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# PRELIMINARY REPORT ON ARCHAEOLOGICAL EXCAVATIONS IN BONNYCASTLE PARK, 1981

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## Introduction

The purpose of the excavations in Bonnycastle Park was to determine the exact location and condition of that portion of Upper Fort Garry buried under the park. The City of Winnipeg and the Downtown Winnipeg Association had sponsored brief excavations in the Fort Garry Gate Park in 1978 and 1979, and it was desirable to complement this work by examining the only other portion of Upper Fort Garry that is presently accessible. The excavations in Bonnycastle Park can also be seen as a complement to the eventual work that will be done in the CN East Yards under the Agreement for Recreation and Conservation (ARC). In short, the excavations in Bonnycastle Park contribute to the total picture of exploration, settlement and trade at the junction of the Red and Assiniboine Rivers.

## Historical Background

The construction of Upper Fort Garry began in 1835, at which time a stone walled fort with bastions at each corner was erected. In 1853, work was begun on an extension of the fort to the north. The walls of the extension consisted of inner and outer wooden walls separated by rubble fill. The stone gateway now standing in Upper Fort Garry Gate Park was the back entrance to the fort and was used primarily as the Governor's private entrance. An 1876 map of Winnipeg compiled by the Federal Surveyor R.C. McPhillips shows Upper Fort Garry in full operation as of that date. Historical Records indicate that the fort was dismantled in 1882 in order to straighten Main Street and thereby facilitate streetcar operation.

By 1895, several small buildings had been erected along the west side of south Main Street in what is now Bonnycastle Park. These buildings were located approximately at the point where the fort's south-west bastion formerly stood. Between 1895 and 1905 a streetcar barn, belonging to the Winnipeg Electric Streetcar Company, was erected along Assiniboine Avenue approximately 100 feet from Main Street. At this location, the streetcar barn would have stood just to the west of the former fort's west wall. Leading off Main Street into the barn were at least seven tracks which were not taken up until the early 1960s. Subsequently, the area that is now Bonnycastle Park was landscaped. This operation required a considerable amount of fill to be brought in from unknown sources. The result is the present-day Bonnycastle Park.

Archaeological work on fur trade posts in the Red-Assiniboine River area has not been extensive. Lower Fort Garry was extensively examined in the mid-1960s and was reported on by J.V. Chism (1972). This report indicated the locations of excavations and the nature of recovered structural remains, but portable artifacts are not discussed. In 1978, test excavations were conducted by P.J. Priess to examine deposits underneath and adjacent to the rear gateway of Upper Fort Garry (Priess 1980). This gateway is the one presently standing in the Fort Gary Gate Park. Structural details were also the main product of Priess' work. Further text excavations of the palisades in the Fort Garry Gate Park were undertakne by M. Kelly in 1979. No report on this work is yet available.

## Aims

The aim of 1981 excavations was to test the deposits under Bonnycastle Park to determine the exact location, state of preservation, and potential for future investigations of the Upper Fort Garry remains. It was necessary to determine what form the "dismantling" of the fort walls had taken. Had they been partly or completely knocked down, or had they been taken away? It was also necessary to discover exactly how the stone walls had been built, since photographic records do not convey this sort of information completely. The test excavations were designed to provide information on the depth of modern fill that had been deposited on the site and the extent to which the streetcar tracks had been removed. In short, the 1981 excavations were set up as a small-scale feasibility study which might or might not lead to subsequent work.

## Field Procedures

A three dimensional reference grid was established. The horizontal coordinates of this grid were tied into the City of Winnipeg's Special Survey, one marker of which is a steel stake on the south side of Assiniboine Avenue at the foot of Fort Street. This pin was assigned the coordinates N 100 m E 100 m so that all information recorded within Bonnycastle Park would fall in the northeast quadrant of the grid. The vertical dimension of the grid was established in reference to the Geodesic Survey brass plug that is set into the foundation of the pumphouse in the southeast corner of Bonnycastle Park. This plug is 232.203 m above sea level.

A contour map of the northeast portion of Bonnycastle Park was generously provided by the City of Winnipeg's Land Surveys and Real Estate Department (Fig. 1). The McPhillips map indicated quite accurately where the west wall of the fort should lie, so a trench 8 m x 1 m consisting of four excavation units of 2 m x 1 m placed end-to-end was centered over the wall's anticipated location approximately at right angles to it. The coordinates of this trench were N93-94m E176-184m. At the same time, a small test excavation of 2 m x 1 m was set out at N 65-66, E 190-192 m to explore the approximate location of the fort's southwest bastion. Subsequently, excavation units were opened at N 92-93 m,

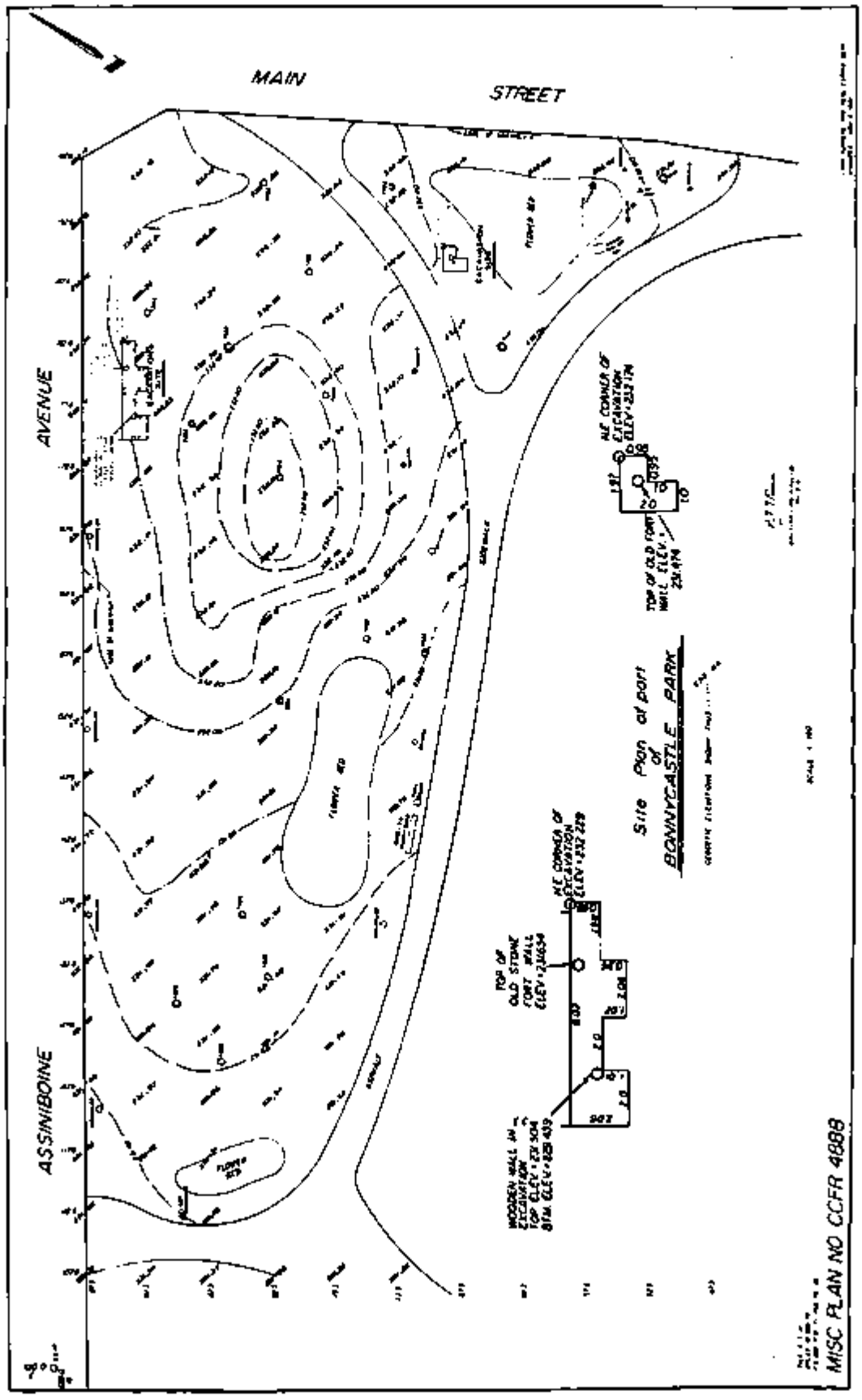


Fig. 1. Map of Bonnycastle Park, showing ground contours and locations of excavation units (see enlargements). Courtesy of City of Winnipeg, Land Surveys and Real Estate Department.

E 176-178 m; N 92-93 m, E 180-182 m; and N 64-65 m, E 190-191 m. A convention was adopted by which excavation units were always referred to in terms of the horizontal coordinates of the northeast corner.

No indications were available as to the sequence, depth and complexity of strata in the site. To address this situation, a 1 m x 1 m test excavation unit was removed at N 93-94 m, E 176-177 m. The deposits were removed in 10-cm arbitrary levels within natural strata. Square-ended shovels were used to remove the strata containing modern materials, and finer tools such as mason's trowels and grapefruit knives were used to excavate the stratum containing the Upper Fort Garry remains. All excavated earth was screened through 1/4" mesh, and all recovered information was recorded according to accepted archaeological practice.

## Stratification

Five major soil strata were detected, and each one was assigned a letter of the alphabet. Stratum A, the uppermost, consisted of 5-10 cm of black topsoil, sod and roots. Stratum B was a thick deposit of recent fill that was used to elevate and shape the present contours of Bonnycastle Park. This fill, approximately 50 cm thick, consisted of a jumbled mass of disturbed silts and clays that varied in colour from brown to grey to yellow. Stratum C was composed of compact sand, gravel, clay and rock and was 5-10 cm thick. A dark paleosol varying in thickness from 10-20 cm comprised Stratum D. Beneath this lay undisturbed river silts that appear to be relatively homogenous in their composition and greyish-brown colour. These stratigraphic descriptions were consistent throughout all excavation units in the trench near Assiniboine Avenue (Fig. 2). In the excavation units near the flower bed beside Main Street, the stratification was much more disturbed due to the recent installation of numerous underground structures. Strata A and B were readily discernable, but recent disturbance had apparently caused some stratigraphic inversion. Excavations in this area were not deep enough to encounter undisturbed silts.

Soil samples taken from each stratum were analyzed by the Manitoba Provincial Soil Testing Laboratory at the University of Manitoba. A series of samples from different depths within the undisturbed river silts were submitted in order to see if these deposits were as homogenous as they appeared. The results of the mechanical and organic fraction analyses are presented in Table 1.

Not surprisingly, the table shows that strata which were or are ground surfaces, Strata A, C and D, contain the largest proportions of organic material. Further, Strata A and C contain high proportions of sand. Stratum B shows characteristics similar to those of the upper portions of Stratum E. This situation arises primarily due to the fact that Stratum B consists of imported silt and clay fill. The samples from Stratum E appear to be divided into two groups. The upper group, from 122-170 cm DBD, contains relatively high proportions of sandy, clay and organic material and relatively low proportions of silt in comparison

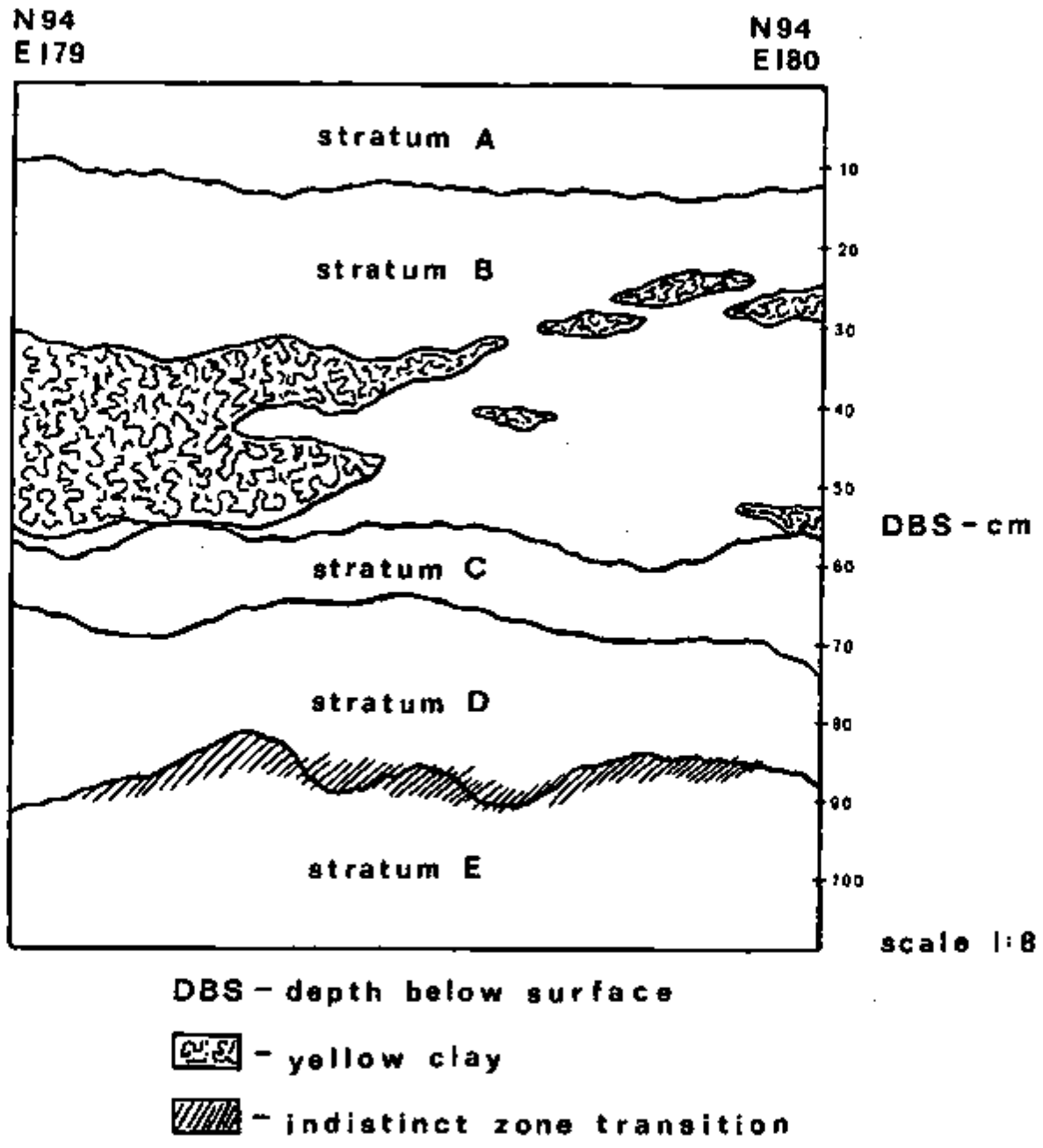


Fig. 2. Stratigraphic profile of N 94 m E 179-180 m, showing typical section of deposits.

TABLE 1

Percentages of Mechanical and Organic Constituents, Selected Soil Samples, Main Trench, DlLg 21

| Stratum | % Sand | % Silt | % Clay | % Organic |
|---|---|---|---|---|
| A | 14 | 42 | 44 | 9.4 |
| B | 6 | 27 | 67 | 1.4 |
| C | 18 | 40 | 42 | 2.8 |
| D | 4 | 25 | 71 | 2.4 |
| E (122 cm DBD)* | 5 | 55 | 40 | 0.9 |
| E (160 cm DBD) | 4 | 35 | 61 | 1.0 |
| E (170 cm DBD) | 6 | 32 | 62 | 0.7 |
| E (220 cm DBD) | 21 | 67 | 12 | 0.4 |
| E (280 cm DBD) | 32 | 56 | 12 | 0.3 |

* DBD = Depth Below Datum

to the lower group of samples from 220-280 cm DBD. This situation suggests that the undistrubed river silts are not as homogenous as they appear to the naked eye. The higher proportions of silt in the upper group of strata may indicate that the water containing the materials deposited as the lower group of samples was moving faster than the water containing materials deposited as the upper group of samples. Whether different depositional events or different stages of the same depositional event are represented remains to be determined. Given that the upper sample from Stratum E varies somewhat from the two immediately below it suggests that the full complexity of the depositional history of the silts requires further investigation.

The cultural contents of the strata are revealing. Strata A, B and C contain modern materials. Stratum D and the very top of Stratum E contain fur trade and aboriginal materials. Below the surface of Stratum E are sterile deposits.

## Cultural Materials

### Features

The west wall of Upper Fort Garry was encountered at E 181-182 m, approximately 1 m east of where it was anticipated to have been. The remains of the wall consisted of large, unmodified limestone cobbles and boulders held together by a soft mortar (Fig. 3). These remains are approximately 1 m wide and are oriented just off the right angle to the long axis of the main trench. Because no evidence of construction was found below these remains, they are interpreted as the foundations of the

Fig. 3. Plan view of foundations of the west wall of Upper Fort Garry, N 92-94 m.

west wall of the initial Upper Fort Garry. This foundation rested on and in Stratum D, the old topsoil layer, and it suggests that the walls of Upper Fort Garry were built directly on the ground surface. The weight of the stone walls probably caused the foundations to become embedded in the ground surface. The absence in adjacent excavation units of stones from upper portions of the wall indicates that dismantling of fort walls involved complete removal of wall materials down to the ground surface and transportation of these materials from the site.

A second feature, discovered quite by accident in N 93-94 m, E 176-178 m, consists of the wall and corner of a log building (Fig. 4). This building is of particular interest because its uppermost log lies in Stratum E, the undisturbed river silts, just below the bottom of Stratum D. Excavation down the outside of the log wall approached 3 m and revealed that the wall was almost 2 m high. The logs were oak and they had been roughly axed or adzed to form a flat exterior surface. The northeast corner of the building stood at N 93.25 m, E 178 m. This corner was made by chopping the end of each log to form a tenon. The butts of these logs had an unfinished appearance in a number of cases as if the wedge-shaped end that resulted from chopping the tree down had just been left. In spite of this, the tenons for the corner of the building were made carefully. An effort seems to have been made to fashion tenons that sloped down and out from the building. The purpose of this method of construction was to allow any water to run out of the corner of the building, thereby helping to keep the interior dry and the corner from decomposing rapidly.

The spaces between the logs produced large quantities of wood chips and silt. This suggests that chips produced while the logs were being shaped were mixed with mud and used as chinking.

Excavation unit N 92-93, E 176-178 m was opened in an attempt to examine a portion of the interior of the structure. By the time excavations ceased, work had progressed only as far as the bottom of the uppermost log. It appeared that Stratum D passed over the top of this log and then dipped down slightly inside the structure. Artifacts contemporaneous with the occupation of Upper Fort Garry were found in this matrix.

The brief examination of this log structure revealed that it apparently had not been built on an old topsoil zone. Instead, the bottom log rested on undisturbed river silts. Paradoxically, however, there were no signs of disturbance in the soil profiles immediately outside the wall to indicate that a hole might have been dug into the silts to accommodate this structure.

The northeast corner of this structure lay approximately 3 m west of the Upper Fort Garry wall foundation, and the stratigraphic evidence at the time excavation ceased suggested that the structure was buried in deposits that lay below the stratum on which Upper Fort

Fig. 4. Detail of log wall, showing detail of corner joints and chopping on exterior surface.

Carry was built. No interpretation is presently available to account for the location of the structure in relation to the fort. On the other hand, the apparently different relative ages of the two features and the rough-hewn, but technically sophisticated, attributes of the log structure suggested that it might predate the fort. If this suggestion were true, the structure might be as early as 1738, the date at which La Verendrye's Fort Rouge was built, thereby making it one of the oldest European structures in western Canada. At this time, however, there is insufficient evidence to support any firm conclusions.

A third feature was uncovered in the southerly group of excavation units. This feature consisted of large cobbles and areas of crude mortar and appeared to be portions of the fort's wall foundations (Fig. 5). The cobbles were not as large as those encountered to the north, nor were they as closely packed. It is thought that dismantling of the wall and its foundations may have been more comprehensive in this area.

There is some concern over this interpretation because a buried electrical cable was exposed at E 191.5 m that ran from north to south through the excavation unit. Also, a large wooden timber approximately 6" x 6" protruded vertically from the floor of the excavation unit immediately to the east of the rock and mortar concentration. The top of this timber protruded 10 cm above the elevation of the rock and mortar concentration. Further, pieces of wood, including a possible 2" x 4" fragment were recovered below the concentration of rock and mortar. These pieces of evidence indicate that stratigraphic disturbance, possibly severe, occurred at this location at one or more times in the past. For this reason, the rock and mortar concentration may have been produced as a result of the disturbances rather than any dismantling of the fort.

## Artifacts

With very few exceptions, the recovered artifacts were of European manufacture. Table II presents the artifacts according to their material category.

In addition to these materials, a number of fragments of bone and wood were recovered. Identification and quantification of these categories are not yet complete, but several fragments of a long bone from a large mammal have been flaked at one end. The remainder of the bone items seem highly fragmentary. An impressionistic examination of the wood suggests that it is composed primarily of fragments of railroad ties, chips of wood from the chinking in the log structure, and miscellaneous fragments.

Identification of the materials listed in Table II revealed some interesting information. In the glass category, at least 143 pieces are flat and clear. These most likely are window pane glass fragments. Among the remaining pieces of glass are: one Blackwoods beverage bottle that pre-dates 1920, and one base of a Blackwoods beverage bottle, four pieces

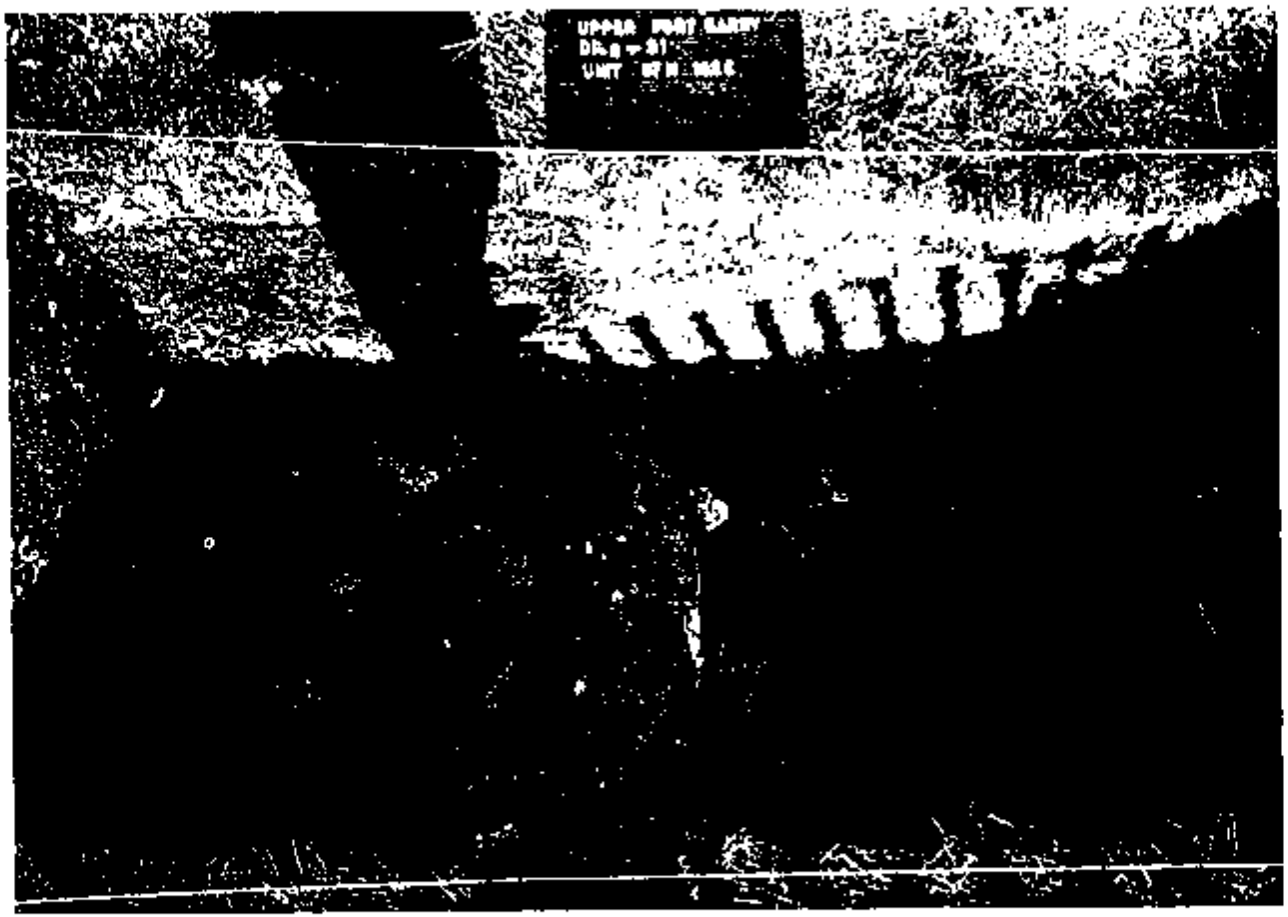

Fig. 5. Plan view of foundations of the west wall of Upper Fort Garry, N 66-67 m.

TABLE II

Artifacts Recovered from Upper Fort Garry, 1981 Excavations, by Material Category

| | |
|---|---|
| **Glass** | |
| flat, clear | 143 |
| Blackwoods | 2 |
| lens | 4 |
| drinking glass | 2 |
| wine bottle | 2 |
| beer bottle | 15 |
| unidentifiable fragments | 184 |
| blue bead fragment | 1 |
| **Ceramics** | |
| kaolin pipe fragments | 24 |
| white earthenware | |
| a. Bosphorus pattern | 7 |
| b. B700 pattern | 2 |
| c. Camilla pattern | 1 |
| d. Continental Views pattern | 1 |
| e. jar fragments | 21 |
| procelain | |
| a. doll head | 1 |
| b. unidentifiable | 7 |
| brick | 18 |
| vitrified white earthenware | 8 |
| stoneware | 6 |
| coarse, red glazed earthenware | 11 |
| unidentifiable | 61 |
| **Metal** | |
| nails | 216 |
| miscellaneous fastenings | 24 |
| spherical metal balls | 2 |
| button | 1 |
| 1946 nickel | 1 |
| railroad tie plates | 3 |
| brass straight pins | 3 |
| miscellaneous | 157 |
| **Stone** | |
| knife river flint flake | 1 |
| miscellaneous flakes | 3 |
| **Miscellaneous** | |
| coal/coke | 17 |
| asphalt | 13 |

Table II, continued

Miscellaneous, continued

| | |
|---|---|
| cement | 3 |
| mortar | 20 |
| shell | 3 |
| mother-of-pearl button | 1 |
| marbles | 2 |
| graphite contact shoe | 1 |
| leather | 2 |
| TOTAL | 994 |

of lens glass that are most likely from automobile headlights; fragments of two drinking glasses with faceted stems; fragments of at least two different wine bottles, but neither is complete nor datable; and fifteen pieces of beer bottle.

Among the ceramics, 24 kaolin pipe fragments were recovered. There are at least six different pipes represented, and among these are: a plain-bowl pipe fragment possible with the markings "TD" on it; a pipe stem marked "Montreal", four pipe bowl fragments, one of which shows a Scottish Thistle, another shows a Fleur-de-Lis, and the fourth has an unidentified moulded relief pattern. There are 75 pieces of white earthenware and on some of these are designs that can and have been dated. Seven pieces of "Bosphorus" pattern have been identified. This is a brown transfer pattern, likely manufactured by John Marshall and Company in Scotland approximately 1854-1899. It is possible that other manufacturers may have used the same pattern. There is no label to identify John Marshall and Company definitely, but it is likely to have been manufactured by him. The "Bosphorus" design also has been identified at Lower Fort Garry. At least two pieces of blue transfer printed pattern, identified "B700", were also recovered. It was manufactured by W.T. Copeland or Copeland and Garrett Company about 1838 to at least 1847. One sherd of blue transfer pattern identified as "Camilla", manufactured by either Copeland and Garrett of W.W. Copeland from approximately 1833 to the present, was also recovered. A rimsherd of blue transfer pattern identified as either "Louis Quatorze" or "Continental Views" was noted as well, and it was probably made by Copeland or Copeland and Garrett. It is interesting that the B700, Camilla, Louis Quatorze, and Continental Views patterns have all been previously excavated in association with Lower Fort Garry (Sussman 1979:12, 14). Also included amongst the ceramics are 21 pieces of a single vessel that, when reassembled as much as possible, constitute what is obviously a crenelated jar. On the bottom of this jar is impressed an "M" and this may be the beginning of the world "Mailing". Positive identification on this mark should be available in the future. Eight pieces of porcelain were recovered, one fragment of which was a portion of a doll's head. Eighteen bricks were identified among the ceramics, as were eight pieces

of vitrified white earthenware, six pieces of stoneware, and 11 pieces of red-glazed coarse earthenware.

The total of 240 nails includes not only nails but, for purposes of brevity, close to two dozen miscellaneous fastenings which include bolts and screws.

Although there were only three pieces of cement, one proved to be most unusual. It contained a bone fragment that is clearly visible along one fractured surface. The cement is obviously quite recent, and the reason why a piece of bone would be included in it is the subject of some speculation.

Among the bone artifacts are four bone tools that were manufactured by flaking. This is an unusual recovery because bone is normally worked by abrasion. In the past, archaeologists usually assumed that only stone tools were manufactured by flaking. We have also identified tentatively two or three bone flakes that may have resulted from the manufacture of bone tools.

Under the miscellaneous category there is one blue glass trade bead fragment. This bead was manufactured in halves in a mold, and when it fractured it did so down the mold seam. Also in the miscellaneous category is one collar button made of either mother-of-pearl or irridescent celluloid, two modern marbles, one streetcar contact shoe made of graphite, and two pieces of leather.

The chronological evidence provided by the ceramic pattern dates confirms earlier suspicions that Stratum D is indeed an old topsoil zone on which Upper Fort Garry was built and on which the activities associated with the fort were conducted. There are still no artifacts that date prior to 1836 and none that are definitely associated with the log structure. Once the faunal remains and pieces of wood are identified and coded, the computer-assisted analysis of all artifact materials will proceed.

## Interpretation

The depositional history of the site has been influenced by natural and cultural factors. Flooding of the Red and Assiniboine Rivers was responsible for the deposition of the clays and silts of Strat D and E. There was an apparent reduction in the rate of siltation as evidenced by the build-up of organic debris that characterizes the silt and clay matrix of Stratum D. Human agencies of deposition then replaced natural agencies as the sandy, gravelly matrix of Stratum C was laid down in conjunction with the streetcar and trolly operations that ceased on the site in the 1960s. Landscaping to form the present contours of Bonnycastle Park was responsible for the thick, convoluted matrix of mottled clay and silt labelled Stratum B. Stratum A, the root and topsoil zone, represents the final step in park landscaping. Throughout the course of European use of the site, disturbance of the deposits in some areas has resulted from installation of such modern phenomena as electrical cables, sprinkler systems, and sewer and water mains. In locations where such items have been installed, the standard soil profile is obviously inapplicable.

Superimposed on the depositional history of the site is a sequence of building construction. The log structure, buried in apparently undisturbed river silts, may be the same age as, or older than, Upper Fort Garry. Further excavation is required to clarify the chronological and functional relationship between the log structure and the fort. The construction of Upper Fort Garry, begun in 1836, underwent a series of additions and modification until the eventual dismantling of the entire complex in 1882. These additions and modifications, although not present or clearly recognized in the 1981 excavations, are to be expected in future work at the site and will likely be recognizable as superimposed features and relatively early stratigraphic disturbance.

Construction associated with the streetcar and trolly system had little effect on the deposits in the area where the 1981 excavations took place. Levelling of the old ground surface, and provision of an adequate roadbed on which tracks could be laid are activities represented by Stratum C.

The most recent history of construction is represented by Strata A and B and, to some extent, by recent matrix disturbances associated with the various underground structures in the park. While these recent developments are not buildings per se, they were undertaken within the larger context of road grade levelling and building construction in Winnipeg.

Artifacts can be divided into two main groups: late historic and early historic. The late historic materials are found in Stratum C and above and represent the post-Upper Fort Garry occupation of the site. The early historic artifacts are found in Stratum D and the very top of Stratum E. They are in no case attributable to a time period significantly earlier than the time at which the fort was built and occupied. Whether artifacts of an earlier historic time period are discovered in association with the log structure awaits further investigation.

The lithic and faunal materials were recovered from Stratum D and the uppermost positions of Stratum E. They are therefore thought to be contemporaneous with the early historic artifacts. They may have been left behind by Native or Metis groups that camped outside the fort while trading. The amount and distribution of the lithics and fauna are not sufficient to indicate any substantial prehistoric occupation of the site prior to construction of the fort.

A shift in orientation of interest is indicated by the results of the 1981 excavation. At first, the main interest was in locating the remains of Upper Fort Garry and determining what form and state of preservation those remains exhibited. The fortuitous discovery of the log structure has raised a series of questions that require answers. One wishes to know its size, age, function, and relationship to the fort, if any. Further examination of the log structure and the fort remains will be directed at providing answers to these questions.

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