RESEARCH BULLETIN

The York Factory Reference Collection

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Introduction

The York Factory Threatened Collections project was initiated in the spring of 1991 to assess the condition of the York Factory artifacts and upgrade their storage condition to meet Collections Management standards. One of the products of the project is the creation of a reference collection "...of representative examples of artifacts which reflect the themes identified for York Factory..." (Hamilton 1992:5). A key ingredient of this concept is that the collection should have uses beyond that of archaeology. It has to be accessible to many different people ranging from park interpreters to students. Reference collections will also be the primary source of artifacts used in the creation of displays and Edu-kits.

By the fall of 1992, assessment and upgrading had been completed for 56 125 artifact assemblages encompassing approximately 242 000 fragments.[1] Project staff were now ready to tackle the creation of a reference collection. The task was made easier in that much of the background requirements had been prepared as part of the Threatened Collections project. Most of the research material relevant to the project, such as *Research Bulletins*, had been brought together to one location in the lab. For data management there was the recently updated Dossier Analysis database.

The only remaining consideration was the structure of the actual collection. This was found, almost ready-made, in *Goods on the Bay: Material Culture from Archaeological Investigations of York Factory Hudson's Bay Company Post 1788-1957* (Lunn 1985). This document placed the artifacts into functional categories based on a classification system established by Sprague (1981). Lunn intended that his report be used for interpretive and management purposes so it seemed logical that this become our starting point.

This report provides the reader with a summary of the reference collection's uses, structure and finding aids; a compendium, if you will. With this report in hand, a person could arrive at Prairie and Northern Regional Office (PNRO) already possessing a good knowledge of the reference collection. This will be largely accomplished in the Methodology Section. The last section details the tasks that are required to refine the York Factory collection and review the potential of reference collections at this office. The material presented here will be generally applied to future reference collections for other sites.

Site and Research Overview

York Factory National Historic Site is situated on the west bank of the Hayes River, approximately eight kilometres upstream from the mouth of the river on Hudson Bay. Its history is unique and colourful, and "... *for almost two centuries it served as a trading post and entrepôt, as well as the major administration, trans-shipment and manufacturing centre within the fur trade network*" (Parks Canada 1988:6).

Initial archaeological investigations determined that the original sites of York Factories I and II were gone, eroded over time into the Hayes River (Adams 1981). York Factory III, the focus of investigations, was constructed on the present site in 1788 and was continuously occupied until the Hudson's Bay Company closed its operations in 1957 (Lunn 1985).

Archaeological investigations at York Factory commenced in 1978 as a direct result of a salvage program and continued seasonally until 1982. These initial efforts yielded a vast assemblage of artifacts representing most aspects of the western Canadian fur trade between 1788 and 1957. In August 1989, a relatively small assemblage of artifacts was recovered through mitigation for the new staff house. This house is located in the area of 19th-century barns as well as a schoolhouse that burned down in the 1930s (Filopolous and Adams 1992). As a result of stabilization efforts of the Depot building in summer, 1991, an impressive array of artifacts were uncovered. These specimens are of particular interest as they represent much of the material culture dating to the earliest building on the site dubbed the "Old Octagon." It was constructed in 1788 and lies directly below the Depot building which itself was constructed between 1831-38. The artifact collection has been extensively analyzed and recorded by Parks staff, and represents the largest collection housed at Archaeological Services. Many thousands of artifacts dating to the Old Octagon period have been recovered from the 1992-93 efforts. All of these artifacts will be analyzed and recorded in 1993-94.

A number of key documents were consulted in the process of creating the reference collection which also serve to orient the reader. Perhaps the most useful document which provides an excellent orientation to the development of the site is the York Factory National Historic Site Management Plan (Parks Canada 1988). The Management Plan makes reference to two essential documents that evolved as part of the structured planning process. These are the York Factory Background Information Package (Parks Canada 1984) and York Factory Plan Alternatives (Parks Canada 1985). Each of these Parks Canada documents contain further bibliographic and other references to literature and data generated on all aspects of York Factory.

Lunn's (1985) material culture report outlines the research framework, methods, and functional classification system used to classify all artifacts excavated between 1978-82, and similar classification systems, with minor variations, can be found in the aforementioned documents.

Five historically significant themes encompassing York Factory's history have been outlined in the Management Plan. The themes provide the framework with which to interpret the material culture of York Factory as represented by the artifacts in the reference collection. Details on the themes are provided in the Management Plan. Theme One listed below is not represented by the artifact collection, as the artifacts associated with the earliest period of the original forts have eroded into the Hayes River. Themes Two to Five are represented to greater or lesser degrees, outlined in the Background Information Package, Plan Alternatives and the Management Plan. The five themes are:

1. York Factory and the French/English Struggle for Control of Hudson Bay: 1670-1713.
2. York Factory as the Focal Point for British Control of the Fur Trade Hinterland.
3. Life at a Hudson's Bay Company Post: 1789-1870.
4. The Work Environment and Artisan Manufacturing at York Factory: 1789-1870.
5. European-Native Contact at York Factory: Cultural and Socio-Economic Interaction in the Fur Trade.

Information on structures and time periods are contained in the documents mentioned above, and a synthesis report of York Factory archaeology written by Gary Adams (1985) provides a "*...quantified and distributional analysis of the artifact* data..." (Lunn 1985:3).

Uses of a Reference Collection

Reference collections are defined in the Parks Canada lab manual, *Collections Management Procedures for Laboratory Staff,* as follows:

Special collections of artifacts may be set up for reference purposes. Often these collections consist of representative artifacts from a particular site or a particular type of site.... Such collections may be set up

for education display purposes or comparative use (PNRO 1991:28).

This reference collection is site-specific consisting of a representative sampling of artifacts received from York Factory field seasons. It incorporates artifacts that are of a special nature such as objects that are more complete or that clearly reflect the various activities and features of a site. Artifacts are chosen to link a site's themes and events with its structures and proveniences. In this way, a reference collection becomes an effective tool for site interpretation because it attempts to include all the components of a site. There are also type collections within the reference collection which are items chosen on the basis of similar attributes reflecting a particular facet of material culture. These collections, being part of a reference collection, can be used as aids in the analysis process. The variety of capabilities that the reference collection possesses, demonstrates its ability to become a precedent for managing other artifact collections.

One important reason for creating a reference collection is to respond to clients' needs in an effective and efficient manner. Our clients include National Historic Site and National Park staff such as those involved in Visitor Activity programming, regional staff in the Archaeology, History, Curatorial and Conservation sections as well as students, researchers and the general public. The needs of these clients vary from artifact requests for displays and interpretive programs to hands-on Edu-kits and replicas. The presence of the York Factory reference collection has already demonstrated its ability to greatly facilitate the process of locating artifacts requested by Parks Canada's Manitoba North staff for a new display. A reference collection not only provides a centralized source of information on the archaeology of a site, it also highlights the gaps in the archaeological record. This can be useful for students, staff and researchers in developing research proposals. A reference collection also makes it quicker and easier to answer questions from the general public.

A practical reason for establishing a reference collection is for monitoring the condition of conserved artifacts. Many of the reference artifacts have undergone conservation treatment, but still have to be checked periodically for any signs of recurring deterioration. Having the artifacts separated from the main collection of a site allows Collections Management staff greater access to the conserved artifacts and ensures efficiency in monitoring practices.

The rest of the collection, though not conserved, has been upgraded to Collections Management standards and is managed through the use of the Dossier databases. These artifacts, which are more unstable, can deteriorate rapidly with excessive handling. A separate reference collection can reduce the amount of handling and allow the other artifacts to be retrieved only when necessary.

A reference collection prevents duplication in artifact conservation. It provides both a visual display and a database record of conserved artifacts. This makes it possible to strategically select types of artifacts that are absent from the reference collection and priorize their conservation treatment. Any multiple copies of conserved objects can be used in displays and Edu-kits.

An excellent use for a reference collection is to ensure proper identification of artifacts and to promote coding standardization. It provides assistance to untrained staff or students who have been hired, on a short term basis, to analyze artifacts and enter the data into the computer. Since the artifacts in the reference collection have already been analyzed and documented, they become the basis for future coding of similar items. A coder has the advantage of using the artifact attribute listings in the database as a guide for standardization as well as actually seeing a similar artifact in the collection.

A reference collection has great potential to be used as a research tool for both internal and external use. It becomes the visual interpretation of a site. All the essential site information is consolidated into one area making the reference collection a central repository and starting point for accessing site data. Retrieval of information becomes more efficient. The computer database provides current artifact listings that can be manipulated to extract different types of analysis data. The database also provides paper records of artifact information providing a quick-reference guide for various artifact groupings. *"These artifacts supplement the written record, making it tangible and three dimensional so it can be literally seen and potentially studied in innumerable ways"* (Lunn 1985:2).

Methodology

Development of the Functional Classification System

In the early stages of the project Adams and Burnip (1981) adapted and employed a method of artifact classification and analysis based on Stanley South's (1977) model of pattern recognition. To interpret artifact patterning at York Factory, the artifact's function was considered most important. A large percentage of the artifacts recorded on the computerized data retrieval system between 1978-82 were assigned function codes based on South's model.

In order to do justice to representing life and activities at York Factory it was evident that a more appropriate classification system for historic artifacts than South's was needed. After reviewing seven different classification schemes based on artifact function(s), it was found that Sprague's (1981) functional classification system "... *provided the flexibility for relating specific artifacts to various functional categories and to larger functional groups...*" (Lunn 1985:10).

What was especially convenient about Sprague's scheme was that the information could be easily united with the major themes defined for York Factory, and it had been used with success at other historic fur trade sites (Lunn 1985). Sprague's classification system seemed to satisfy most of the research objectives required as part of the research mandate at that time, and the function codes which were already in the database could be easily converted from South's classification schemes to Sprague's.

Lunn used the functional categories and groupings based on Sprague's system as the foundation for his York Factory artifact report. He states that "*Liberties have been taken to create categories not described by Sprague in order to classify some items unique to the historic activities of York Factory*" (1985:10).

Lunn (1985:3) attempted to record and describe all the artifacts from York Factory, "... *ranging in size from beads to cannon parts, ranging in date from mid-18th century shoe buckles to 1950's vaccination vials, and ranging in provenience from country-made crooked knives to Turkish Figs.*"

Refining the Functional Classification System

Starting in 1991, a quick-reference functional classification and codes sheet was used by laboratory staff to assign a given artifact its most appropriate function code, as time did not allow for all artifact attribute information to be recorded.

Upon reviewing the functional classification and codes sheet used from 1991 onward, minor deviations from the major documents outlining the original classification system were noticed. The reference sheet was compared with Table 4 in Lunn's (1985) report, as well as the structure outlined in the York Factory Background Information Package (Parks Canada 1985). This exercise led to the development of an updated quick-reference sheet on the functional classification system and codes. The updated functional classification system is outlined in Table 1. This classification scheme served to clarify the overall structure the reference collection was to take, and was consistent with information contained in Lunn's report.

The Reference Collection

From the onset of the project, Threatened Collections staff flagged artifacts that they deemed suitable candidates for a reference collection. This subjective chore was done as a matter of course during the routine upgrading of the collection, and consumed a negligible amount of project time to accomplish. Once the entire collection had been upgraded to Collections Management standards, the more objective task of compiling information for formulating the most suitable structure for the reference collection could begin.

In formulating a design strategy to select artifacts appropriate for a reference collection, the obvious launching point was to use Lunn's (1985) report. The order of presentation in his report has the artifacts organized under their respective function and associated group, outlined precisely by the order of the report's Table 4 and table of contents. In addition, "... *artifact type names are arranged alphabetically, producers' and makers' names are arranged alphabetically, and structural and temporal associations are indicated*" (Lunn 1985:12).

Depending on the information that was available to Lunn for a given artifact, the descriptions included the quantity of artifacts represented, material composition, mode(s) of manufacture, measurements, manufacturer's

Table 1
York Factory Functional Classification System

GROUP	CATEGORY	SUBCATEGORY	FUNCTION CODE
I. PERSONAL ITEMS	A. Clothing	1. Clothing Material	330
		2. Clothing Fasteners	340
	B. Adornments	1. Beads	610
		2. Personal adornment	350
	C. Grooming		460
	D. Personal Medical		461
	E. Indulgences	1. Tobacco	440
		2. Alcohol	441
		3. Sweets, etc.	442
	F. Pastimes		450
	G. Pocket Tools and Accessories		430
	H. Luggage		251
II. DOMESTIC ITEMS	A. Furnishings	1. Furniture	250
		2. Drygoods, Draperies, etc.	252
		3. Decorative Furnishings	240
	B. Food Preparation		130
	C. Food Serving		140
	D. Packaged Foods		120
	E. Faunal and Floral Remains	1. Fauna	150
		2. Ethno-botanical	160
	F. Portable Power and Illumination		241
	G. Portable Heating		131
	H. Portable Sanitation and Waste Disposal		462
	I. Domestic Items		451
	J. Home Information and Communication		482
	K. Cleaning and Maintenance		260
	L. Laundry		360
	M. Sewing		310
	N. Domestic Safety		262
	O. Pest Control		263
III. ARCHITECTURE ITEMS	A. Materials	1. Window Glass	230
		2. Construction Materials	231
	B. Hardware	(Construction Hardware)	210
	C. Fasteners	(Construction Nails)	220
IV. TRANSPORTATION ITEMS	A. Land Transport		470
	B. Water Transport		530
V. COMMERCE AND INDUSTRY ITEMS	A. Agriculture and Animal Husbandry		112
	B. Hunting	1. Hunting Ammunition	110
		2. Hunting Tools	111
	C. Fishing		113
	D. Trapping		540
	E. Logging and Milling		561
	F. Construction and Manufacturing	1. Metalworking	510
		2. Woodworking	560
		3. Fabric and Leatherworking	320
		4. Brick and Stoneworking	562
	G. Fur Trade	1. Packing and Storing	420
		2. Retailing	422
VI. GROUP SERVICES ITEMS	A. Hudson's Bay Company Administration		410
	B. Defence		520
	C. Group Medical		463
	D. Religion		700
VII. SCIENTIFIC EXPLORATION ITEMS			701
VIII. NATIVE INDUSTRIES ITEMS			490
IX. ITEMS NOT CLASSIFIED			1

marks, pattern design, illustrations, archival references and artifact identification numbers.

Lunn (1985:12) included the identification numbers in his report "... *for one specific reason: to identify artifacts for interpretive use.*" We took his words to the logical extreme by systematically retrieving the artifacts mentioned in the report, maintaining the structure outlined by the report's table of contents. The Threatened Collections crew had already completed the mammoth task of upgrading the York Factory collection to improve storage, retrieval and accessibility, thus the selection process was expedited.

The Finding Aids

It soon became evident that quick-reference finding aids would greatly improve understanding of the functional classification system, its relationship to Lunn's report, and quicken the process of adding, subtracting or modifying the system and by extension, improving the complexion of the reference collection. In addition, the finding aids could enable artifacts from future excavations of the site to be identified and coded correctly and consistently.

A number of related documents have recently been compiled into one binder in order to quickly orient a person to the structure and function of the reference collection. The binder presently includes sections on the following: 1) A "How to use this finding aid" guide; 2) The Functional Classification System outline; 3) A cross-reference key linking function/codes with associated groups on the Functional Classification System sheet; 4) An alphabetical listing of object names, with corresponding function codes; 5) Valid York Factory function codes, in sequential order, generated from the Analysis database; 6) Storage location codes for the reference collection; 7) Definitions for function codes, which includes database printouts by function code, in sequential order, for reference collection artifacts; 8) A quick-reference table for artifacts mentioned in Lunn's (1985) report; 9) Additions/deletions to the functional classification system; 10) Identification of Maker's marks on York Factory Artifacts (extracted from Lunn's report); 11) Check List of artifact Types by Time Period and Structure Area Association (extracted from Lunn's Report); 12) References cited/bibliography, extracted from Lunn's report and augmented with publications created since 1985; 13) A list of reference collection

artifacts in order by provenience and associated with their function codes.

All the documents have been generated on WordPerfect (with the exception of sections excerpted from Lunn's 1985 report) and are stored on a floppy disk for ease of editing. The finding aids will be modified in the future as more information is unearthed on the material culture of York Factory.

Selecting the Artifacts

Once the theoretical structure of the reference collection was refined and finalized, artifacts specifically mentioned in Lunn's report were retrieved from storage. Each worker selected specific groups to work on such as Personal Items or Commerce and Industry Items.

A large volume of artifacts conserved in previous years had already been segregated from regular artifact storage as one of the goals of the Threatened Collections project. Often these artifacts were among those mentioned in Lunn's report. These were promptly placed in the reference collection. Other conserved and non-conserved artifacts that were selected exhibited good display potential, were superior examples to those mentioned in Lunn's report or illuminated a facet of material culture that was not adequately represented. Occasionally particular artifacts were mentioned in the report which are presently located in the Depot building at York Factory. Lists were generated of these artifacts for possible future retrieval and relocation to controlled storage in Winnipeg.

The artifacts were selected one function code at a time within a given group, using printouts of the function code under consideration. For example, within the group labelled Personal Items, all the artifacts in function code 330 were reviewed and all the specimens mentioned in Lunn's report were placed in the reference collection. Additional selections were incorporated into their appropriate function code, and all the reference collection artifacts are currently organized by artifact type, provenience and catalogue number.

How an Artifact Fits into the Classification System

To clarify the process of classifying and incorporating an artifact into the reference collection the reader will be walked through the system with a simple example. A

clay smoking pipe stem with a distinct and unusual maker's mark has been excavated at York Factory in recent years. Consulting the "Functional Classification System" reference sheet, one can easily place the pipe stem in the group Personal Items, within the category called Indulgences. The Indulgences category embraces three function codes: Tobacco, Alcohol, and Sweets, etc. The pipe stem obviously belongs under the function code for Tobacco. If so desired, a simple program can be written on the Analysis database to list all smoking pipe stems with maker's marks in the reference collection, or from the entire York Factory artifact collection. The marks on the stem can be compared with all the pipes with marks in the reference collection and if the artifact is a unique or superior example, it can be added to the reference collection. The finding aids can also be used to rapidly assign a function code to the specimen by referring to the alphabetical listing of object names. They may also be used to quickly assess what information exists for a given artifact in Lunn's report.

Finalizing the Selections

Once the final selections were made, the updated storage location information was input into the database, and all appropriate amendments to the function code, object name, material description, object description and the like was added. Some obvious coding inconsistencies for artifacts such as pocket knives were corrected and standardized rapidly by comparing an attribute printout of identical artifact types. Attempts were made to standardize object names of the artifacts by consulting the alphabetical listings of object names found in Chenhall (1978), Blackaby et al. (1988) and the *Canadian Parks Service Classification System for Historical Collections* (Parks Canada 1992).

Physical Organization of the York Factory Reference Collection

The previous section presented the reader with the structure of the reference collection. You may be asking yourself: what kind of artifacts are in the collection? An actual artifact list would be too long for this format. In fact, a list of the artifact types[2] would exceed 10 pages. Tables 2 and 3 are examples of the artifact types from two function codes. Table 4 contains the quantities of artifact types and artifacts within each function code. Most of the artifacts can be categorized as relating to food, clothing and structures. Other well-represented function codes are primarily part of the group Commerce and Industry Items. There are several under-represented function codes such as Fauna and Beads. This is partly due to a lack of analysis and research rather than an absence of available material. For example, the large volume of faunal material has not been analyzed to any great extent. As well, all the beads are presently in Ottawa for identification and are not yet included in the collection. The other major factor is that excavations have simply not yielded certain types of artifacts even though they are recorded in historic documents. This is particularly true of trade goods which are not abundantly represented at York Factory. As a result, the collection may not accurately reflect the lifeways of the site but this should be partly remedied with further research and excavation.

Table 2
Example of Sewing, Function Code 310

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GROUP . . . . . . . . . . . . . . . . . . . . . Domestic Items
CATEGORY . . . . . . . . . . . . . . . . . . . . . . Sewing
SUB-CATEGORY (FUNCTION) . . . . . . . . . . . . Sewing
CODE . . . . . . . . . . . . . . . . . . . . . . . . 310
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DEFINITION: "Tools, equipment, and supplies originally created for preparing materials made from fibres and preparing woven fabrics. Also included in this category are tools, equipment, and supplies used for manufacturing objects from fibres or cloth, e.g. sewing needle, embroidery scissors, reel, spool" (extracted from Parks Canada 1992:31).

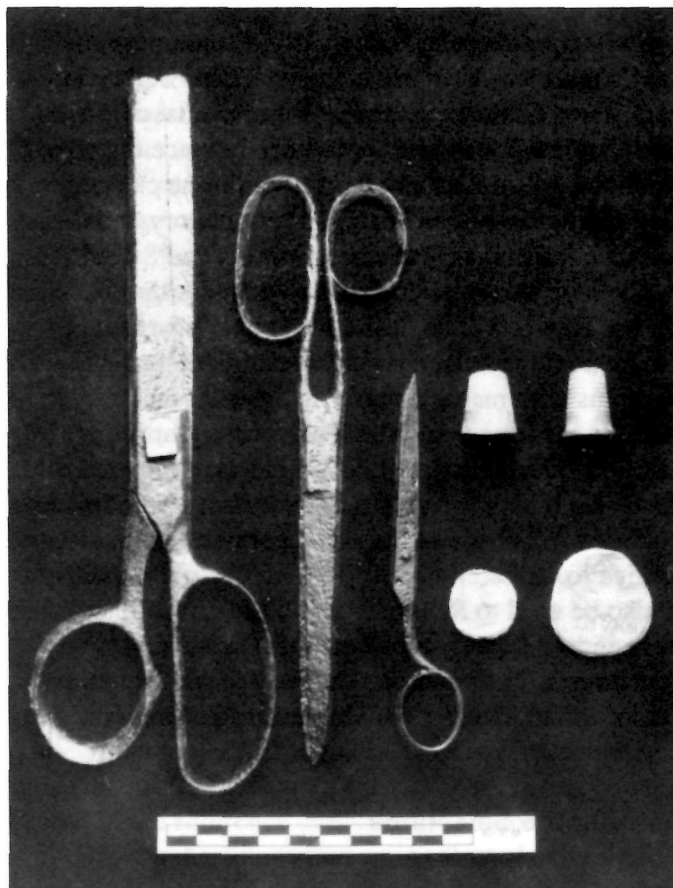| Artifact Types Included in Function Code 310	Quantity of Artifacts
Label, Fabric	1
Needles	3
Pins, Straight	3
Scissors	5
Sewing Machine Parts	4
Thimbles	2
Weights, Clothing	4
Total of Artifact Types = 7	
Total Quantity of Artifacts = 22	

Fig. 1. Sewing Items. (L-R): Shears, Straight Trimmers, Embroidery Scissors, Thimbles, Clothing Weights.
Photo by L. Dueck

Table 3
Example of Personal Adornment, Function Code 350

GROUP . . . . Personal Items
CATEGORY . . . . Adornment
SUB-CATEGORY (FUNCTION) . . . . . Personal Adornment
CODE 350

DEFINITION: "An ornament originally created to be worn on the human body or on clothing for ornamentation rather than for protection or simply as body covering" (extracted from Parks Canada 1992:27).

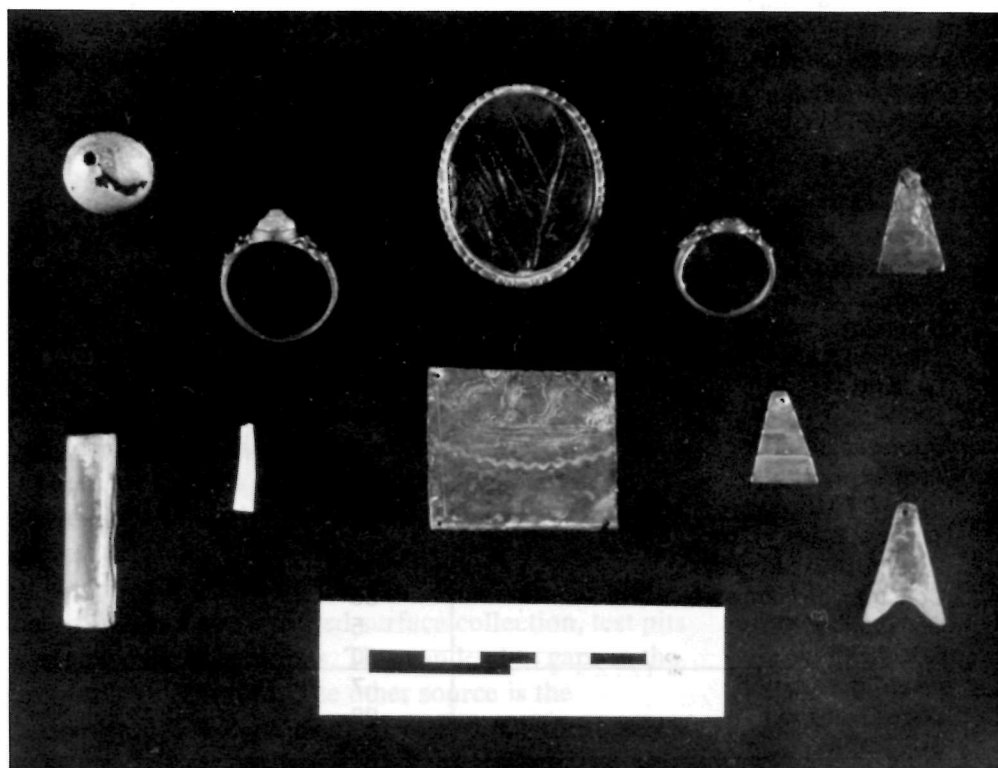| Artifact Types Included in Function Code 350	Quantity of Artifacts
Bell, Hawk	1
Bracelet Part	1
Brooches	10
Dentalium	1
Earring Parts	2
Jewelry, Miscellaneous Parts	4
Necklace Parts	3
Pendants	5
Rings, Finger	14
Silver, Trade	7
Spangles	7
Tinklers	7
Total of Artifact Types = 12	
Total Quantity of Artifacts = 62	

Fig. 2. Personal Adornment Items. Top Row (L-R): Hawk Bell, Finger Ring, Brooch, Finger Ring, Spangle (with leather strip attached). Bottom Row (L-R): Possible Tinkler or Bead, Dentalium, Incised Trade Silver Item, Spangle.
Photo by S. Toews

Table 4
Number of Artifacts in the Reference Collection by Function Code
Total Artifacts = 2177

Group	Function Code Description	No. of Artifact Types	No. of Artifacts in Function Code
Personal	Clothing Material	6	99
	Clothing Fasteners	10	209
	Beads	1	3
	Personal Adornment	12	62
	Grooming	10	33
	Personal Medical	6	40
	Tobacco	7	86
	Alcohol	5	28
	Sweets, etc.	4	14
	Pastimes	10	51
	Pocket Tools & Accessories	10	48
	Luggage	2	5
	SUBTOTAL	**83**	**678**
Domestic	Furniture	10	65
	Drygoods & Draperies	1	4
	Decorative Furnishings	3	12
	Food Preparation	19	44
	Food Serving	20	138
	Packaged Foods	6	94
	Fauna	1	3
	Ethno-botanical	1	28
	Portable Power & Illumination	7	33
	Portable Heating	1	16
	Sanitation & Waste Disposal	3	4
	Domestic Pastimes	3	6
	Home Information & Communication	6	23
	Cleaning & Maintenance	7	9
	Laundry	4	6
	Sewing	7	21
	Domestic Safety	2	2
	Pest Control	2	4
	SUBTOTAL	**103**	**512**
Architecture	Window Glass	1	0
	Construction Materials	14	44
	Construction Hardware	30	163
	Construction Nails	5	117
	SUBTOTAL	**50**	**324**
Transportation	Land Transport	7	32
	Water Transport	28	71
	SUBTOTAL	**35**	**103**
Commerce and Industry	Agriculture & Animal Husbandry	13	19
	Hunting Ammunition	4	57
	Hunting Tools	25	70
	Fishing	6	22
	Trapping	7	24
	Logging & Milling	6	23
	Metalworking	28	52
	Woodworking	41	80
	Fabric & Leatherworking	4	9
	Brick & Stoneworking	6	4
	Packing and Storing	18	59
	Retailing	6	11
	SUBTOTAL	**164**	**430**

Table 4 (Continued)

Group	Function Code Description	No. of Artifact Types	No. of Artifacts in Function Code
Group Services	HBCo. Administration	13	36
	Defence	4	15
	Group Medical	12	17
	Religion	3	6
	SUBTOTAL	**32**	**74**
Scientific Exploration	Scientific Exploration	4	5
Native Industries	Native Industries	3	51

Interpretation

The interpretation of the collection is dependant on whether one examines only the number of artifacts in a function code or the number of artifact types. Since not all artifacts from the entire collection are represented in the reference collection it is best to look at types and function codes. The preponderance of artifact types are located in the Commmerce and Industry group. This could reflect York Factory's role as a major fur trade shipping and manufacturing centre. One must keep in mind, however, that the reference collection consists of primarily conserved artifacts. In the past, the objects most likely sent for conservation were the metal artifacts, i.e. tools and hardware. The artifact quantities represented for each function code, as mentioned above, depend a great deal on the level of research and identification carried out on the artifacts. The large numbers of hardware and ceramics are partly representative of the specialties of the office staff.

There are two major sources of error which may prevent the collection from accurately representing the human activities at York Factory. One is the wide range of sampling methods used at the site. These include controlled and uncontrolled surface collection, test pits and complete excavations. This can lead to gaps in the archaeological record. The other source is the understanding that archaeologists generally deal only with the discards and refuse of the past. Even taken together these should not be viewed as a serious concern. One aspect of the reference collection is to highlight the possible problem areas in the site archaeology. This should result to further research which will close the gaps and, in so doing, change the makeup of the reference collection.

Artifact Classification

The placement of artifacts within each function code is largely subjective in nature. Despite an artifact's provenience and original use, there are difficulties in assigning function. For example, Lunn (1985:187) placed a prospector's pick under the code Brick and Stonework. The original use of this item would have been to sample geologic formations but there was no function code, at the time, for such activity. This changed with the recent addition of the code Scientific Exploration. The hammer was reassigned to the new code but there is no clear evidence as to how it had actually been used at the site. This was not the only classification problem.

There is also the matter of artifact re-use. Whenever possible the artifact is classified as to its last use regardless of the possible original function. Files, normally under Metalworking, that have been modified into boat scrapers are put under Woodworking which includes boat-building tools. In addition, there are artifacts, newly re-identified, that require classification to a new function code. Some of the changes result from debates involving whether to 'lump' or 'split'. For example, should nails with a special function be placed in the relevant function code or should all nails be placed under the code Construction Nails? In most cases, including this example, function overruled all other considerations. This meant that boat nails are found under the code Water Transport. In the end, most of our changes are minor and based on established coding conventions.

Artifact Storage

There are four major storage areas in our office: the movable storage system, oversize shelves, the controlled environment room and the freezers. The movable storage system consists of shelves that are mounted on tracks. The vast majority of artifacts are stored on these shelves including metals, glass and ceramics and the area is generally referred to as regular storage. Any boxes that do not fit on the movable storage system are placed on a separate set of stationary shelves which is designated as the oversize area. All organics, except unworked fauna, are placed in the controlled environment room commonly called the humidity room. Artifacts excavated under permafrost conditions, and not yet conserved, are stored in the two freezers.

Computer Databases

The management of archaeological collections at PNRO has been accomplished through the use of Parks Canada Dossier Collect database running on PC compatibles. The Collect database records artifact data in a series of text fields. It also manages provenience data and field documents such as photographs and drawings. During the course of the Threatened Collections project, it was found that Collect's sibling, the Analysis database, was superior for sorting and managing artifacts as it recorded the artifact attributes (colour, shape, type, etc.) in distinct data fields. Since the York Factory Analysis database had been updated, it seemed logical that it be used to manage the reference collection. Besides minimizing the number of databases, it provides the link between the reference collection and the rest of the artifacts. Over the years the attribute fields have been filled, leaving little room for new forms of data. This means that the only reference collection data on the Analysis database are the location and function codes. There may be space to include Group and Category information at a later date. The management themes are a bit too broad and overlapping to assign to individual artifacts. An updated Collect database could fulfil this role.

Future Considerations

There are issues that still have to be addressed concerning the reference collection including the addition of artifacts from further analysis of the 1992 archaeological field season collection. There is also the incorporation of new material from the anticipated research project on the artifacts excavated from the Depot stabilization project of 1993 which should provide excellent examples of artifacts relating to the early occupations of York Factory III.

Currently, the reference collection artifacts remain in specially labelled boxes until future resources are allocated to purchase separate storage cabinets. Once the cabinets are set-up, the artifacts will be removed from their polyethylene bags and laid out on ethafoam sheeting in the cabinet drawers. All numerical information pertaining to the artifacts will be maintained. The cabinet drawers will facilitate the viewing of artifacts because one will simply pull out a cabinet drawer to find the artifacts exposed in an orderly fashion and linked with all essential information and finding aids.

If the York Factory reference collection is used as a precedent to manage other sites and its structure is implemented for their collections, refinements or additions may need to be made to the functional groupings. Conventions used by other research institutions may also have to be adopted to adequately reflect the different types of sites. For example, a site such as Fort Walsh, which is a North West Mounted Police post, the functional groupings implemented for the York Factory reference collection may not properly reflect the activities of such a post. Other examples are Pre-Contact sites which cannot be accurately represented by the historic-based York Factory functional classification system. In these cases, one could attempt to integrate or adapt the various functions of the sites with the York Factory classification system which most likely will result in an inaccurate representation. A more viable option would be to create a new functional classification system that would reflect the specific activities of each site.

Clients' requests can influence the way a reference collection is structured. One client, the staff at Lower Fort Garry National Historic Site, requested artifacts for a display that reflects specific themes, time periods and functional categories. Their needs will help define the parameters of a future reference collection for Lower Fort Garry. Curatorial staff, who furnish the

buildings at the site, will also play a role in defining this reference collection.

A future vision is to compile Edu-Kits for school groups or specialized interest groups. Edu-kits, or other forms of educational material, are excellent tools for educating the public about a wide range of topics including the role of Parks Canada and archaeology as well as offering a visual picture of cultures past and present. A reference collection provides a ready supply of conserved artifacts that can be used for these kits and certain artifacts may be replicated to allow for a "hands-on" experience.

Another future vision is the creation and usage of a binder of photos, which would be useful to those who do not have access to the artifact collection such as field workers or external researchers. Ideally, all the artifacts in the reference collection would have its photograph taken and stored in a binder or input to some form of visual computer database. One would have the option of browsing through the photo binder to become familiar with the reference collection rather than viewing the artifacts inside the cabinets. It would be another tool to work in conjunction with the other finding aids for the reference collection showing essential information on function, associated structures and themes as well as the variety of artifacts for a site.

The role of the York Factory Depot collection should be included in the reference collection strategy. The collection consists of artifacts that have mainly been surface-collected by park staff and visitors and stored in the Depot building at York Factory. A partial list of these artifacts, generated from the Analysis database, includes objects not represented at PNRO. In what ways can these artifacts be incorporated into the reference collection? Possible solutions are to physically remove the artifacts from the Depot building and add them to the reference collection, or have a photo record of the artifacts that are too large or heavy to be removed from the Depot such as the ship's anchor or complete cast-iron stoves.

The York Factory Management Plan describes several interpretation proposals for both the on-site and off-site programs. The proposals discuss the role of the Depot collection and how its interpretation can be presented to the public. It offers some ideas into which the reference collection can be factored. The proposals emphasize the importance of the York Factory collection stored at PNRO for interpretive displays that are accessible to the public.

What makes this collection particularly invaluable, besides its broad thematic representation, is the fact that many of the artifacts are portable. As very few people will actually travel to York Factory National Historic Site, this collection will be one important interpretive vehicle to bring the site's material to the Canadian culture.... As the proposed on-site visitation for the York Factory National Historic Site is relatively low, but general interest is prominent across Canada, the national significance of the site requires a strong off-site interpretation program (Parks Canada 1988:36-39).

Conclusion

The reference collection is one method by which Archaeological Services can contribute to the interpretation of Canada's national historic sites. It is a teaching tool for non-archaeologists and a convenient source of information for researchers. The creation of reference collections for the rest of the sites in Prairie and Northern Region can encourage closer interaction with other Parks Canada sections. It will also result in a greater dissemination of archaeological information to people outside of Parks Canada.

The structure of the collection was developed from Lunn (1985) who, in turn, had used the classification methods of Sprague (1981) and South (1977). An artifact is classified by function or, in the case of re-worked material, by its last use. It is assigned to a broader artifact type and then placed in one of 55 functional groupings. These groupings are further classified to reflect related function: e.g. Construction Material and Hardware are found under Architecture Items. In keeping with the goal of making the collection accessible, several paper-finding aids were developed to provide links between the various levels of classification. The computer adds further flexibility in its ability to sort based on a host of parameters including material and attribute (size, colour, etc.).

The reader must bear in mind that this is a pilot project and there have been the requisite teething pains. Many times we faced the question of an artifact's place in the collection. How does one decide on a function code for an artifact that could, or did, have a number of uses? These questions, while sometimes exasperating, are to be expected from such a large historical artifact collection. It is anticipated that the collection's structure will be modified with the acquisition of new data. It will also have to be adapted for other sites

particularly those with Pre-Contact components. Given the time and resources further developments could see similar reference collections for all sites. These collections can better serve archaeologists and the clients of PNRO Archaeological Services by making the archaeological record more available and, perhaps, easier to understand.

Notes

1. This artifact total does not include artifacts from the yet unanalyzed 1992 and 1993 material.
2. An artifact type is the first level in grouping artifacts by function. It is derived from the section names found in *Goods on the Bay...* (Lunn, 1985). In this way all carpentry hammers are found in function code Woodworking and then under the artifact type Hammers, Carpentry. It should be noted that many artifact types are, in fact, artifact object names. For example, a pressed-glass jewelry facet would be placed under Jewelry Parts, Miscellaneous, whereas a Spangle can be considered both an artifact type and an object name. While this is a grey area there has not been any difficulties with interpretation.

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