ARCHEOLOGICAL
COLLECTIONS MANAGEMENT

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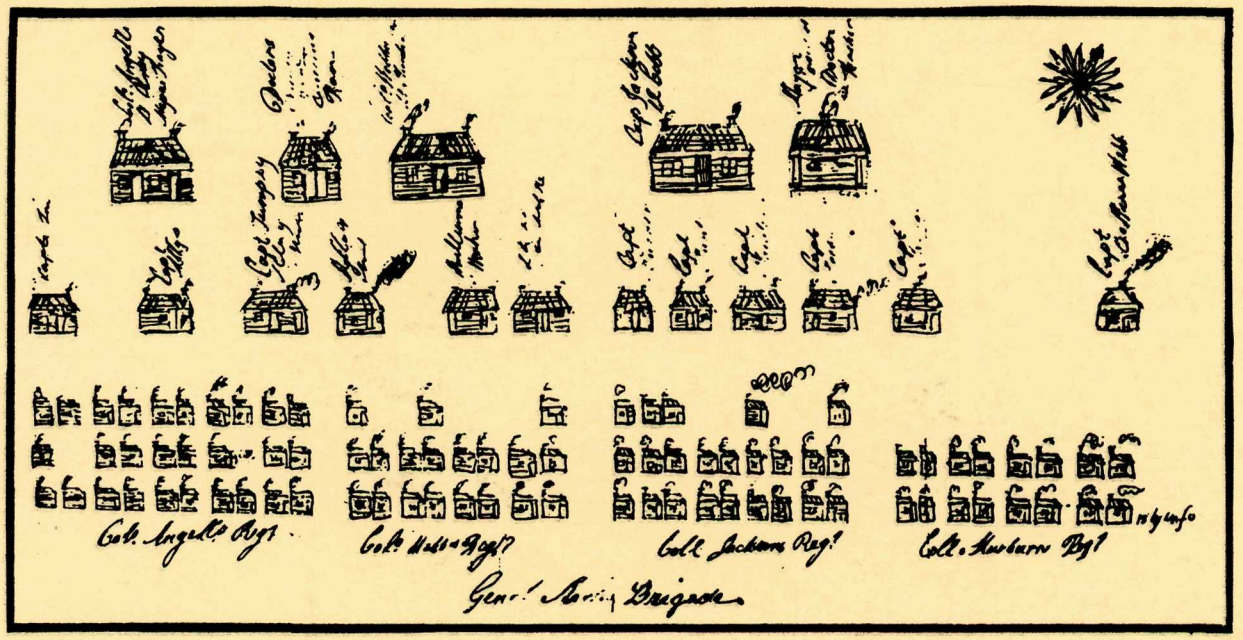

MORRISTOWN
NATIONAL HISTORICAL PARK

NEW JERSEY

ACMP Series No. 2

Division of Cultural Resources
North Atlantic Regional Office
National Park Service
U.S. Department of the Interior

Cover illustration is a 1780's sketch of Stark's Brigade. Courtesy of Morristown National Historical Park.

ARCHEOLOGICAL COLLECTIONS MANAGEMENT AT MORRISTOWN NATIONAL HISTORICAL PARK

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ACMP Series No. 2

Alan T. Synenki and Sheila Charles

Division of Cultural Resources
North Atlantic Regional Office
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Boston, MA 1983

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...collections represent a valuable resource only if they are properly documented, conserved, and organized in such a manner that their research value is maintained...To maintain their research value, both collections and their associated documentation must be accessible, and they must be protected from deterioration...Without a doubt, there is a crisis in curation

-Marquardt, Montet-White, and Scholtz
Resolving the Crisis in Archaeological Collections Curation.
American Antiquity 47:409-418. (1982)

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PREFACE

The purpose of this document is to describe the procedures used by the Morristown Archeological Collections Management Project (hereafter abbreviated MACMP) to reclassify, catalog, and store the archeological collections at Morristown National Historic Park (hereafter abbreviated MORR). While the majority of the artifacts in the collections are from archeological excavations, some are from unsystematic surface collections. These collections are the result of various individuals' work conducted in the 1930's to the 1960's.

This document provides MORR personnel with critical information for efficient and effective management of the collections. Equally important, it provides archeological researchers with quantitative data for each site. Problems and biases inherent in MORR's collections data base are identified and discussed in detail.

The MACMP is the second in a series of collections projects being conducted by the Division of Cultural Resources, North Atlantic Regional Office of the National Park Service. The project extended from August 23 to September 3, 1982 at MORR. The cataloging of the artifacts was completed by Donna Gagnon and Suzanne Spano under the direction of Alan T. Synenki.

It should be noted that the provenience-based artifact catalog used by MACMP is a modified version of the catalog originally developed for the Salem Archeological Collections Management Project (see Synenki and Charles 1983:Appendix A). Organizational and substantive changes were made to reflect the large volume of military-related artifacts in the Morristown collections. Several changes recommended in the Salem Archeological Collections Project (Synenki and Charles 1983:Chapter V), were also made. The item-based artifact catalog is identical to the one developed and used by the above mentioned project (Synenki and Charles 1983:Appendices B and C).

Charles' participation in the MACMP consisted of assisting in the design of the provenience-based catalog and the writing of the Artifact Category Definitions section in Chapter III. Synenki wrote the remainder of the manuscript and also served as general editor.

ACKNOWLEDGEMENTS

A number of individuals have contributed significantly to the completion of the MACMP as a whole, and to this manuscript in particular.

Frank McManamon, Chief, Division of Cultural Resources, North Atlantic Regional Office, National Park Service deserves special thanks both for initiating this project and providing us with the opportunity to participate.

Warren Beach, Superintendent, Susan Kopczynski, Curator, Jim Holcomb, Chief of IRM, and Joe Fritzinger, Park Technician, all of Morristown National Historical Park also deserve a great deal of thanks. Their hospitality and efforts in accommodating project personnel at Morristown is much appreciated.

We are also grateful to Will Logan of the Denver Service Center for providing correspondence and other documentation which allowed us to associate a number of unlabeled artifacts with the Center's archeological work at the Wick house.

Kerry Horn, who joined the Archeological Collections Management Project well-after the completion of the MACMP, is thanked for her efforts in the production of the cover design and assistance with several aspects of the editing of this manuscript.

Finally, we would like to thank both Donna Gagnon and Suzanne Spano for putting in extra-long hours in order to complete the MACMP on schedule. Their hard work and efforts are especially appreciated.

CHAPTER I

INTRODUCTION

Project Goal

The objective of the MACMP is to make the artifacts and associated documentary materials accessible to MORR personnel for management and educational purposes and to the archeological community for research.

For MORR personnel, accessibility not only means the ability to find a particular artifact in the collection, it also means that they can inventory the types and quantities of artifacts present in a collection. Marquardt et al. (1982:412) have stressed the importance of the latter, emphasizing the need for the development of an efficient storage/retrieval system to accomplish this goal.

For researchers, accessibility not only means the ability to locate artifacts and associated documentary materials (e.g., fieldnotes, maps) from a collection in a repository, but it also means the artifact data has been quantified and is in a usable form. In addition, it means that definitions of each artifact class and/or category, as well as a detailed discussion of the classification and coding systems used are available.

To accomplish the above stated objective, the MORR archeological collections, like the Salem National Historic Site collections, are computerized using the North Atlantic Regional Office's 9845C Hewlett-Packard mini-computer.

Research Significance

The MACMP was able to determine that the archeological collections at Morristown National Historical Park consist of artifacts from no less than 16 sites, 11 of which are either revolutionary war encampments or military-related structures or areas.

Although the quality of the spatial and stratigraphic information for the collections is variable due to both record (e.g., fieldnotes, maps) loss and differences in past collection techniques, a number of these collections have sufficient information for answering a variety of theoretical, methodological or substantive issues in military history in general and revolutionary war archeology in particular. For example, Rutsch and Peters (1977:35) have suggested that little information is available on the functions of entire units of different sites at Morristown. Intra- and inter-site analyses of the spatial arrangement of the artifacts from the collections could be used to provide data on this issue. From a materials-science perspective, several classes of artifacts from the MORR collections have significant study potential. For example, the gunflints appear to have been manufactured from a variety of non-local cherts. The sourcing of these cherts, therefore, would add to our understanding of the procurement and distribution of gunflints during the revolutionary war period.

CHAPTER II

METHODOLOGY

The purpose of this chapter is to make explicit the systematic techniques and procedures used by the MACMP to process and organize the archeological collections at MORR. For the most part, the organization of the chapter follows the order in which the tasks were performed. In this chapter, we will discuss (1) how each collection of artifacts and individual artifacts were associated with particular sites and excavators, (2) the provenience system used by the different excavators, and (3) the cataloging and processing procedures used to classify, record, and physically store the artifacts. In discussing the provenience systems used, site-specific data problems are identified and discussed.

Site Identification

As noted in Chapter I, the MACMP determined that the MORR repository consists of collections from no less than 16 archeological sites.

Two primary techniques were used to match particular collections to specific excavators. First, all artifacts were inspected visually for artifact numbers or provenience information. Similarities and differences in artifact labeling and recording practices were noted. Second, an extensive literature search at both the Division of Cultural Resources, North Atlantic Regional Office's files, and the Morristown National Historical Park's curatorial repository and library was conducted in order to locate and examine all archeologically relevant articles, site reports, fieldnotes, maps, and Park correspondence. In several instances, contact with former archeological researchers and current Park personnel was made. Table 1 summarizes the results of this work.

In using Table 1, several important matters need to be kept in mind. First, in general, the collection names that appear in this table are those that were used by the original excavator. When a site has been given different names by different excavators, the name assigned by Rutsch and Peters (1976a) is used (e.g., Reputed New Jersey Brigade Site Cantonment). Second, while the majority of excavation dates that appear in Table 1 are well documented, some are not. For example, due to ambiguity in the literature, there is uncertainty about several of Baker's dates. These dates, however, are believed to be within one or two years of the actual date of excavation. Third, because there are few systematic artifact catalogs for sites, the references that appear under the Artifact Catalog/Inventory heading are those used by the MACMP to associate particular artifacts with their respective sites. While several references list all the artifacts recovered from a site, others simply mention the presence of one or more unique or unusual objects. Fourth, the references that appear under the Excavation Fieldnotes/Site Maps and Photographs heading not only include maps and handwritten fieldnotes taken during excavation, but also reports that provide specific spatial or stratigraphic information about a particular site. And fifth, the references that appear under the Archeological Reports/Literary Sources heading are not meant to be a complete listing of all known reports. The intent is to list sources that provide the most comprehensive statements about a particular site. Where there is ambiguity or differences between two important sources, both are given.

Table 1. Site Summary Data

Collection	Excavator(s)	Year Excavated	Artifact Catalog/Inventory	Excavation Fieldnotes/ Site Maps and Photographs	Archeological Reports/ Literary Sources
Wick House	Baker for CCC	1934	----	Baker(1934); Wick House Plot Numbers with Depth Screened and Date Completed(n.d.); Wick House Excavation Map; Rutsch and Peters(1976a:Figures 27,28)	Baker(1934,1935a,1935b)
	Denver Service Center	1975	National Park Service(1975)	----	Bauxer(1975c)
First Maryland Brigade	Baker for CCC	1934	----	----	Baker(1934); Rutsch and Peters(1976a:597)
	Rutsch	1972	Rutsch, Thatcher and Peters (1973:97-103)	Rutsch, Thatcher and Peters(1973:96-97)	Rutsch, Thatcher and Peters (1973); Rutsch(1982)
Guerin House	Baker for CCC	1935	----	Baker(1934); Guerin Excavation Map	Baker(1934;1935c)
Pennsylvania Brigade Site	Baker for CCC	1935	Baker(1936a;1936b)	Map No.101 Map No.102	Baker(1936c); Rutsch and Peters(1976a:464-472)
	Cotter	1961	Cotter(1961a)	Cotter(1961a)	Cotter(1961b); Rutsch and Peters(1976a:478-480)
	Rutsch	1971	----	----	Rutsch(1982:4)
Fort Nonsense	Baker for CCC	1936	----	Map No.104 Map No.105	Cox(1936); Weig(1956); Rutsch and Skinner(1971)
	Rutsch and Skinner	1971	----	----	Rutsch and Skinner(1971); Rutsch(1982:3)
Field-East-of-Cemetary	Baker for CCC	1935	----	Map No.101	Baker(1935d,1936d); Rutsch and Peters(1976a:464,610-612)
Reputed New Jersey Brigade Cantonment	Baker Baker	1936 1938	National Park Service(1936) National Park Service(1938)	---- Jones(1938)	Rutsch and Peters(1976a:361) Peters and Rutsch(1976: Appendix A; Rutsch and Peters(1976:362-366)

Table 1. Site Summary Data (continued)

Collection	Excavator(s)	Year Excavated	Artifact Catalog/Inventory	Excavation Fieldnotes/ Site Maps and Photographs	Archeological Reports/ Literary Sources
New Jersey Brigade	Ditchburn Rutsch	1968 1974-1975	Ditchburn(1968,1971) ----	Ditchburn(1968,1971) ----	Ditchburn(1968,1971) Rutsch and Peters(1976a: 410); Rutsch(1982:3)
Hand's Commissary	Baker	1936	Cox(1936,1937)	----	Rutsch and Peters(1976a: 573)
Hand's Brigade	Cambell	1963	----	Cambell(1963a)	Cambell(1963a)
Ford Mansion (Washington's Head-quarters)	CCC Rehab Crew	1937 1964	Ford Mansion Artifact Inventory Sheets(n.d.) National Park Service(1964)	Master Map No.200 ----	Press Release(1937); B.B. (1982) Perry and Sowers(1965)
Connecticut Brigade	Cambell	1962-1963	Cambell(1962a,1962b,1962c)	Cambell(1962a,1962b, 1962c,1963b)	Cambell(1962a,1962b, 1962c,1963b)
New York Brigade	CCC Rutsch and Peters	1930s 1974-1975	National Park Service(n.d.a.)	----	Rutsch and Peters(1976b: 16-18,1977:34) Rutsch and Peters(1976a: 605;1976b)
Aquaduct Trail	unknown	unknown	National Park Service(n.d.b.)	----	Rutsch and Peters(1976a)
Jockey Hollow Surface Finds	unknown	unknown	National Park Service(n.d.c.)	----	----
Second Maryland Brigade Stroley's Orchard	Rutsch	1972	Rutsch(1982:1)	Rutsch et al.(1973); Rutsch and Peters(1976a: 598)	Rutsch et al.(1973); Rutsch and Peters(1976a: 596-599)
Surface Finds	Rutsch	1972	National Park Service(1972)	----	Rutsch(1982:2)
Metal Detector Finds	Rutsch	1972	----	----	Rutsch(1982:2)

Artifact Cataloging and Processing

Initially, all artifacts were removed from the three metal storage cabinets located in the curatorial repository at MORR, and grouped first according to site and then according to provenience within sites. Next, within these proveniences, artifacts were separated into the appropriate class and category (Appendix A). These are discussed in detail in Chapter III.

Mended or fragmentary ceramic and glass vessels three-quarters or more complete then were separated from all other artifacts. Each vessel was assigned a vessel number; these were affixed to the bottom of vessels and recorded in the appropriate item-based catalog (Appendix B or C). This was done to assist the MORR personnel in the selection of vessels for display and to permit researchers to examine a sample of the ceramic and glass assemblages with little difficulty. For all other artifacts, whole and fragmentary, counts of items in each category per provenience unit were made and recorded in two places: (1) on acid-free tags which were placed within each artifact bag, and (2) in the appropriate row and column in the provenience-based catalog (Appendix A).

Artifact Storage

The artifacts are stored in two ways. All fragmentary and small whole artifacts are housed in the three metal storage cabinets located in the MORR curatorial repository. Whole items too large to fit into the cabinets are placed in one acid-free Holinger box.

The storage cabinets are labeled units 1, 2, and 3. Within each unit, drawers are numbered 1...N. In general, sites within these cabinets are arranged by excavation date; the earliest excavated site is located in Unit 1; the latest in Unit 3. Sites excavated by several individuals in different years are housed by the earliest excavated date. For the purposes of convenience, sites are recorded in the MACMP's artifact catalogs also in this order. One exception to this is the artifacts from Rutsch's excavations. These artifacts are located in Unit 3 because the MACMP did not acquire them until after the artifact catalog was completed at MORR.

Provenience Systems, Coding, and Data Problems

All original provenience information is retained and recorded in the MACMP's artifact catalogs. Table 2 provides a summary of this information by site and excavator. Although most terms are the excavator's, some are assigned by the MACMP (e.g., spatial coordinate) when excavators failed to provide them. The MACMP chose terms that are as descriptively accurate as possible.

Table 2 also provides the format that the provenience information was coded into. All provenience information is coded from left to right. For example, examining Baker's provenience information for the Wick house, the first digit (**X**-XX-XX-X) records the site designation. In this instance, the letter "W" is used to refer to the Wick house area. The next two digits (X-**XX**-XX-X) record the plot number. The next two digits (X-XX-**XX**-X) record the tier number. The last digit (X-XX-XX-**X**) is used to note the specific location of the excavations within the Wick house area. In this case the letters "A," "B," "I," and "R" refer to the orchard, carriage barn, ice house, and Tempe Wick's room respectively. Excluding digits used to record the site designation, the number 9

Table 2. Provenience Information, Coding, and Format

Site	Excavator(s)	Provenience Information	Code	Format
Wick house	Baker	Site	W	X-XX-XX-X
		Plot	1-88	
		Tier	A-LM	
		Location	A=orchard B=carriage house I=ice house R=Tempe Wick room	
	Denver Service Center	Site	W	X-XX
		Artifact Number	1-16	
First Maryland Brigade	Baker	Site	MB	XX
	Rutsch	Site	MB	XX-XX-X-XX
		Hut Type	OH=officer's hut	
		Feature	A	
		Level	Ø1=present ground surface LP=loose stone pile on slope	
Guerin	Baker	Site	G	X-XX-X
		Plot	1-30	
		Tier	A	
Pennsylvania Brigade Site	Baker	Site	PA	XX-XXX-X-X
		Plot	1-179	
		Square	A-X	
		Location	1-9	

Table 2. Provenience Information, Coding, and Format (continued)

Site	Excavator(s)	Provenience Information	Code	Format
	Cotter	Site	PA	XX-X-XX-XX
		Test Pit	2-9	
		Field Specimen Number	2-22	
		Feature	1-13	
	Rutsch	Site	PA	XX
Fort Nonsense	Baker	Site	FN	XX-X
		Line, Station, Depth	1-8	
	Rutsch and Skinner	Site	FN	XX-XXXXXX-XX-XX
		Grid Coordinates	N5E75	
		Feature	3D	
		Level	2	
Field-East-Of-Cemetary	Baker	Site	C	X-XX-XXX-X
		Ditch	1-9,A	
		Spatial Coordinate	60-265	
		Location	W-X	
Reputed New Jersey Brigade Cantonment	Baker	Site	NJS	XXX-XX-X-X
		Plot	5,14	
		Square	C	
		Depth	5-6 inches	

Table 2. Provenience Information, Coding, and Format (continued)

Site	Excavator(s)	Provenience Information	Code	Format
New Jersey Brigade	Ditchburn	Site	NJB	XXX-XX-X-X
		Hut Type	OH=officer's hut ET=enlisted men's trash pit	
		Hut Number	1-9	
		Feature	L=latrine	
	Rutsch	Site	NJB	XXX-XX-X
		Hut Type	OH=officer's hut CH=company officer's hut	
		Feature	F=fireplace	
Hand's Commissary	Baker	Site	HC	XX
Hand's Brigade	Cambell	Site	HB	XX-XX-X
		Unknown	CH	
		Hut Number	9	
Ford Mansion	Baker	Site	FM	XX-X-XXX-X
		Plot	A-S	
		Square	1-100	
		Location	C=cellar foundation K=kitchen T=trenches M=wall behind mantel FM-9-999-T=trenching area FM-9-999-P=parking lot	
	Rehabilitation Crew	Site	FM	XX

Table 2. Provenience Information, Coding, and Format (continued)

Site	Excavator(s)	Provenience Information	Code	Format
Connecticut Brigade	Cambell	Site	CB	XX-XX-XX-XX-X
		Hut Type	FO=field officer	
		Hut Number	2-37	
		Tier	L=lower	
			M=middle	
			U=upper	
		Orientation or Association	N=north	
			S=south	
			E=east	
			W=west	
			A=floor	
			B=oval	
			C=waiter	
			D=dump	
			F=latrine	
New York Brigade	unknown	Site	NY	XX
	Rutsch and Peters	Site	NY	XX-XXXXXXXX-X
		Grid Coordinates	S100E200	
		Level	1=present ground surface	
Aquaduct Trail	unknown	Site	AT	XX

Table 2. Provenience Information, Coding, and Format (continued)

Site	Excavator(s)	Provenience Information	Code	Format
Jockey Hollow Surface Finds	unknown	Site Location	JH A=Armstrong house B=Old Campsite-Fort Hill C=B.N.M. T=items found about 100 ft. off Tempe Wick road across from Jockey Hollow road	XX-X
Second Maryland Brigade				
Stroley's Orchard	Rutsch	Site Location Grid Coordinates Level	MB2 S0 N1300E20 1=present ground surface 2=surface and humus 3=brown soil 4=brown yellow clay	XXX-XX-XXXXXXXX-X
Surface Finds	Rutsch	Site Level	MB2 1=present ground surface	XXX-X
Metal Detector Finds	Rutsch	Site	MB2	XXX

sometimes appears (e.g., W-99-99-9) indicating that data for the provenience information is not provided by the excavator or excavators.

Because of time limitations, the MACMP did not quantitatively study how many artifacts are missing per provenience unit for each site. In instances when artifact catalogs exist, an assessment is not only possible but necessary for future researchers to conduct.

For purposes of convenience, Figure 1 shows the location of some of the sites that will now be discussed.

Wick House

Two archeological investigations were conducted at the Wick house (Table 2). Baker's work consisted of the excavation of areas in and around the house and outbuildings. The purpose of his excavations was to confirm the location of various structures that were purported to have existed.

The area around the house was divided into plots and tiers and excavation proceeded in 2 inch stratigraphic levels. As Baker has noted, "the immediate area surrounding the house was divided in ten foot plots. Each plot was given a number, and each tier of plots a letter" (1934:7). A map showing the location of these is available (Wick House Excavation Map n.d.). All soil was sifted through ½ inch mesh galvanized screen. A detailed record of this activity and the artifacts recovered by plot level was kept (Baker 1935b). Although Baker did no stratigraphic analyses (Rutsch and Peters 1977:28), the potential for this at the Wick house still exists.

Baker's excavations revealed a number of amorphous features which raised rather than answered more questions about the Wick house area. According to Rutsch and Peters (1976a:632-633), only one structure could be positively defined and dated as a result of Baker's work. Although Baker's fieldnotes no longer exist, a final report, a site map, photographs of the excavations, and a list of the plots and stratigraphic levels within plots that were excavated are available. As noted above, it is uncertain whether the MORR repository has all of the artifacts recovered during excavation of the sites listed in Table 1. This is particularly true for the Wick house since a number of artifacts from the site were recommended to be temporarily disposed of because they were deemed "irrelevant to our programs and policies" (Hopkins and Baker 1940). It was recommended that disposal consist of burying the artifacts near the Historical Museum. The memorandum further notes that a map showing the location of the buried artifacts is attached; however, the present whereabouts of the map is unknown.

The Denver Service Center's archeological work (Bauxer 1975a) in the Wick house area consisted of monitoring various construction activities (e.g., rerouting the Tempe Wick road, building of the Visitors Center). Even though a variety of artifacts were retrieved (Bauxer 1975b, 1975c), only 16 ceramic sherds exist in the MORR repository. While these artifacts are labeled (e.g., WH-1, WH-2) and have catalog cards and artifact analysis sheets that provide a detailed ceramic description, no spatial or stratigraphic information is given. Although the general location from where these artifacts were retrieved is not documented, a literature search by the MACMP indicates that they probably were recovered from the backdirt of trenching activities in the near vicinity of the Wick house (see Bauxer 1975c).

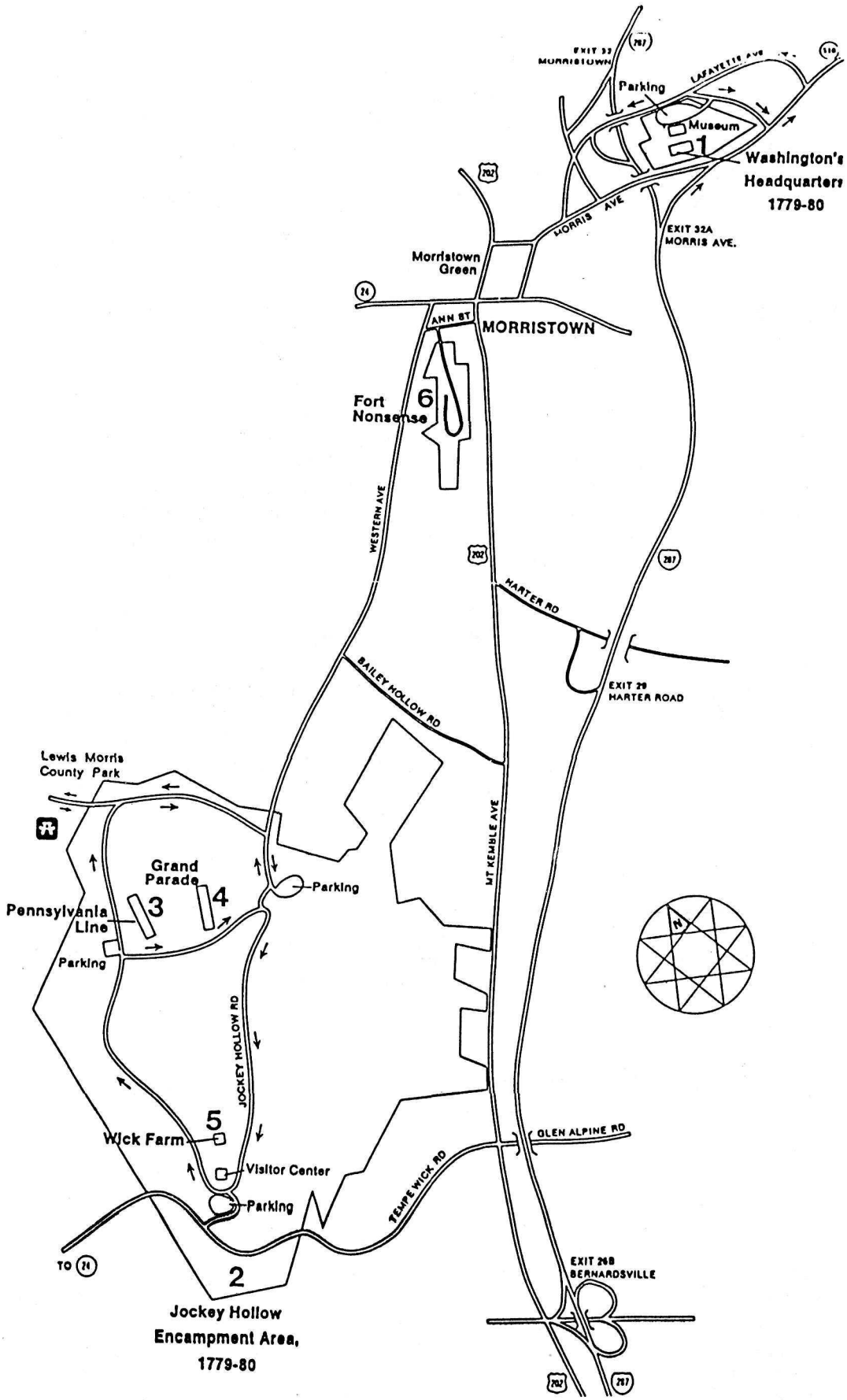


Figure 1. Site Location Map.

Although daily activities are documented, no final report, fieldnotes, site map, or photographs of the excavations were found located at MORR by the MACMP or at the Denver Service Center by Dr. Logan (Will Logan, personal communication 1983). Because no complete catalog or inventory exists, it is uncertain whether the MORR repository has all of the artifacts from Bauxer's archeological activities.

First Maryland Brigade

Two archeological investigations were conducted in the First Maryland Brigade area: (1) Baker in 1934, and (2) Rutsch in 1972.

The purpose of Baker's investigation was to confirm the location of hut structures. Like Rutsch and Peters (1976a:597), no formal report, map, or fieldnotes of Baker's excavations were found by the MACMP. Written documentation of Baker's excavations is limited to that which appears in his discussion of the Wick and Guerin house excavations (Baker 1934) and Setser's (1933) brief reference to the archeological excavations in this area. Because neither of these sources provide a detailed description of the excavation procedures and provenience systems used, only the site designation (i.e., MB) is recorded for the artifacts.

Rutsch's (Rutsch, Thatcher and Peters 1973:96-97) excavations in the First Maryland Brigade area consisted of the subsurface testing of stone rubble concentrations hypothesized to be the remnants of huts. With the exception of two fireplaces, no other features were encountered as a result of excavations in these concentrations. The few artifacts that were uncovered "may have been associated with an officers hut..." (Rutsch 1982:3). Provenience information for these artifacts is available. A final report, fieldnotes, and an inventory of the artifacts recovered during the survey and excavation exist.

Guerin House

Baker's 1934 excavations is the only archeological investigation conducted at the Guerin house. As Baker notes (1934:1), prior to his supervision of the excavations, work had already commenced. As with the Wick house, the purpose of the excavations was to locate any associated outbuildings. The excavations at the Guerin house were not as extensive as those carried out at the Wick house.

Although Baker's fieldnotes no longer exist, a site map, photographs of the excavations, and a list of the plots and stratigraphic levels within plots that were excavated are available. No artifact catalog exists. A final report of Baker's investigations is available (Baker 1934).

Pennsylvania Brigade Site

Three archeological investigations were conducted at the Pennsylvania Brigade Site: (1) Baker in 1935, (2) Cotter in 1961, and (3) Rutsch in 1971. The purpose of Baker's excavations was to confirm the location, arrangement, and characteristics of the huts so reconstructions in this area could commence. The MACMP confirmed what Rutsch and Peters (1976a:472) indicated: no final report was ever completed and the fieldnotes had been inadvertently destroyed. Fortunately, both excavation maps and photographs, and an artifact inventory of the materials retrieved, by provenience, are available (Baker 1936a, 1936b).

Like the Wick and Guerin areas, the Pennsylvania Brigade Site was divided into plots and squares. Plots measured five feet square and were assigned numbers; squares within plots measured one foot square and were assigned letters. Squares were the smallest unit of excavation. Excavation proceeded by trowel and all dirt was sifted through ¼ inch-mesh screen.

Approximately ten years after Baker's excavations, artifacts were cataloged. The catalog records both provenience and artifact-type information. A circled number also appears with some of the artifacts. The meaning of this number is unknown as is the cataloger. Nevertheless, the MACMP retained these numbers in the provenience coding of the artifacts.

Due to the planned reconstruction of revolutionary-period military huts at the Pennsylvania Brigade site, the purpose of Cotter's (1961b) work was to survey the site for significant archeological remains. As a part of this survey, Cotter attempted to evaluate Baker's work at the site using existing documentary materials (e.g., excavation maps) and subsurface testing. Subsurface testing consisted of the excavation of test pits (numbered 1 to N). Spatial and stratigraphic controls were exercised. Detailed drawings and photographs of the features encountered and an inventory of the artifacts recovered were made (Cotter 1961a). A final report and extensive fieldnotes also exist. In addition to defining the location and arrangement of both "upper" and "lower" hut lines, Cotter concluded that:

> There is no reason to suppose from available evidence that the CCC ever produced more than conjectural evidence of the location of more than one hutsite, and this site location is not now known (1961:21-23).

After a detailed study of additional documentary materials in conjunction with those used by Cotter, Rutsch and Peters (1976a:478-479) suggest that Baker's original identification of huts is correct. Furthermore, Rutsch and Peters (1976a:478) also contend that despite the apparent regularity of the Brigade lines, "their spacing relative to one another is inconsistent with any of the Brigade encampment patterns we know of."

The artifacts associated with Rutsch were unearthed during hut stabilization at the Pennsylvania Brigade site (Rutsch 1982:4). No spatial or stratigraphic information is available for the artifacts. Consequently, the only provenience information recorded for the artifacts is the site designation.

Fort Nonsense

Two archeological investigations were conducted at Fort Nonsense. The purpose of Baker's excavation was to gather structural evidence for the reconstruction of the fortification (Cox 1936; Rutsch and Skinner 1971:3). Baker never completed a report of his work, and the location or existence of his fieldnotes is unknown. Rutsch and Skinner (1971:3-4) however, note that Borreson's report in Weig (1956) summarizes Baker's excavations and provides a site map. Two additional maps (Map No. 104 and 105) also exist at MORR. No discussion of excavation procedures used or the spatial and stratigraphic controls exercised is presented by Borreson.

A list of the proveniences excavated and artifacts recovered does exist (National Park Service n.d.d.). From these sources it is apparent that eight proveniences contained artifacts. Information on line, station (spatial coordinates), and depth (stratigraphic provenience information) accompanies the artifacts.

For logistical reasons, each of Baker's eight provenience units is assigned a number from one to eight (Table 3). As a result, the only provenience information recorded on the artifact catalogs is the site designation and the provenience unit code number (Table 2).

Table 3. Fort Nonsense Provenience Information

Code Number	Line	Station	Depth
1	O	110	-
2	O	0+62+0	8-10 inches
3	T	0+40+0	8 inches
4	Q to S	0+08	8 inches
5	Q to S	0+10+0	10 inches
6	R to T	0+08 to 0+12	10 inches
7	P to S	0+00 to 0+10	10 inches
8	P to R	10 to 12	10 inches

Due to the destruction of the fortification in 1965, the purpose of Rutsch and Skinner's (1971:6) archeological excavations was to "relocate the walls of the fort from original features if possible, or from the traces of the razed reconstruction."

Field-East-of-Cemetary

Baker's archeological investigation of this area consisted of the excavation of a number of "test ditches" east of the First Pennsylvania Brigade site and several test squares and trenches west of the site (Map 101). Within the latter area, Baker uncovered a series of "old fire beds" that contained a variety of artifacts. Although Baker's excavations began in 1934, written documentation of his work does not appear until 1935 (Baker 1935c:611). Unfortunately, this memorandum does not describe the excavation methodology used. A formal report of the excavations was never completed. While photographs of the excavations exist, no fieldnotes or an artifact catalog are available. Although spatial controls were exercised, no stratigraphic information exists for the artifacts.

Reputed New Jersey Brigade Cantonment

After reviewing Baker's work in this area, Rutsch and Peters (1976a:361-363) concluded that although this site probably related to the Continental Army's activity in the Jockey Hollow area, it is not possible, given the available information, to ascribe a function to or determine whether this site was a part of the New Jersey Brigade encampment site of 1781-1782. Given this, the MACMP separately cataloged Baker's and Ditchburn's artifacts as two different sites.

Four areas were excavated (Rutsch and Skinner 1971:6-9). A grid system was set up and feature and level information was recorded. Fieldnotes, a site map (Rutsch and Skinner 1971:Figure 9), photographs, and a final report are available. Although no artifact catalog exists, information about each artifact was written on the outside of the artifact envelopes. All artifacts recovered exist at MORR.

Although excavations of the Reputed New Jersey Brigade cantonment were supervised by Baker, daily field operations were overseen by Jones. As Rutsch and Peters note (1976a:361), excavations were conducted on two separate occasions. This was confirmed by the MACMP through the discovery of two artifacts with associated tags (National Park Service 1936) and several artifacts with an associated orange card describing provenience information and a date (National Park Service 1938).

Like previously described sites that were excavated or supervised by Baker, this site was divided into five-foot square plots or blocks. These were subdivided into one-foot squares. Stratigraphic information is only available for the artifacts recovered in 1938 excavations. While no final report was ever completed, Jones' (1938) fieldnotes and a number of field drawings are available at MORR and also in Peters and Rutsch (1976:Appendix A). No catalog of artifacts recovered from the excavations exists.

New Jersey Brigade

The MORR repository contains artifacts from Ditchburn's (1968, 1971) archeological investigation and Rutsch's (1982) hut stabilization activities.

The goal of Ditchburn's excavations was "to unquestionably prove the occupation of the area and to map the remaining hut sites which may be located by visible surface indications" (Ditchburn 1968:1).

Ditchburn's (1968:3-5) excavation methodology consisted of first gently raking the leaves on the present ground surface above the huts and then troweling and screening all dirt. Provenience information for the artifacts consists of hut type, hut number, and when appropriate, feature type (Table 2). No other spatial or stratigraphic information exists for the artifacts. Although Ditchburn's fieldnotes do not exist at MORR, his field procedures and strategies are detailed in his reports (1968, 1971). An excavation map, inventory of artifacts (Ditchburn 1968:10-13) and photographs (Ditchburn 1971:plates 1-7) of some of the artifacts are also available in these reports.

Ditchburn's investigations revealed 36 possible hut sites as well as a number of other features (e.g., refuse area, privy). While Ditchburn (1971:4) believes that one officer's hut and one enlisted man's hut were identified, Rutsch and Peters (1976a:409) contend that the former was a company officer's hut and that the field officers' line has not been identified.

The only provenience information for the artifacts retrieved from Rutsch's (Rutsch and Peters 1976a:410) stabilization activities is the hut type (e.g., company officer's hut). No formal report (Rutsch 1982:3), fieldnotes, maps, or artifact catalog is presently available.

Hand's Commissary

Although Rutsch and Peters (1976a:572) conducted limited archeological investigations in this area, the MORR repository only has the artifacts from Baker's excavations in 1936.

The purpose of Baker's excavations was to expose the ruins in the area so that an interpretive trail for the public could be constructed (Cox 1936). While some photographs of his work are available (Peters and Rutsch 1976:Figures 9-11), no fieldnotes, site map, or final report are available. The provenience system and excavation methodology used therefore is uncertain. Although the number of artifacts recovered from the excavations has been noted (Cox 1936, 1937), no artifact catalog exists. In addition, Hopkins and Baker's (1940) memorandum, discussed in the Wick house section, also recommends that a number of artifacts from the Hand's Commissary site be temporarily disposed of. If this recommendation was adopted, this would certainly account for the scarcity of artifacts from this site. With respect to those artifacts that do exist, it should be noted that these do not have any associated spatial or stratigraphic provenience information.

Hand's Brigade

The only archeological excavation in the Hand's Brigade area was by Cambell (1963a). The purpose of Cambell's excavations was to determine whether the hut lines were destroyed by plowing as reported by Tuttle in 1871 (Cambell 1963a:1). According to Cambell (1963a:2), the results of his excavations confirmed Tuttle's remarks.

Although Cambell's fieldnotes do not exist, a general description of his excavation strategy does (Cambell 1963a:4-5). Photographs, a site map, and detailed feature drawings also are available (Cambell 1963a:6-7, Figure 1). While spatial controls were exercised, stratigraphic controls were not. Although no artifact catalog detailing the numbers of artifacts found was kept, the kinds of artifacts recovered from certain features have been noted (Cambell 1963a:6-7). Provenience information appears on the artifacts (e.g., CH5, CH9). While the H9 probably refers to hut number 9, it is not known what the "C" refers to. It is possible that is is used to designate the Connecticut Brigade (Cambell 1963a:Figure 1).

Ford Mansion

The MORR repository contains artifacts from Baker's 1937 excavations and the Park's restoration activities.

The purpose of Baker's archeological investigations was to assist in the gathering of accurate structural evidence to be used in the restoration of the Ford Mansion (Press Release 1937; B.B. 1982). No final report of Baker's excavations was ever completed. An artifact inventory (Ford Mansion Artifact Inventory Sheets n.d.) and a site map (Master Map No. 200) do exist.

Similar to other sites that were excavated or supervised by Baker, the area around the Ford Mansion was divided into plots and squares. The specific location of the excavations (e.g., cellar foundation - see Table 2) sometimes is also noted. Although the MORR repository has a large number of artifacts from the excavations, some artifacts still may be permanently missing or temporarily disposed of (Hopkins and Baker 1940).

In 1964, several parts of the Ford Mansion underwent rehabilitation. Due to the lack of archeological supervision, artifacts found by individuals in the course of their work have no known spatial or stratigraphic provenience information.

Connecticut Brigade

Although Rutsch and Peters (1976a:103-104) did some limited survey in the Connecticut Brigade area, Cambell's (1962) excavations were the only subsurface investigations in this area. The purpose of Cambell's excavations was to determine the lines of the first and second Connecticut Brigade and to document similarities and differences in the placement and arrangement of hut features (e.g., fireplaces). Because Rutsch and Peters (1976a:100-103) provide a thorough and lucid discussion of Cambell's findings, no summary of these is given here.

Although no fieldnotes or an artifact inventory exists at MORR, several reports are available (Cambell 1962a, 1962b, 1962c, 1963b). These reports briefly mention what kinds of artifacts were recovered in each feature and include site maps. Provenience information available includes hut type (e.g., field officer's), hut number, and brigade line tier (e.g., upper, middle, lower).

New York Brigade

The MORR repository contains artifacts from two archeological excavations. Although there is no written documentation identifying the excavators of the first collection (Table 2), it probably is from the Civilian Conservation Corp's 1930's clearing of the brush from the brigade area (Rutsch and Peters 1976b:16-18, 1977:34). Other than the site designation (i.e., NY), no provenience information exists for these artifacts.

The other collection consists of artifacts from Rutsch and Peters' (1976b) survey of the "New York Brigade" area. Rutsch and Peters (1977:34) note that their attempts to locate the brigade were fruitless. In fact, no revolutionary war-period artifacts were retrieved from their survey. Provenience information consists of grid coordinates and level information (Table 2).

Aquaduct Trail/Jockey Hollow Surface Finds

A small number of surface finds by unknown individuals in the Aquaduct Trail area (Rutsch and Peters 1977:26) and at other Jockey Hollow locations exist in the MORR repository. The only written documentation identifying the artifacts is two tags labeled "Aquaduct Surface Finds" (National Park Service n.d.b.) and "Jockey Hollow Surface Finds" (National Park Service n.d.c.). Several artifacts from the latter area have known specific locations (Table 2).

Second Maryland Brigade

The Second Maryland Brigade artifacts were recovered by Rutsch et al. (1973) from (1) the investigation at Stroley's orchard, (2) unsystematic surface collections, and (3) a metal detector survey in various areas in the Second Maryland Brigade. The purpose of their archeological investigations in this area was to determine what, if any, subsurface evidence exists for the Brigade.

As Rutsch and Peters (1976a:598) note, at Stroley's orchard the topsoil was removed to below the plowzone. A grid system was set up and excavation proceeded according to arbitrary levels. One feature and a number of artifacts were uncovered (Rutsch et al. 1973).

Little written documentation describing the precise location of artifacts recovered from surface collections and the metal detector survey exist. With the former, artifacts were retrieved from the "wooded portion" of the Brigade area (Rutsch 1982:2). No other provenience information for these artifacts exists. Artifacts encountered with the metal detector survey have no known spatial or stratigraphic information.

CHAPTER III

CATALOG SYSTEM

The purpose of this section is to: (1) discuss the specific factors that influenced the choice of the artifact categories and (2) provide an explicit definition for these categories.

Design

The structure of the MACMP catalog system is designed to facilitate both efficient data entry and easy retrieval of data concerning the artifacts themselves (e.g., counts, provenience association) as well as their storage location.

The data for each site was computerized using the Query/45 program of the Data Base Management software package of the Hewlett-Packard 9845C mini-computer. Computerization not only permits quick and easy data retrieval for management purposes but also allows intra-site and inter-site artifact comparisons to be made among sites within the North Atlantic Region of the National Park Service that are processed by the Archeological Collections Management Project. All collection's data are stored on flexible disks. Information concerning access to and use of the computerized data should be directed to the Division of Cultural Resources of the North Atlantic Regional Office.

Format

As noted in Chapter II, two different artifact catalogs are used: (1) provenience-based, and (2) item-based. The provenience-based catalog (Appendix A) is used to record the total number of artifacts within particular categories according to the unit from which they were excavated. The totals, however, do not include complete vessels or sherds that comprise mended vessels recorded on the item-based catalog.

To facilitate computerization of the provenience-based catalog, the categories were rearranged according to eleven artifact classes (Table 4). This rearrangement will make inter-Park artifact comparisons easier since these classes will be used in all future Archeological Collections Management Projects. The provenience-based catalog was developed and designed for archeological researchers who most often prefer their data quantified by excavation unit, and for National Park Service personnel who must regularly inventory their collections.

The item-based catalog is used to record complete and near-complete ceramic and glass vessels individually. The catalog was primarily developed to assist Park personnel in the selection of vessels for display and other interpretive purposes. For those who may not be completely familiar with the vessels recorded in this catalog or have the necessary time or expertise to research them, the following information is recorded in the item-based catalogs.

Table 4. Artifact Catalog Summary

Artifact Class	Category
Historic Ceramics	
redware	plain, glazed, trailed slipware
tin-enameled	delft
coarse buff-bodied earthenware	combed and dotted, yellow ware, other earthenware
creamware	plain, edge-decorated, annular-decorated, mono and polychrome handpainted, other creamware
pearlware	edge-decorated, transferprinted, other pearlware
whiteware	whiteware, transferprinted
other refined earthenware	rockingham, other refined earthenware
stoneware	bellarmine/frenchen, westerwald, raeren, white salt-glazed, utilitarian import, utilitarian domestic, other stoneware
porcelain	porcelain
Tobacco Pipes	
pipe stems	4/64", 5/64", 6/64", other, unidentifiable
pipe bowl	pipe bowl
Glass	bottle glass
Apparel	footwear, button, buckle
Household and Personal Objects	
tableware	curved glass, miscellaneous glass, spoon, fork, knife, unidentifiable cutlery
furniture and hardware	furniture part
other household and personal	personal object, toy, domestic/household, pewter, tin

Table 4. Artifact Catalog Summary (continued)

Artifact Class	Category
Architectural Material	
architectural material	window glass, building material
nails	handwrought, machine cut, wire, unidentifiable nail
other hardware	hardware, iron, lead, brass, copper, unidentifiable
Tools and Hardware	
hand tools	tool
transportation objects	tack
weaponry/accoutrements	military accoutrement, musket/gun part, buckshot, musket ball, cannon ball/grapeshot, miscellaneous munition
gunflints	rounded heel, rectangular heel, flint
Faunal and Floral Remains	bivalve, bone, other organic
Lithics	
prehistoric lithics	worked lithics
Unidentifiable	unidentifiable
Soil Samples	soil samples

Vessels are recorded in the ceramic vessel catalog (Appendix B) by vessel number, provenience, ceramic type, vessel type, date range, and storage location. As noted in Chapter II, the excavator's original provenience designations are retained. In instances where a mended vessel is composed of sherds recovered from several provenience units, the one with the greatest number of sherds is recorded. If there are equal numbers of sherds from two or more different units, the one which comprises the largest proportion of the vessel is used. Ceramic type refers to the categories in Table 4. Vessel type describes the form or function of a vessel. Vessels are classified according to four types (Table 5). These are consistent with and often derived from Noel Hume (1976), Watkins (1950), Ramsay (1939), and Moran et al. (1982). For purposes of consistency, date ranges are from South (1978), although the above sources were also consulted. Because of the lack of time, dates for those ceramics displaying maker's marks were not checked.

Vessels are recorded in the glass vessel catalog (Appendix C) by vessel number, provenience, vessel form, function, manufacturing process, date, and storage location. Form refers to the morphology of a vessel. Vessels are classified according to one of seven forms (Table 6). Function is defined by the content or a vessel's use. Vessels are classified according to one of ten functions (Table 6). Manufacturing process refers to the technological process used to produce a vessel. Vessels are classified according to one of three processes (Table 6) as defined by Lorraine (1968), McKearin and McKearin (1941, 1950), McKearin and Wilson (1978), Munsey (1970), Newman (1970), Switzer (1974), and Toulouse (1967). Date ranges were assigned to the glass vessels on the basis of morphological characteristics and traits of manufacture. The above references were used to assign date ranges. In the comments section, the place of manufacture (e.g., United States, England, Holland, France, and Unknown) is recorded.

Artifact Categories: Basic Considerations

Before discussing the factors that influenced the choice of the individual artifact categories, several matters need to be noted. First, it is recognized that historic archeologists have differences of opinion about different artifact categories and classificatory schemes. This is understandable since classification systems are not real but merely constructs to help the researcher answer particular research questions (Hill and Evans 1972). This is not to deny that an emic understanding of historic ceramic terms is possible or ignore the value and utility of the documentary record in ways that Deetz (1977) has suggested. Yet one can not assume that the only or best classificatory system to answer specific research questions is to use manufacturers' and distributors' ceramic terms (Miller 1980). Indeed, when classificatory schemes are constructed for specific research problems, detailed attribute analysis (Binford 1965; e.g., Braun 1977; Plog 1977) has proved to be more useful than traditional classificatory schemes (i.e., types, wares, varieties). Nevertheless, because the primary goal of this project is to render the collection accessible and because time, money, and personnel are real constraints, it is not feasible or desirable to develop a detailed attribute-based classificatory system. One potential research avenue for the MORR data may be to develop and test this type of system or the utility of other systems developed by historic archeologists (e.g., Miller 1980).

Table 5. Ceramic Vessel Type and Examples

Type	Example
Flat	plate, saucer, serving platter, milk pan, basin.
Bowl, Cup	eating, drinking, serving, and mixing bowls; cup, mug, porringer, casserole.
Pots, Jugs, Jars	cooking and storage pots; tea, coffee, and chamber pots; crock, jar, jug.
Other	sugar bowl, creamer, gravy boat, bottle, butter dish.

Table 6. Glass Vessel Attributes and Categories

Attribute	Category
Form	flat-sided, round, oval, squat, cylindrical, paneled, other.
Function	beverage, culinary, medicinal, household, household or medicinal, ink, toiletries, tableware, lighting, decorative.
Manufacturing Process	free-blown, blown-molded, automatic bottle machine.

Given this, several factors were considered important in the choice of artifact classes and categories. First, artifact class and categories that historic archeologists presently are in agreement with were chosen. This is particularly true for the ceramic categories. Second, because the purpose of the MACMP catalog is to facilitate comparisons with other archeological sites in the North Atlantic Region of the National Park Service, artifact categories consistent with those used in cataloging other Park collections in the region (e.g., Salem National Historic Site) were chosen. Third, in order to deal with objects similar in material and function, yet few in number, summary categories were created.

Because of the quantity, diversity, and significance of some artifacts (e.g., ceramics), some classes and categories receive more thorough treatment than others. Whenever possible, individual artifacts are classified according to (1) raw material type (e.g., earthenware, stoneware, iron, brass), (2) method of production (e.g., rounded heel vs. rectangular heel gunflints), and (3) function (e.g., architectural). In some instances however, when more detailed analysis is handled better by a specialist, cataloging is limited to the nature of the material or its function.

Definitions

The order in which the artifact categories are discussed generally follows the sequence in which they appear in the artifact catalog (Appendix A). Because some categories are self-explanatory, not every category in the catalog is discussed. For convenience, Table 4 summarizes the artifact catalog by artifact class and category.

Historic Ceramics

Ceramic sherds and vessels of the historic period that were used in the preparation, storage, cooking, and serving of food are recorded in this section of the artifact catalog. Although less frequently encountered, flowerpots and ceramic toiletry items (e.g., chamberpots) are also classified here. Twenty-six categories were used to record the MORR ceramics. Each category is classified on the basis of its paste: (1) earthenware, (2) stoneware, or (3) porcelain.

In addition to paste, each of the ceramic categories is distinguished from one another on the basis of temper, glaze, or decoration. An attempt to determine the place of manufacture, temporal placement, and historic significance of the ceramic categories is made. The attributes used and histories discussed often are derived from and consistent with those detailed by historic archeologists (Noel Hume 1976; South 1978) and ceramic specialists (Godden 1975; Lewis 1969; Ramsay 1939; Watkins 1950, 1959).

I. Earthenware

Earthenware has a relatively soft, water-absorbent paste in comparison with stoneware and porcelain (Deetz 1977:47). To make the vessels impermeable, often, the earthenware surface was glazed. While lead glaze was commonly used, various compounds were added to the lead to produce a range of different colors. Nineteen earthenware categories are represented in the MORR collections. These can be broken down into seven earthenware varieties: (1) redware, (2) tin-enameled ware, (3) coarse buff-bodied earthenware, (4) creamware, (5) pearlware, (6) whiteware, and (7) other refined earthenware.

Redware

A red earthenware paste is the only attribute used to define redware ceramics. Plain redware, glazed redware, and trailed slipware are present in the MORR collections.

plain redware. ceramics classified as this ware have an unglazed, coarse red earthenware paste and surface.

glazed redware. ceramics classified as this ware display two attributes: (1) a coarse red earthenware paste, and (2) a lead glaze on the interior and/or exterior of the vessel. Although glaze colors often include black and brown, orange, yellow and green are found. These latter colors result from the addition of oxidized copper filings to the glaze (Watkins 1959:4).

trailed slipware. three attributes define this ware: (1) a coarse red earthenware paste, (2) the presence of a trailed yellow slip decoration on the vessel's surface, and (3) an overall clear lead glaze. Godden (1975:17) suggests that slip decorating represents "an early standard form of embellishing" on both American and English redware as early as ca. 1670 and as late as 1795.

The trailed slipware collection at MORR includes regional and Pennsylvanian varieties. The latter are identifiable on the basis of their bold abstract designs. Although in the Pennsylvania area, lettering (e.g., names, initials, inscriptions) is a common decorative element on redwares, lettered designs do not appear in the collection. Embellished forms, such as rounded pie plates with crimped edges, are present however.

Tin-enameled Ware

Tin-enameled wares exhibit the following attributes: (1) a soft earthenware paste and (2) a thick lead glaze containing a tin oxide (Barber 1906). Delft is the only tin-enameled ware found in the MORR collections.

delft. this ware has a soft buff to pink colored paste, often so porous that it can be scratched easily with a fingernail. In cross section, the sherd walls are relatively thick and the enamel appears to sit on the surface rather than blend into the paste. This enamel is often pitted, and can be flaked off the body quite easily. Visually, the overall appearance of a delft surface is opaque and dull looking. Dark blue and polychrome geometric or floral designs are common handpainted surface decorations.

Known since the sixth century A.D., the technique of tin enameling arrived in England ca. 1567 when Jaspries Andries and Jacob Janson of the Netherlands established the first factory in Norfolk (Noel Hume 1976:203; Lewis 1969:35; Solon 1906). The production of delft continued well into the nineteenth century when white salt-glazed stonewares and creamwares supplanted the tin-enameled market.

Coarse Buff-Bodied Earthenware

Coarse buff-bodied earthenwares have a coarse buff earthenware paste. Three types exist in the MORR collections: (1) combed and dotted, (2) yellow ware, and (3) other earthenwares.

combed and dotted. three attributes define this ware: (1) a relatively hard, coarse, buff to pink earthenware paste, (2) a slip decoration consisting of repetitive thin, wavy brown lines or dots on the vessel's surface, and (3) a smooth, often glossy, yellow surface color due to the lead glaze.

The technique of combing involves drawing a thin wire, horn, leather comb, or similar object with brown slip on it, over the vessel's surface (Woodhouse 1974:157; Godden 1975:17). In contrast, the spots which characterize dotted wares are brown drops of slip on the vessel's surface. It should be noted that also recorded in the combed and dotted category are fragments of undecorated portions of these wares.

South (1978:72) and Noel Hume (1976:135) suggest that combed and dotted wares were produced in England initially at Staffordshire and then at Bristol and Wrotham from 1670 to 1795. Noel Hume (1976:134) further suggests that some production of this ware may have occurred in New England beginning in the second half of the seventeenth century.

yellow ware. two attributes define this ware: (1) a highly fired, relatively thick buff earthenware paste, and (2) a transparent lead glaze.

Ramsay (1939) and Ketchum (1978) indicate that yellow ware is a utilitarian earthenware manufactured in the United States from the 1830s to the 1930s, and in England from the 1840s to the 1900s. Food preparation vessels (e.g., mixing bowls) are common vessel forms.

other earthenware. ceramics recorded in this category have a fairly thick coarse buff-colored earthenware paste. This category includes earthenwares that are either (1) so highly fragmentary or in such poor condition (e.g., burnt, loss of glaze) that they could not be assigned to another specific category, or (2) coarse buff-bodied wares that are identifiable but too small in number to warrant a separate category.

Creamware

Two attributes define this ceramic variety: (1) a thin, hard, fine-grained cream to white earthenware paste, and (2) a clear lead surface glaze. The overall appearance of a creamware vessel has a very pale yellow or yellow-green tint due to the addition of copper to the lead glaze. Very often this tint is noticeable in the crevices of the vessel.

The development of creamware is the result of many individuals' work in several districts of England (Solon 1906:199-299). Although Wedgwood perfected creamware in Burslem in 1762 (Noel Hume 1976:125), "most examples of English creamware are still attributed to Leeds, Liverpool, or Staffordshire..." (Austin 1978:39; see also Moore 1909; Noel Hume 1976; Towner 1965). In general, most creamware assemblages in America post date 1770 (Miller and Stone 1970:42-44) even though production continued in England until 1820 (Towner 1957; Noel Hume 1973, 1976; South 1978). The perfection and subsequent popularity of creamware is viewed as one of the most important ceramic developments of the eighteenth century (Noel Hume 1976:123). Five categories of creamware are present in the MORR collections: (1) plain, (2) edge-decorated, (3) annular-decorated, (4) mono and polychrome handpainted, and (5) other creamware.

plain creamware. this category is used to record undecorated and unpainted creamware sherds.

edge-decorated creamware. vessels classified as edge-decorated exhibit molded relief and/or handpainted rim designs. On dinnerware, while the royal pattern, feather-edging, bead and reel, and queen's shape (Noel Hume 1972, 1976:116, 1973:Figure 2) are common creamware edge-decorated designs, shell-edging is the most prevalent pearlware edge decoration.

annular-decorated creamware. this ware exhibits an underglaze annular surface decoration. Simple annular, mocha, and fingerpainted designs are present in the MORR collections. These decorations can be dated to specific time periods (Van Rensselaer 1966; South 1978:72; Noel Hume 1976). For example, vessels with horizontal bands of color were manufactured between 1780 and 1815. Vessels with mocha designs (e.g., fern-like ornamentation), were manufactured from 1800 to 1820. Fingerpainted vessels which display cloud-like swirls of colored lines, were produced from 1790 to 1820. It is not uncommon to find several of these designs used on a single vessel.

monochrome and polychrome handpainted creamware. this category is used to record both monochrome and polychrome handpainted creamware sherds. Vessels that exhibit a handpainted overglaze-enameled floral decoration composed of two or more colors date to ca. 1765-1810 (South 1978:72). Deetz (1977:10-11) has hypothesized that handpainted creamwares are not usually found on sites occupied by individuals of only average means.

other creamware. this category is used to record other decorated creamwares such as those which exhibit molding, ribbing, plaiting, or the application of designs in raised relief. Molded items in this category differ from those recorded in the edge-decorated category in that the designs are not confined to the rim. Items that exhibit more than one decorative technique (e.g., handpainting and transferprinting) also are classified in this category.

Pearlware

Pearlware exhibits the following attributes: (1) a thin, hard, finegrained white earthenware paste, and (2) a clear, lead-glazed surface. Due to the addition of cobalt to the lead glaze, the surface of pearlware vessels has an overall light blue hue. Very often this blue is noticeable in the crevices of vessels.

Noel Hume (1978a:42) states that "Pearlware represented one of the landmarks of English earthenwares...." Although pearlware began to replace creamware in England by 1765, Noel Hume (1978a:46) suggests that 1785 is a more reasonable date for its arrival in the American colonies because prior to this date, trade was disrupted by the Revolutionary War.

Three categories of pearlware are present in the MORR collections: (1) edge-decorated, (2) transferprinted, and (3) other pearlware. The items in these categories exhibit the two attributes described above, yet differ on the basis of surface treatment and/or decoration. These decorative elements as well as others not present in the MORR collections (i.e., plain, blue handpainted, annular, polychrome) can be dated to specific time periods within the pearlware manufacturing era.

edge-decorated pearlware. rim fragments with a handpainted or molded relief decoration are recorded in this category. Four of the most common molded-in-relief pearlware rim designs are: (1) shell-edged, (2) the bead and reel pattern introduced ca. 1762, (3) featheredging, a rim design composed of relief-molded fronds, associated with pearlware manufactured between 1800 and 1820, and (4) the fish-scale rim design seen on pearlware manufactured between 1800 and 1820. No shell-edged specimens are present in the MORR collections.

transferprinted pearlware. this ware displays an underglaze-transferprinted surface design. The technique of transferprinting, perfected ca. 1756 by Sadler and Green of Liverpool, England first appears on pearlware ca. 1787 yet was not popular until ca. 1795 (Noel Hume 1976:129; Little 1969; Coysh 1971). Production continued until ca. 1840. Although other monochrome colors as well as polychrome transferprinted pearlware designs exist, blue transferprinted varieties predominate. Oriental blue willow motifs, floral patterns, European, geometric, and realistic transferprinted scenes are the most common design elements on transferprinted vessels.

other pearlware. this category is used to record other decorated pearlwares that exhibit molding, ribbing, plaiting, the application of designs in raised relief, or decorative techniques that do not appear in the artifact catalog (e.g., spatter or sponge decoration). In addition, items which exhibit more than one decorative technique (e.g., handpainting and transferprinting) also are classified in this category.

Whiteware

Whiteware exhibits the following attributes: (1) a fairly thin, very hard, fine-grained white paste, and (2) a clear, glossy white surface glaze. By 1813-1820, this tableware supplanted pearlware (Noel Hume 1976:131). In the past as well as the present, whiteware production occurs in the United States and Europe.

The whiteware assemblage is divided into two categories. Both hardwhite (ca. 1820+) and stoneware products (i.e., ironstone, granite china, and semiporcelain) (ca. 1813+) are recorded in these categories.

whiteware. this category is used to record all whiteware vessels that are handpainted, unpainted, or molded.

transferprinted whiteware. this category is used to record only transferprinted whitewares.

Other Refined Earthenware

Other refined earthenwares have a refined buff or white earthenware paste.

rockingham. this ware is characterized by two attributes: (1) a vitrified buff earthenware paste, and (2) a glossy brown, often mottled, exterior glaze. In addition, rockingham often exhibits a clear yellow interior glaze. Although first produced in Swinton, England during the late eighteenth century on property owned by the Marquis of Rockingham, great quantities of this typical and popular tableware were produced in America ca. 1840-1860.

other refined earthenware. this category is used to record ceramics that are either (1) diagnostic refined earthenwares that are not numerous enough to warrant a separate category (e.g., lusterware, agateware) or (2) refined earthenwares that have been burnt and/or lost their glaze and can not be more specifically identified.

II. Stoneware

Stonewares are highly fired ceramics with a hard, vitreous, nonabosrbent paste. Webster (1971:40) notes that, unlike the red earthenwares, stoneware is fired at a temperature of approximately 2300° F. Among other things, the color and surface texture of stoneware results from different clay compositions, kiln firing conditions, and the kinds and amounts of glaze applied to the vessel (Stewart and Cosentino 1977:21). Six stoneware categories exist in the MORR collections: (1) bellarmine/ frenchen, (2) westerwald/raeren, (3) white salt-glazed, (4) utilitarian import, (5) utilitarian domestic, and (6) other stoneware.

bellarmine/frenchen. these stonewares exhibit: (1) a thick gray stoneware paste, and (2) a light to golden brown, mottled salt-glazed exterior surface. Common vessel forms include bottles and jugs. These often exhibit one of three types of ornamental relief designs: (1) medallions, (2) pseudo-armorial devices, and (3) a bearded human face, inaccurately alledged to be a caricature of Cardinal Roberto Bellarmino (Noel Hume 1976:55-57). Beginning in 1550 and continuing throughout the first quarter of the eighteenth century (Noel Hume 1976:57), these Rhenish stonewares were manufactured in and around Frenchen.

westerwald/raeren. two attributes are used to identify these ceramics: (1) a gray stoneware paste and (2) an elaborate stamped, incised, and/or sprig molded surface decoration with cobalt blue and/or manganese purple glaze.

Noel Hume (1976:280) suggests that the first gray and blue stonewares were manufactured in the area of Raeren, Germany, ca. 1590 and are distinguishable from the westerwald decorative style. While the former exhibits ornamental friezes, the latter displays "elaborate floral and geometric designs achieved in a combination of extremely thin sprig molding and a multiplicity of combed lines" (Noel Hume 1976:280). Although production of westerwald is generally believed to have continued until 1775, it has been suggested that Rhenish stonewares became less popular in England and America in the 1760s (Noel Hume 1976:283).

white salt-glazed stoneware. these stonewares exhibit: (1) a thin, fine-grained white stoneware paste, and (2) a white salt-glazed surface. Also classified in this category is dipped white salt-glazed stoneware identifiable by a thick, fine-grained gray stoneware paste coated with a white salt-glazed slip.

The production of white salt-glazed stonewares in a "plethora of factories from Devonshire to London, and London to Glascow" occurred between 1720 and 1805 (Noel Hume 1978b:27; Mountford 1971, 1973). The rising popularity of creamware however, forced a decline in the production ca. 1775 (Mountford 1973:214). While popular, "this ware was competitive in price to pewter and superior to the wood and earthenwares traditionally used in English and Colonial households" (Moran et al. 1982:116). Noel Hume (1978b:16) suggests that white salt-glazed stoneware was one of the eighteenth century's most significant ceramic advances "not only because it marked the advent of a new body, but because it brought along with it a new design capability that was subsequently reflected in other wares."

utilitarian import stoneware. three attributes are used to identify this stoneware: (1) a hard, nonabsorbent, vitreous paste, (2) a salt-glazed exterior, and (3) the absence of an Albany slip on the vessel's interior surface. Vessels such as English Bristol cream ale bottles (Herskovitz 1978, Switzer 1974) and German mineral water bottles (Adams 1969:65) are recorded in this category.

utilitarian domestic stoneware. three attributes are used to define this ware: (1) a hard, vitreous stoneware paste, (2) a salt-glazed vessel exterior, and (3) an Albany slip. Albany slip is a clay wash that appears on a vessel's interior surface. Although it varies in color from medium brown to black, it most frequently appears as a dark metallic brown. This color variability is the result of differences in (1) clay sources along the Hudson River near Albany, New York, and/or (2) techniques of applying slip before or after firing (Webster 1971:40). Webster (1971:40) and Watkins (1950:11) indicate that after 1800 Albany slip appears on all North American stoneware.

other stoneware. similar to utilitarian imports, the stoneware in this category exhibits the following attributes: (1) a hard, vitreous stoneware paste, (2) a glazed vessel exterior, and (3) the absence of an Albany slip. However, this category also includes small, unidentifiable, and/or burnt stoneware sherds which do not fit in any other stoneware category.

III. Porcelain

Two attributes characterize porcelain: (1) an extremely vitreous, often translucent white paste, and (2) a white glossy surface glaze. Because of time constraints, all porcelain was recorded in a single category.

While Noel Hume (1976:257) suggests that porcelain was a fairly expensive tableware in the seventeenth and early eighteenth centuries, Tindall (Gordon 1975:162) notes that after the American Revolution porcelain was more affordable in the United States. Support for Tindall's assertion can be found in post-eighteenth century inventories. In addition, during this time, production spread to America as well as Europe and China (Noel Hume 1976:257).

Tobacco Pipes

Historic ball clay tobacco pipe bowls and stems are recorded in this section of the artifact catalog. Bore diameters were measured with the shank end of drill bits. Specimens with 4/64, 5/64, and 6/64-inch bore diameters are recorded separately. All other pipe stems with measurable bore diameters are recorded in the "other pipe stem" category. Pipe stems which are too fragmentary to obtain bore diameter measurements are recorded in the "unidentifiable" category. Pipe bowls and specimens composed of both stem and bowl are recorded in the "pipe bowl" category.

Glass

The glass is separated into four functional categories: (1) bottle, (2) window, (3) curved, and (4) miscellaneous. Because of time restrictions, the glass assemblage is not sorted into specific form or technological categories (i.e., categories detailing the method of production and associated time periods).

bottle glass. whole bottles and bottle fragments are recorded in this category.

window glass. this self-explanatory category is used to record window glass.

curved glass. this category is used to record glass fragments whose vessel function is indeterminate.

miscellaneous glass. this category is used to record glass fragments whose form or function is known, but because of their small number do not warrant a separate category.

Apparel

This section is used to record apparel and associated fastening devices. Although no cloth or leather garments are present in the MORR collections, the apparel class includes three categories: (1) footwear, (2) buttons, and (3) buckles. Each category (Appendix A) is self-explanatory.

Weaponry/Accoutrements

Artifacts that once functioned as weaponry include gunflints, musket/gun parts, and ammunition.

Gunflints are classified into three categories on the basis of morphology: (1) rounded heel, (2) rectangular heel, and (3) flints (i.e., indeterminate specimens).

Noel Hume (1976:20) indicates that gunflints with rounded heels are manufactured from French flints and frequently are found on eighteenth century sites. Gunflints with rectangular heels are believed to be English gunflints. Noel Hume (1976:221) suggests that, "By the War of 1812...the British were using at least as many English flints as French, and in the first half of the nineteenth century western traders - both American and British - were selling only the English product." Regardless of the gunflint shape, the presence of gunflints indicates a more advanced firearm than the matchlock or wheel lock (Noel Hume 1976:219).

Musket/gun parts include flintlocks, triggers, barrel parts, and other gun hardware.

Ammunition is classified into four self-explanatory categories: (1) buckshot, (2) musket balls, (3) cannon balls/grapeshot, and (4) miscellaneous munitions.

Accoutrements are classified as either: (1) tack for gear used in equipping a horse, or (2) equipment used by the military (e.g., cartridge boxes, pouches, canteens, and powder horns).

Nails

Nails are classified into one of four categories on the basis of manufacture: (1) handwrought, (2) machine cut, (3) wire, and (4) unidentifiable. The attributes used to identify these categories are those provided by Lee Nelson (1968) and Blaine Cliver (personal communication 1983).

handwrought nails. these nails were manufactured between 1620 and 1830 and are identifiable on the basis of four attributes: (1) tapering on all four sides of the shaft, (2) a four faceted head (rosehead), (3) the shaft is pinched slightly under the head, and (4) iron that is very ductile.

machine cut nails. these nails were introduced ca. 1795 and exhibit two characteristics: (1) a rectangular shaft, and (2) a shaft that is pinched approximately one quarter to one half of the way down its entire length.

wire nails. these nails post-date 1885 and exhibit two attributes: (1) four-faceted point, and (2) marks from the gripper die (i.e., consecutive horizontal lines visible under the head). Wire nails are manufactured from steel.

unidentifiable nails. nails that are too corroded, deteriorated, and/or fragmented to be classified into one of the above categories are recorded here. Included in this category are iron nails which have oxidized so badly that only a thin friable iron core inside a thick ferric oxide crust exists.

Metals

Excluding those metal objects that are recorded in specific functional categories (e.g., apparel, weaponry/accoutrements, nails), other metal objects are classified into one of six raw material categories: (1) iron, (2) lead, (3) brass, (4) tin, (5) pewter, and (6) copper. No silver or other unidentifiable metals are present in the collection.

Household and Personal Objects

This section of the artifact catalog is composed of nine functional categories. Seven of the categories are used to record household objects employed in the maintenance and decoration of the house: spoon, fork, knife, unidentifiable cutlery, domestic/household objects, furniture parts, and tools. Two other categories, personal objects and toys, are used to record personal possessions associated with grooming, writing, procurement and purchasing of goods (e.g., coins), ornamentation, and play.

Architectural Material

With the exception of window glass and nails, this section is used to record other (1) building material (e.g., brick, mortar, wood), and (2) construction hardware (e.g., nuts, bolts, latches, hinges).

Faunal and Floral Remains

This artifact catalog section includes three categories: (1) shell bivalves, (2) bone, and (3) other organics (e.g., floral, fuel and fire by-products as charcoal and burnt wood).

Lithics

This section of the artifact catalog is designed to record worked lithics, utilized as prehistoric tools (e.g., unifaces, points, bifaces, and groundstone implements) as well as lithics produced as a result of the manufacture of prehistoric tools (e.g., cores, flakes).

Unidentifiable

This section of the artifact catalog is reserved for unidentifiable objects which can not be assigned to any of the categories discussed above.

CHAPTER IV

FINAL REMARKS

The purpose of this chapter is to briefly summarize (1) the inter-site data problems and comment on their effect on the collections' research potential, (2) the general kinds of artifact classes available for study, and (3) problems encountered with the MACMP's provenience-based artifact catalog and recommended changes for future projects.

Two inter-site data problems exist for the MORR collections. First, as can be noted in Chapter II, most archeological sites have poor or inadequate provenience information for many if not all of the artifacts. For example, no spatial or stratigraphic information for artifacts from eight of the 16 sites is available; spatial but no stratigraphic information is known for artifacts from five other sites (Table 2). These problems either preclude or seriously hamper the study of certain kinds of research questions that require well-controlled, provenience data. If, on the other hand, stratigraphic control on single component sites is not critical to researchers, the MORR repository has a number of collections in which intra- and inter-site comparisons are feasible. This is especially true for the military encampment sites.

Second, because artifact recovery techniques varied among excavators, certain classes of artifacts may be under-represented or possibly absent from some of the collections. Depending on the research problem investigated and the kinds of artifacts used, this could result in a serious misinterpretation of the data. For example, inadequate screening techniques or the absence of screening will have a demonstrable effect on the kinds and amounts of artifacts recovered. This effect is particularly acute on fauna and floral remains. Although no systematic study of this problem was conducted by the MACMP, it is possible that differences in artifact recovery techniques at MORR may account for why certain military encampment sites have a plethora of faunal remains, while other sites have little or no remains. If one is interested in examining differences in consumption patterns among military personnel of different ranks, an evaluation of the effects of different recovery techniques would need to be conducted.

Third, although the MACMP personnel did not have time to assess the amount of missing artifacts from each site, during the cataloging process they did notice that a number of sites were missing large amounts of materials (e.g., Wick house, Ford Mansion, Hand's Commissary). Therefore, when using these collections, researchers need to determine the kinds and amounts of missing artifacts and evaluate the effects these have on one's analyses and results. Quantitative assessment of missing artifacts appears to be possible with a number of the sites through the use of available documentation (e.g., artifact catalogs, reports, memoranda).

Despite the above mentioned problems, the MORR archeological collections have a variety of artifacts worthy of study and display. Of particular note is the range and number of military-related items. For example, as noted in Chapter I, the gunflints appear to have been manufactured from a variety of different cherts. Determining the chert sources could prove significant. The collections also have a variety of gun parts that seem to represent different development in firearms. Similarities and differences among cantonments would be interesting to note. Along with other artifacts,

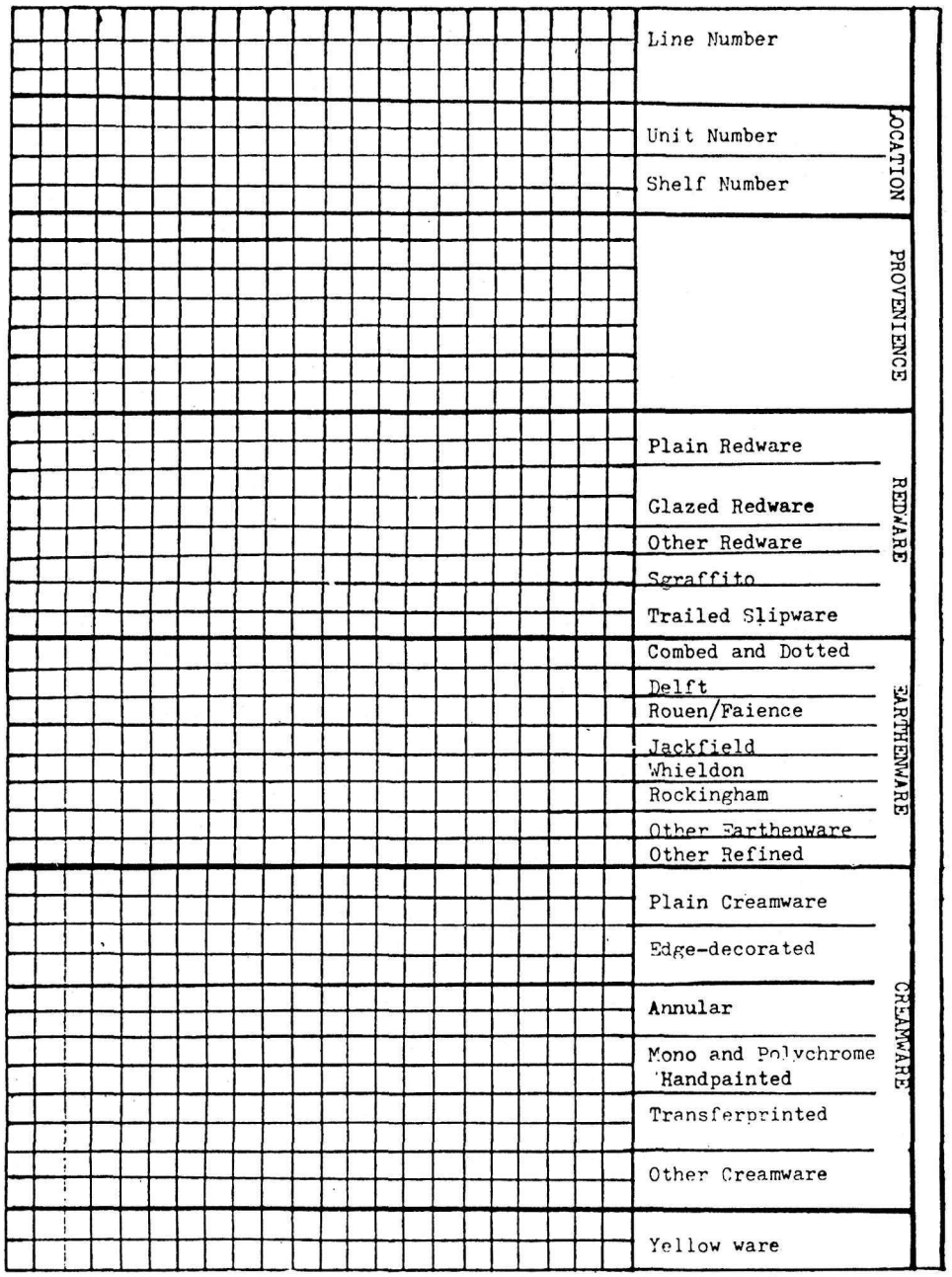
differences in the acquisition and/or distribution of supplies might be detected. Lastly, the archeological evidence of military-related items could be compared with the documentary record as Herskovitz (1978) has done. This may provide important clues to how closely military rules were followed.

Before closing, two problems with the provenience-based artifact catalog, encountered in the cataloging of the material, need to be noted. The first problem involves the choice of certain artifact categories. For example, the metal categories (Appendix A) record only raw material information. In subsequent Archeological Collections Management Projects (e.g., Great Island Tavern Site) it was found that most of the metals also could be cataloged according to general function (e.g., building hardware). Classification of the bone into diagnostic or undiagnostic mammal, amphibian, or reptile categories also would be both feasible and more useful for individuals using the collections.

The second problem concerns the design and organization of the artifact catalog. To facilitate easier, more rapid data entry, it is suggested that the catalog be designed so that all artifacts from a single provenience unit are recorded on a series of cataloging pages as opposed to lines. In addition, each artifact class should be organized in a matrix format so that several artifact attributes (e.g., form, function, raw material, manufacturing technique) are recorded simultaneously (e.g., the Great Island Tavern Site Artifact Catalog).

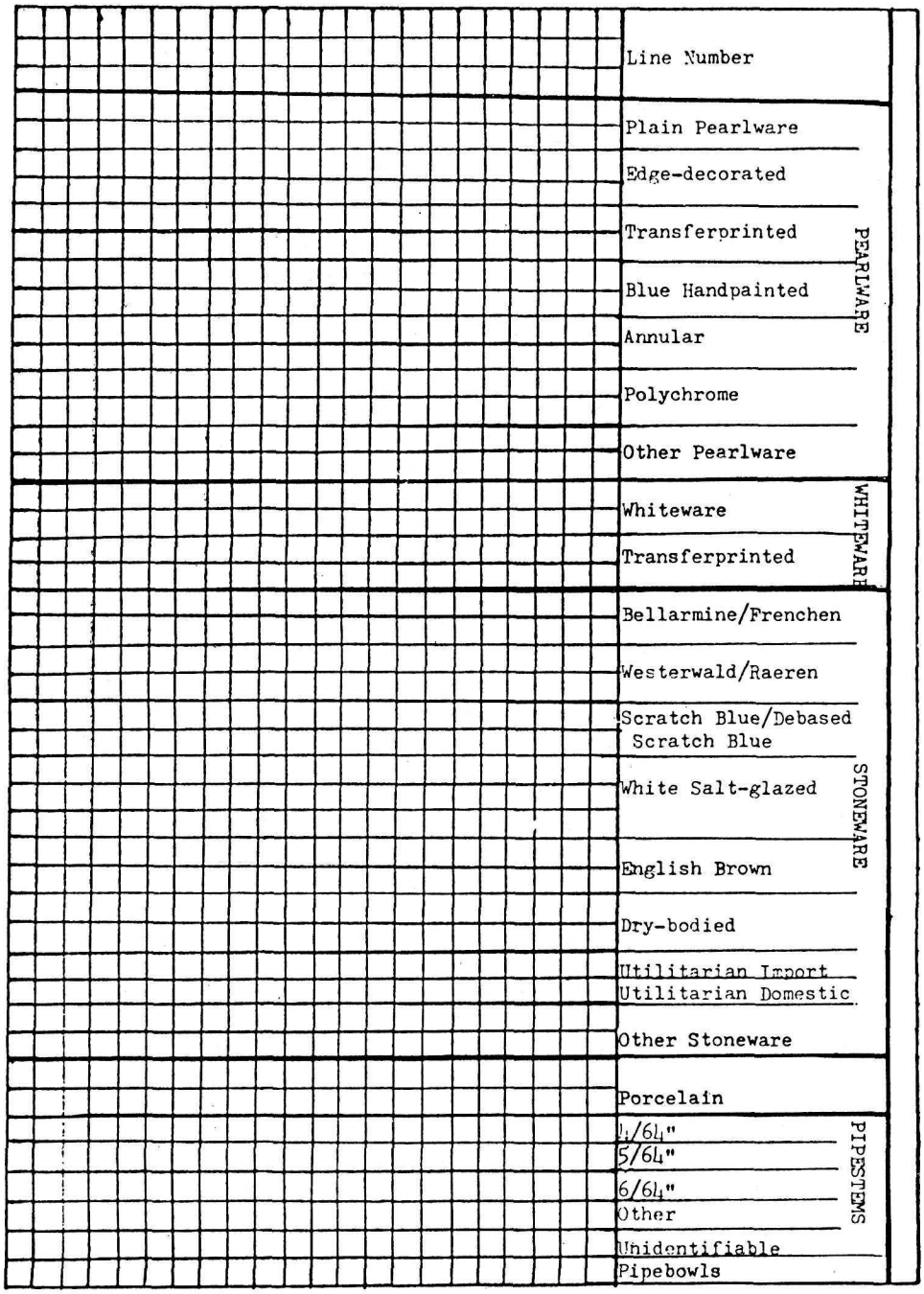
APPENDIX A

Provenience -Based Artifact Catalog, Page 1



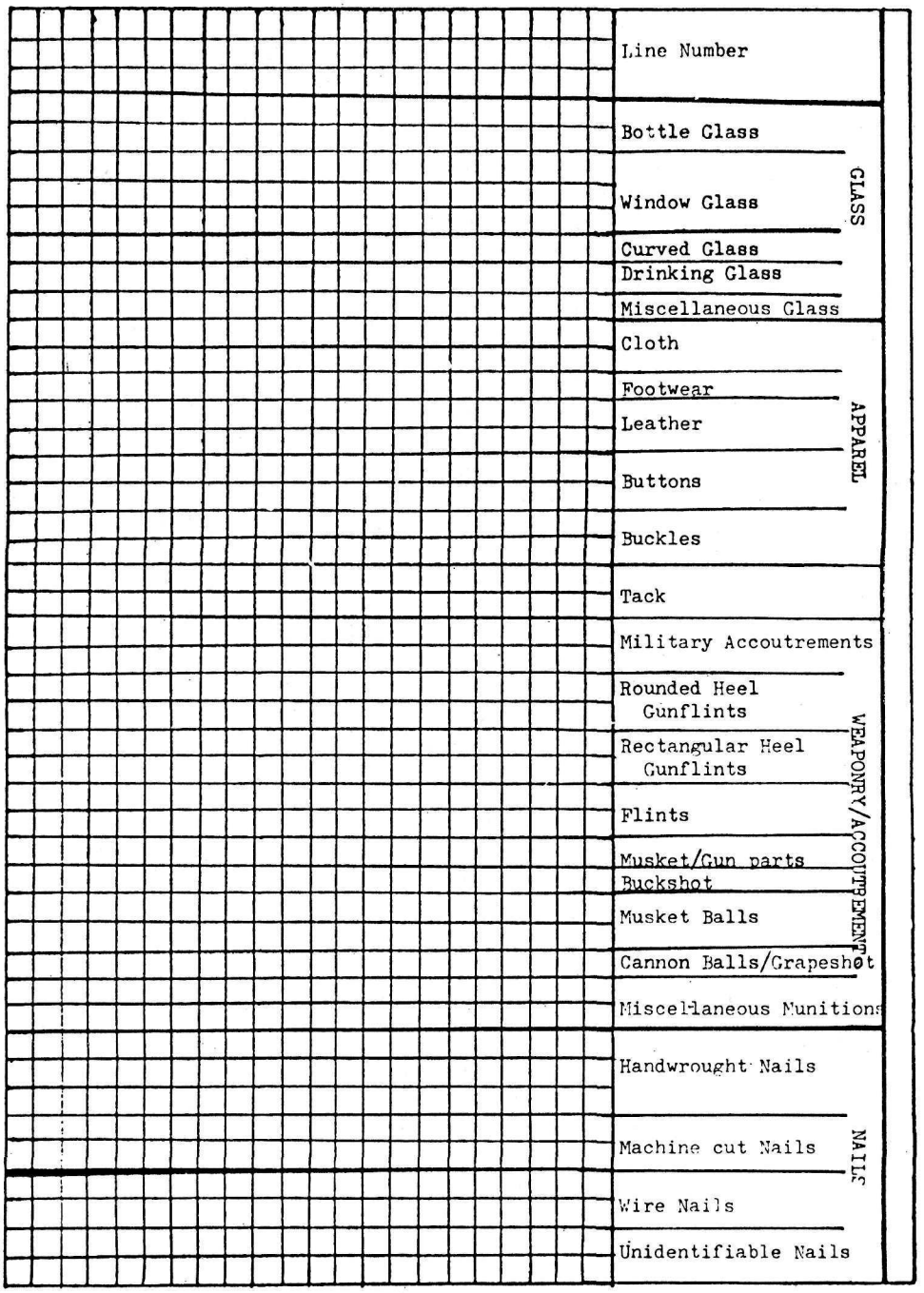
APPENDIX A

Provenience -Based Artifact Catalog, Page 2



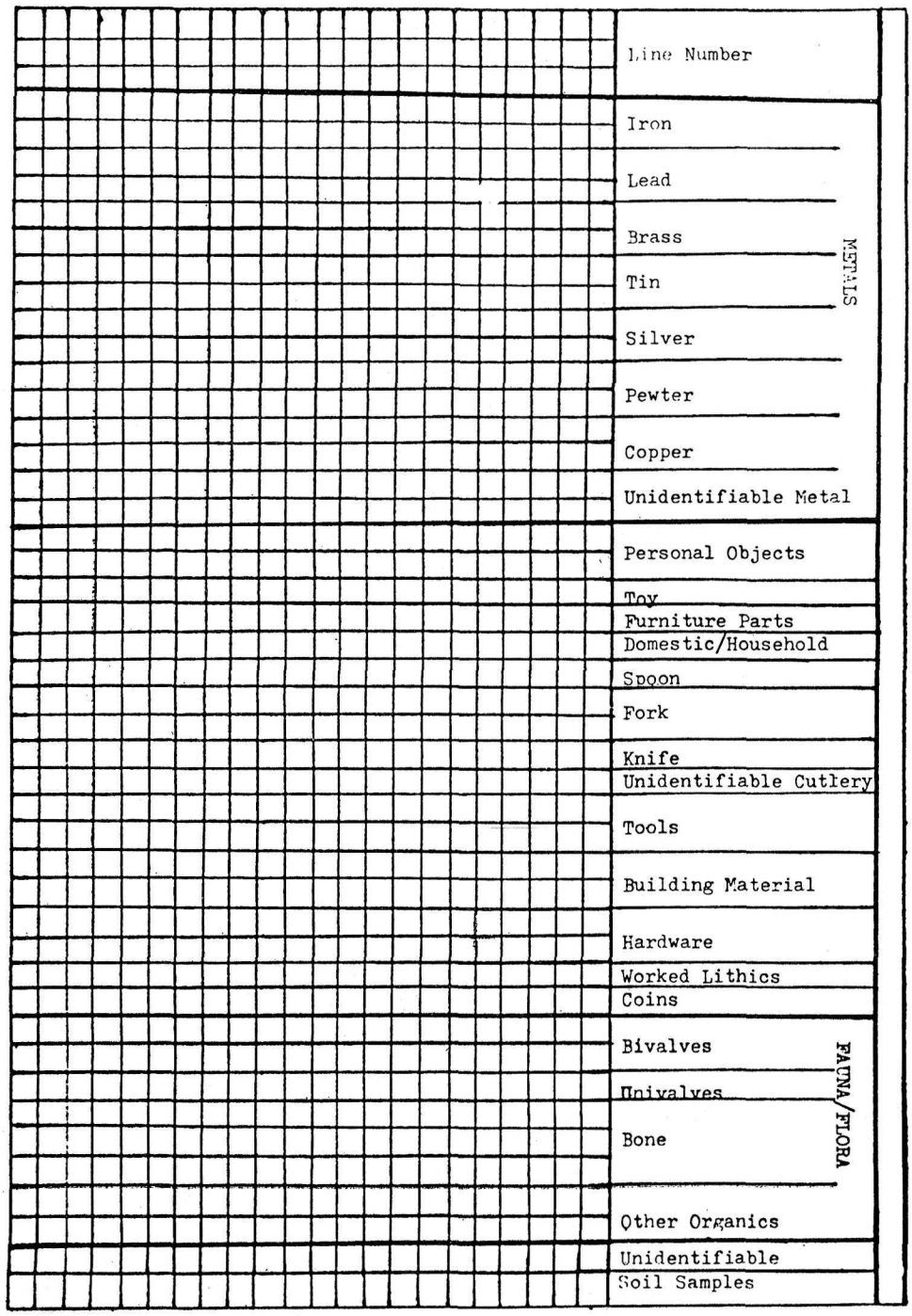
APPENDIX A

Provenience -Based Artifact Catalog, Page 3



APPENDIX A

Provenience -Based Artifact Catalog, Page 4



APPENDIX B

Item-Based Catalog: Ceramic Vessels

PROVENIENCE	CERAMIC TYPE	VESSEL TYPE	DATE RANGE	COMMENTS	ARTIF. #	LOC.

APPENDIX C

Item-Based Catalog: Glass Vessels

PROVENIENCE	LOC.	FORM	FUNCTION	MANUFACTURE	DATE	COMMENTS	NUMBER

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