CHAPTER 8: AN ANALYSIS OF CASTLE HILL CERAMICS

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Introduction

Analysis of the ceramic assemblage from Castle Hill (SIT-002) has resulted in interpretations of site chronology, ceramic supply dynamics, and the lifeways of skilled employees of the Russian American Company at New Archangel. Application of dating methods has defined the chronology of four structures identified during excavations. Of three major stratigraphic layers at Castle Hill, two, stratum II and III, have been dated to ca.1804-1840. These layers represent the first phase of Russian occupation at Sitka, and provide an opportunity to address questions of Russian American history and behavior preceding the 1839 supply contract with the Hudson's Bay Company.

Results of analyses indicate that ceramic tableware and storage vessels during this early phase were primarily of English, Russian and Chinese manufacture. Russian ceramics, rarely documented in North America, were a significant component of the collection. The presence of these wares documents the maritime supply of tableware from European Russia, and may be a chronological horizon marker post-dating the 1804 commencement of regular overseas shipping. Archaeological evidence for Russian American Company (RAC) trade with both New England and Spanish-American-based networks has also been identified.

The presence of modified ceramics suggests that traditional Native Alaskan repair technology was a component of domestic behavior within the metalworking and maintenance complex. Gender and age specific ceramic artifacts indicate that family units were present at Castle Hill.

The marked diversity of ceramic vessel forms, and low relative frequency of tea wares at Castle Hill were identified as a unique pattern of Russian-American vessel use. These anomalies suggest that differential ethnicity, socio-economic status, and supply influenced the cultural behavior of ceramic selection. With the large body of data from Castle Hill, inter-site analyses can now begin to address these variables.

Analytical Methods

Field and Laboratory Methods:

Field recovery of ceramics included standard ¼ inch mesh dry screening and collection by arbitrary 10cm levels or stratigraphic layers. Laboratory conservation consisted of gentle rinsing with tapwater. Labeling of individual ceramic sherds was limited to the 1997 collection, sherds with backmarks, and selected ceramics of interest. All ceramics with manufacturing marks were refit and mended when possible.

Sample Size:

A total of 50,949 ceramic vessel sherds were recovered from 1997-1998 excavations. Sherds from ten (n=10) of the total 162 1m x 1m excavated units underwent detailed analysis. Nine (n=9) of the units were in direct association with the subsurface remains of four Russian-period buildings. One unit (N85, E121), was located approximately 10 m south of the primary block excavation. Excluding marked vessels and crucibles, 835 ceramic sherds were present in these 10 units, representing 1.64% of the total ceramic sherd assemblage. Because of complex stratigraphy and multiple

activities at the bench location, each stratum was analyzed separately. The location of these sample units has been interpreted as the domicile and workshop locus of RAC craftsmen and artisans (Figure 8.1).

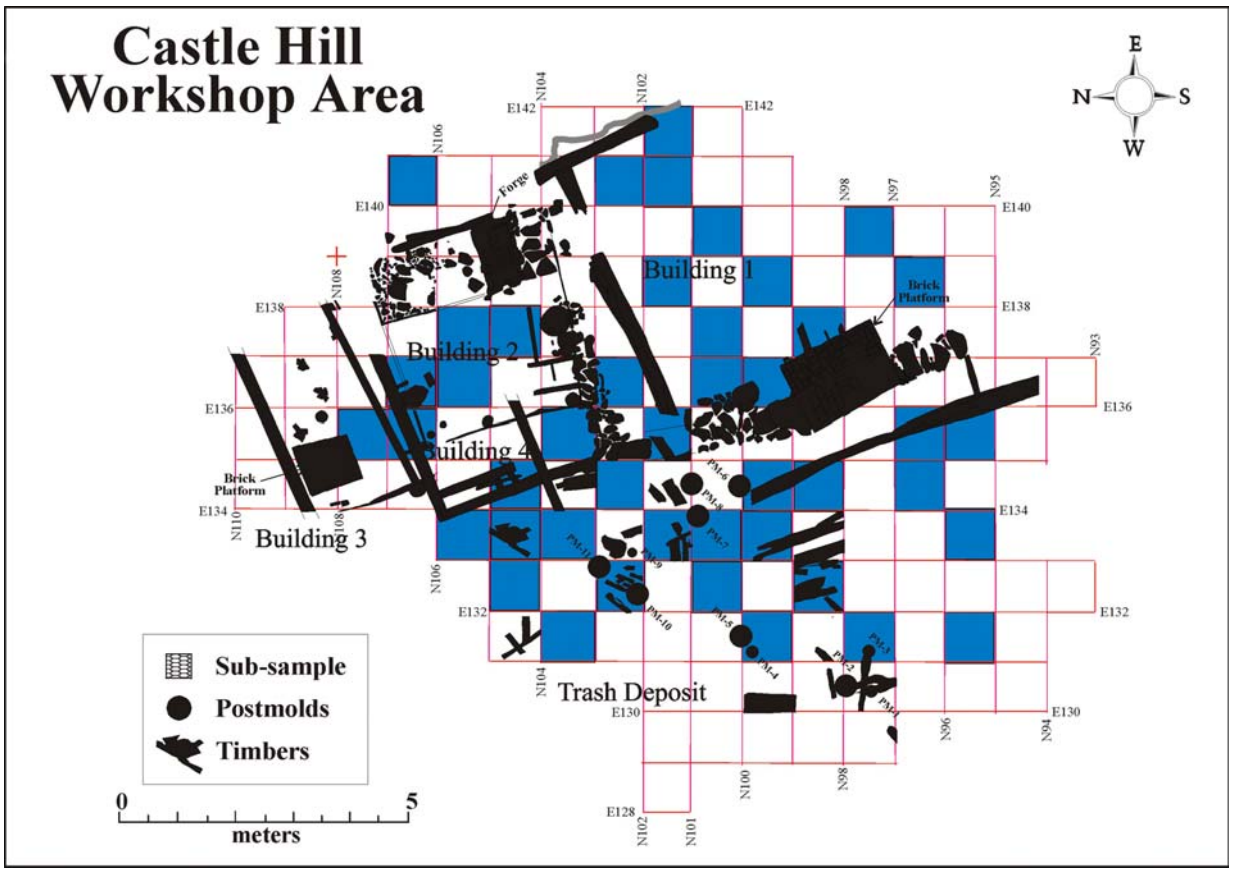


Figure 8.1: Sample units used in ceramic analyses.

Mean Ceramic Dating (MCD):

The mean ceramic dating (MCD) formula was used in the analyses of the 10 unit typologically-based ceramic sample, and the backmark assemblage. The results of both MCD analyses were then crosschecked to arrive at the mean date of occupation for each stratum.

Described in detail by South (1977:217), the process involved multiplying the frequency of each ceramic type by its median date of manufacture. The product was then divided by the total ceramic frequency to arrive at a weighted mean. This product has been shown to correspond closely to the mean date of a deposit or occupation (South 1977: 201-273).

Terminus Post Quem (TPQ) Dating:

The *terminus post quem*, or TPQ, was applied during chronological analysis. The TPQ method identifies the most recent artifact in a deposit, thus representing "the date after which the artifacts must have found their way into the ground" (Noel Hume 1980: 11 in Blee 1984: 71). In the case of deposits with relatively long periods of deposition (ie. stratum IIa sheet midden), the TPQ represents the last known date of active midden accumulation. This method of data interpretation was applied to stratigraphic dating and was based upon founding date of specific ceramic manufacturers, or most recent datable manufacturing technique.

Minimum Number of Vessels (MNV):

Minimum number of vessels (MNV) was used as the primary method for measuring frequency of ceramics. MNV counts were derived through the following process:

Ceramic sherds from each sample unit were sorted by ware type, vessel form, and decoration. Rims or footrings were then organized by paste, glaze, decorative technique and arc diameter. Once individual vessels were delineated, body sherds were subjected to the same process, and then compared to vessels derived through rim and foot-ring analysis. Unique vessel fragments not represented by rim or foot ring delineated vessels were then added to previous totals to arrive at the minimum number of vessels.

Vessel forms were construed through a comparison with nearly complete vessels from the Castle Hill collection and critical vessel measurement data provided in Baker (1978).

Sherd Count:

Sherd count was recorded during the cataloguing procedure, but was not used as the primary method for measuring quantity of pottery. Experimental archaeology and studies of formational processes (Chase 1985; Sullivan 1989; Byrd and Owens 1997) have demonstrated the limitations of sherd-based quantification alone. Sherd numbers are useful for delineating total collection size, and were recorded primarily for use in inter-site analyses.

The Ceramic Typology

Overview:

Ceramic typological analysis is the classification of ceramics based upon technical and decorative attributes. Typologies are effective for discerning the national origins, technological traditions, and manufacturing dates of ceramic tableware. The typological structure used in this analysis followed the system of *ware*, *class, type*, and *variety* (Table 8.1**).**

Ware categories included the traditional triad of porcelain (*I*), stoneware (*II*) and earthenware (*III*). Distinctions between wares were related to original kiln firing temperature and accompanying physical characteristics such as hardness, porosity and color (Rice 1984).

Class (a-g) describes differences within ware groups based upon paste, color and surface decoration. The inherent glaze color differences of Chinese and European porcelains is an example of class differentiation.

Type was used in this typology to differentiate the characteristics of decoration, including overglaze (*OG*), underglaze (*UG*) or undecorated (*U*) wares. In the case of undecorated common earthenware (*IIIg*), *type* differentiated between tin-glazes (*TG*), and lead-glazes (*LG*).

Variety was the last qualitative subdivision, and reflected variations in decoration and/or surface characteristics. The variety is often related directly to dating and

Table 8.1: The Ceramic Typology.

WARE	CLASS	TYPE	VARIETY #	VARIETY
I.PORCELAIN	(a) WHITE	(U) UNDECORATED	01	CANTON BLUE AND WHITE
	(b)GRAY/BLUE	(OG) OVERGLAZE	02	CANTON TRADE/EXPORT
		(UG)UNDERGLAZE	03	SINO-ISLAMIC ALLAH/OM
II.STONEWARE	(c) GLAZED EXTERIOR		04	P-15-1234
			05	P-16-1441
			06	P-17-1028
	(d) GLAZED INTERIOR		07	P-17-1047
			08	P-17-1322
			09	P-17-1328
	(e) GLAZED EXTERIOR and INTERIOR		10	P-17-1347
			11	P-17-1353
			12	P-18-0940
			13	P-19-1116
III.EARTHENWARE	(f) REFINED	(U)UNDECORATED	14	EDGEWARE
			15	FIGURAL/TOBY
			16	MOCHA
			17	ANNULAR
			18	H. PAINTED, THIN-LINED, LEEDS-TYPE
			19	GILDED
		(OG) OVERGLAZE	20	LUSTRE
			21	EMBOSSED
			22	T.-PRINTED, lt. blue
			23	T.-PRINTED, blue
			24	T.-PRINTED, dk. blue
			25	T.-PRINTED, red
			26	T.-PRINTED, green
			27	T.-PRINTED, brown
		(UG)UNDERGLAZE	28	T.-PRINTED, black
			29	T.-PRINTED, FLOWING COLOR
			30	T.-PRINTED, SPODEWARE
			31	T.-PRINTED, LINE ENGRAVED
			32	T.-PRINTED, LINE and STIPPLE
	(g)COMMON	(TG)TIN-GLAZED	33	DELFT
		(LG) LEAD-GLAZED	34	FAIENCE
			35	CRUCIBLE
			36	REDWARE

manufacturing origin. Thirty-six (36) varieties of ceramics were discerned and recorded in this analysis.

Nomenclature for describing specific historic ceramic classes was adapted from the works of Noel Hume (1970) and O'Connor (1984). Typological detail was limited to only those types represented within the 10 unit sub-sample. Some varieties absent from this collection such as spatter and sponge-wares, but common at other 19th century sites, were not described. The typology was modified to address the unique multinational characteristics of ceramic wares deposited at New Archangel. These changes were necessary to account for the presence of Russian ceramics in the collection, and are discussed in the next section.

New Typological Considerations:

Complications have emerged for analyses of historic ceramics within the sphere of Russian supply. Ceramic research models, borne of the work of Noel Hume, South and others, were originally designed to address occupations of colonial Anglo-American sites. Selected categories of ceramic wares at RAC sites, long assumed to be of English manufacture, can be attributed to the Russian ceramic industry. These ceramics, indistinguishable in some cases from common English counterparts, have been documented in statistically significant quantities. As a result, traditional assumptions of dating and national origins were not fully applicable to the Castle Hill collection.

Four major Russian ceramic types were identified in the assemblage. These included Russian porcelain *(Ia),* faience *(IIIg-LG-34),* undecorated whiteware *(IIIf-U),* and undecorated creamware *(IIIf-U).* These ceramics were identified through the analysis of unprecedented numbers of manufacturer's marks.

Russian Wares at Castle Hill:

Russian Porcelain: (Ia-U), (Ia-OG):

White European porcelain of Russian manufacture is represented by 34 marked sherds (mnv=34). These vessels were produced by six pottery manufacturers from the Bogorodorsk region near Moscow. The companies represented are Francis Gardner, Nikita Khrapunoff, Novyi Brothers, Samsonov Brothers, A.G. Popov, and Gulin.

Marked white porcelain vessels (mnv=18) in undisturbed strata II and III deposits were restricted to Russian manufacture. These were hand-painted in unique overglaze enamel colors. This decorative tradition was found on all white porcelain, except for a single late 19th century transfer-printed German porcelain sherd derived from a surface collection.

Russian Faience (IIIg-LG-34):

Produced in the Gzel region of Russia near Moscow, 19 marked sherds (mnv=16) from strata II and III were identified and associated with this ware. Faience in the collection is marked by the factories of Terikhov, E.M. Gusyatnikov, and P.T. Fomin.

This Russian lead-glazed faience was previously identified and described by Thompson (1999). The two most salient characteristics of this ware include a poorly-bonded, flakeable lead glaze, and a porous light tan paste with a low mohs hardness value of 1.5 to 2.5.

Russian Whiteware (IIIf-U):

Whiteware of Russian manufacture is represented by a single marked sherd (mnv-1) of undecorated refined earthenware. This example is a product of the Gardner factory, near Moscow (Appendix 8.5: Mark 46).

Morphological differences between this ware and contemporaneous English analogues were not identified. The presence of this ware challenges the common assumption that all refined undecorated whiteware is of English manufacture.

Russian Creamware (IIIf-U):

Undecorated creamware of Russian manufacture is represented by a single marked sherd (mnv=1) of the Poskochin pottery factory. (Appendix 8.5: Mark 55) This ware is indistinguishable from English creamware of the 18th and 19th century, and has implications for nationality and chronology.

The presence of this undecorated ware indicates that unmarked sherds could not be positively attributable to a single nationality. It is well known that the Poskochin factory replicated the creamware products of Wedgewood, one the most prolific English producers of this ware during the 18th and early 19th centuries (Bubnova 1973: 72; Cameron 1986: 266) From the Castle Hill example, it appears they were quite successful.

The production of creamware by the Poskochin Company from 1817 to 1842 conflicts with the English creamware use-date of c.1762-1820 (South 1977: 212a). The production and popularity of this ware after 1817 is inconsistent with traditional horizon bracketing.

Discussion:

The presence of inextricable Russian and English whiteware and creamware has increased the potential for error in historic ceramic analyses. These new variables, in conjunction with viable criticism of ware-based ceramic analyses, forced a re-analysis of assumptions and a new approach to the typology.

As a result, the traditional creamware, whiteware, pearlware triad was not used for dating. Descriptions for each ceramic type includes precise information regarding presumed country of manufacture. A summary of national attributions for each ware type is presented in Table 8.2.

Table 8.2. Ware types and attributions applied in ceramic analyses at Castle Hill

Typological Ware	National Attribution
IIIf-14---IIIf-32	ENGLAND
Ia, IIIg-LG-34	RUSSIA
IIIf-U	ENGLAND/RUSSIA
Ib-01---Ib-03	CHINA
II	ENGLAND/GERMANY/RUSSIA/CHINA
IIIg-TG-33	FRANCE/HOLLAND
IIIf-U-21	ENGLAND/US
IIIg-LG-35, IIIg-35	INDETERMINATE

Typological Descriptions:

Porcelain (I):

Porcelain is a "completely vitrified, refined ceramic made of kaolin-basted pastes" (Blee 1986: 92). It demonstrates a high-gloss glaze that is completely fused with the paste and nearly impossible to separate using mechanical means. "In section the body ranges from pale gray to off-white, is extremely tight grained, and the glaze clings to it in a thin, translucent line on both sides" (Noel Hume 1970: 258). The highest fired of all ceramics at approximately 1400 degrees Celsius, the glaze is impervious to crazing, and paste hardness ranges from 9-10 on the mohs scale of hardness (Rice 1987: 82).

Chinese Porcelains:

Chinese porcelains can be accurately differentiated from European porcelains. Although both traditions exhibit a fine-grained, dense paste, Chinese porcelains range in paste and glaze color from pale gray to off-white (Hume 1970: 258). Most Chinese trade or export porcelain was produced at Ching-Te-Chen, China, and distributed to the West at the port at Canton (Schiffer 1975: 11-12). The three major decorative classes of Chinese porcelains present in the Castle Hill collection included underglaze painted *(Ib-UG-01),* overglaze enamel *(Ib-OG-02),* and Sino-Islamic *(Ib-UG-03).*

(Ib-UG-01)Canton Porcelain (China): Canton porcelain is a gray-blue, thick-bodied ware commonly known as blue and white porcelain (Blee 1986: 92). Decoration is underglaze blue, hand-painted, and revolves around a chinoisserie, or blue-willow motif. Elements of this design often include the pagoda, bridge and junk executed with wide, 'sloppy' brush strokes. The paste thickness of Canton porcelain is often greater than overglaze export porcelain although nearly indistinguishable from Sino-Islamic ware.

*(Ib-OG-02)Overglaze Export (China): A*lso known as trade porcelain (Noel Hume 1970: 258, 261) this variant of 'export porcelain' consists of a gray-bodied ware decorated with overglaze hand painted motifs such as swags, dots and spears. The painting is executed with fine, small diameter brushwork. Enamel colors include reds, blues, and gilts, all of which are susceptible to post-depositional decay. This ware is generally thinner-bodied than both the Canton and Sino-Islamic porcelain.

(Ib-UG-03) Sino-Islamic Porcelain (China): This ware is a thick-bodied porcelain decorated in hand-painted underglaze blue. Two common patterns associated with this ware are the Sino-Islamic "Allah" pattern and the Sino-Sanscrit "Om" motif (Willetts 1981: 2-7). Appreciable differences between this ware and typical Canton export porcelain reside only in the decorative motif. The origin of Sino-Islamic porcelain is not as well researched as other Chinese wares, but is morphologically consistent with wares of the Ching-Te-Chen tradition. Known as 'Kitchen Ch'ing' this traditional Chinese domestic ware has only recently been recognized in North American archaeological collections. Distribution is restricted to Southeast Asia, India, and selected historic sites in Western North America. (Felton 2001) Although not as chronologically restrictive as other common porcelain wares, its presence in the collection is important to understanding trade dynamics in the Pacific Rim.

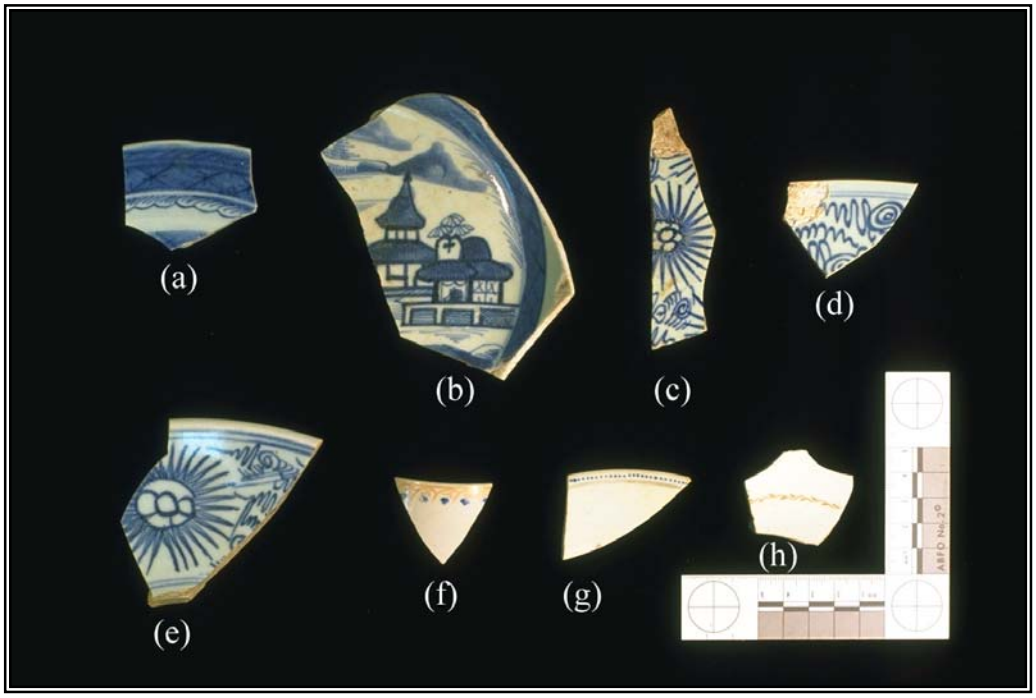


Figure 8.2. Chinese porcelain: (a-b) Canton porcelain (*Ib-UG-01*); (c-e) Sino-Islamic porcelain (*Ib-UG-03*); (f-h) Canton export/trade porcelain (*Ib-UG-02*).

European Porcelains:

(Ia-U, Ia-OG) European Porcelain (Russia): Characteristics of glaze color are used to distinguish between European and Chinese porcelains. European porcelain has a white glaze, while Chinese is bluish-gray or off-white. Within the European tradition of porcelain manufacture, national differences can be further refined through comparisons of vessel form and decorative attributes. Although this advanced level of analysis is possible, it requires extensive vessel refitting. Given the scope of the project, national attributions were based upon the analysis of marked vessels.

Data from analysis of manufacturer marks strongly suggest that Russian porcelain was the primary European porcelain deposited at Castle Hill. All marked sherds of white European porcelain (n=18) in undisturbed Strata II and III were of Russian manufacture. The absence of non-Russian marked porcelain was not likely a function of differential marking practices, as other contemporaneous European porcelain companies traditionally marked their wares.

Decoration motifs associated with these Russian marked examples were executed in overglaze, hand-painted enamels. Colors included greens, yellows, reds and gilts that are distinctive to the Russian provincial tradition. Motifs revolved around a variety of floral and figural scenes, while vessel forms reflected the popular early 19th century Empire movement (Cameron 1986: 27).

Vessel reconstruction of the Castle Hill Russian porcelain collection will be of great value for future comparative research. A cursory examination of RAC ceramic collections from several other sites indicates a preponderance of Russian porcelains in similar early 19th century contexts.

Figure 8.3. Russian porcelain (*Ia-UG*)

Stoneware (II):

(II-04-13) Stoneware (England/Russia/Germany):

Fired between 1200-1350 degrees Celsius (Rice 1987:82), with a mohs paste hardness of 9-10, stoneware lies between earthenware and porcelain in ceramic typologies. "It has a harder, more compact, dense paste than earthenware and absorbs very little moisture" (Sprague 1980: 16). This characteristic is directly related to function. Stoneware in the collection was limited to utilitarian storage containers, including ink or mineral water bottles and storage jars.

Unlike other ware groups, aspects of chronology and nationality for stoneware are poorly developed. Marked examples in the collection indicate a wide range of nationalities, including vessels from England, Germany and Russia.

Paste and outer slip colors were described separately using the Pantone Textile Color Guide (Pantone Institute: 1992). Ten different stoneware varieties were identified in both the marked vessel collection and the 10 unit sample. The stoneware variety for each marked vessel is presented in Appendix 8.5.

Earthenware (III):

Earthenwares are ceramics of porous, opaque soft pastes, which can vary in color from white to shades of tan and gray (Sprague 1980: 15). Fired between 900-1200 degrees celcius, earthenware pastes range in mohs hardness from 1.5 to 4.5 (Rice 1987: 829; Thompson 1999). Most subclasses of earthenware at Castle Hill were consistent with the English manufactured tradition. Exceptions include type *IIIf-U* and *IIIg-U-34*. Two major types of earthenware are traditionally discernable in 19th century collections, refined (*IIIf*) and common (*IIIg*).

*Earthenware (IIIf)**:***

Refined earthenware (*III-f*) is typically a thin, fine-bodied ware with a dense paste ranging from 3.5 to 4.5 on the mohs scale of hardness (Thompson 1999). Refined earthenware is also commonly associated with the traditional creamware-pearlware-whiteware triad of ceramics.

(IIIf-OG, UG-22-32) Earthenware, refined, transfer-printed (England): The transfer printing process involves the 'transfer' of a design from an engraved copper plate to a bisque fired ceramic vessel. The process is described in detail elsewhere (Majewski 1987; Noel Hume 1970). Invented in England by 1755, this process saw a series of technological improvements that are useful as chronological indicators. These changes included the shift from overglaze to underglaze decoration, introduction of line and stipple engraving, and the development of new print colors. These chronological and technical traits were extracted primarily from Majewski (1987:141-146) and South (1977:210-212). Each of these chronological sub-variants is described and referenced in Table 8.3.

The diffusion of transfer-printing technology was rapid. Most European and American potters adopted it by the middle of the 19th century. All marked transfer-printed vessels at Castle Hill were of English manufacture, suggesting an English origin for unmarked vessels with this decoration.

(IIIf-UG-29) Flowing colors (England): Also known as flow blue, this class of transfer-printed decoration was developed by around 1835. Flow blue was accomplished by the introduction of powdered chemicals in the kiln prior to firing (Coysh and Henrywood 1982: 10). The effect of this additive is a blurred, hazy appearance of the transfer-print. Colors include blue, puce, sepia and mulberry (Chapman 1993: 63).

(IIIf-UG-18) Floral, monochrome and polychrome (England): This underglaze hand-painted ceramic is attributed to the tradition of Staffordshire, England. Decoration is executed in monochrome blue thin lines and floral sprig motifs. The designs are applied with extremely fine brush strokes, with some examples demonstrating blue floral sprays applied over wide blue slip bands. Polychrome examples include similar decorative motifs, but in dull and dark yellow, green and brown. This decorative type was applied to fine, thin walled ceramics, what traditionally would be classified as pearlware.

Identified vessel types at Castle Hill were restricted to tea saucers, cups, waste bowls and tankards. This variety should not be confused with mid to late 19th century hand-painted wares known as thick-lined peasant-style or 'Gaudy Dutch' which was not recovered within this analytical sample, but is common in later 19th Century Alaskan collections at Kolmakovskiy Redoubt and the Nushagak basin (Oswalt 1980; VanStone 1970).

(IIIf-OG-15, IIIf-UG-15) Figural/Toby (England): Molded figural vessels, commonly known as toby jugs, are enameled in overglaze colors, and usually represent caricatures found in popular literature of the 19th century. Nearly all vessels of this type were holloware, and represented tankard or pouring jug forms.

(IIIf-UG-17) Annular (England): Annular decoration is characterized by horizontal bands of colored slip that can vary in diameter and color. This hand-painted underglaze decoration is often in slight relief and separated by thin turned grooves (O'Connor 1984: 33). These banded sections may include relief features such as raised dots, checkered rectangles, and simple incised lines. Executed primarily upon holloware vessel forms such as tankards and bowls, annular colors include shades of blues, browns, and greens.

(IIIf-UG-16) Mocha (England): A variant of annular ware, mocha decoration is often found in conjunction with annular-banding. Mocha decoration "is created when an acidic mixture (consisting of various combinations of tobacco juice, hops, urine…) is dripped onto an area of colored slip, where it spreads into dendritic forms resembling trees, seaweed, fronds etc." (Majewski 1987: 163). Vessel types included utilitarian holloware forms similar to those of annular wares.

(IIIf-UG-14) Edgeware (England): Edge decorated wares are earthenwares with simple underglaze hand painting on an unmodified or molded relief marley. Known collectively as shell edge or feather edge, variants include "cord and herringbone," "fish scale," and "dot and plume" (Majewski 1987: 149). The most frequent colors found on edgewares are blue and green, and were applied as a band either flush or parallel to the rim (Majewski 1987: 151). Common vessel types include plates and soup bowls, although holloware vessels are also known (Majewski 1987: 152). Rarely marked by the potter, edgewares are exclusively attributed to English manufacture.

(IIIf-OG-20) Lustre ware (England): This decorative technique is applied to refined earthenware in thin, overglaze films of metallic oxide. These oxides include various colors of copper, gold, and pink. Lustre wares are most commonly associated with thin-bodied holloware forms including pitchers, mugs and tea-wares (Chapman 1993: 81-82; Majewski 1987: 140).

(IIIf-OG-19) Earthenware, refined, gilded (England/United States): Scalloped earthenware plates with distinctive overglaze line gilding were recovered from Stratum I. The gilding was applied in two or three horizontal thin lines, and was restricted to the marley or brim of these plates. These vessels were not attributable to a specific geographic tradition of ceramic manufacture.

(IIIf-U) Earthenware, refined, undecorated (England/Russia): This class contains undecorated creamware, pearlware and whiteware. These wares denote the major English refined earthenware traditions of the late 18th and 19th centuries. Generally this category describes undecorated, fine bodied, glazed earthenwares. The work of Majewski (1987) and others has identified intractable flaws in results derived from ware-based quantification (Miller 1991:52-53). Based upon this criticism, and overlapping Russian and English undecorated refined earthenware traditions, this ware classification was not used. Undecorated refined earthenware at Castle Hill was considered as European in origin, and was not used in ceramic dating.

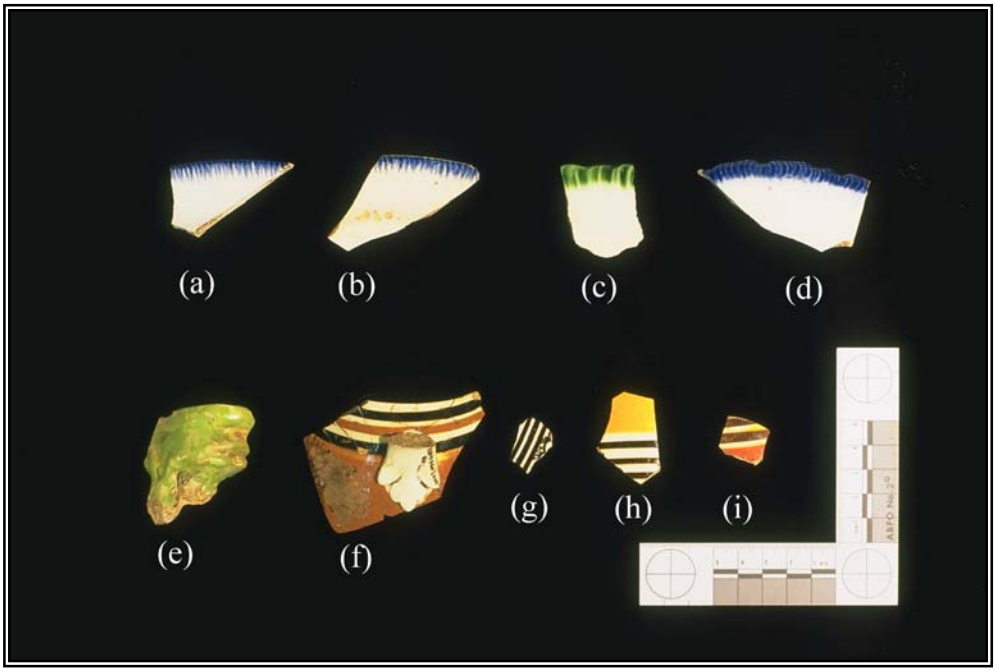


Figure 8.4. Refined earthenware: (a-d) edgeware (*IIIf-UG-14*); (e) figural/toby (*IIIf-OG-15*); (f) mocha (*IIIf-UG-16*); (g-i) annular (*IIIf-UG-17*)

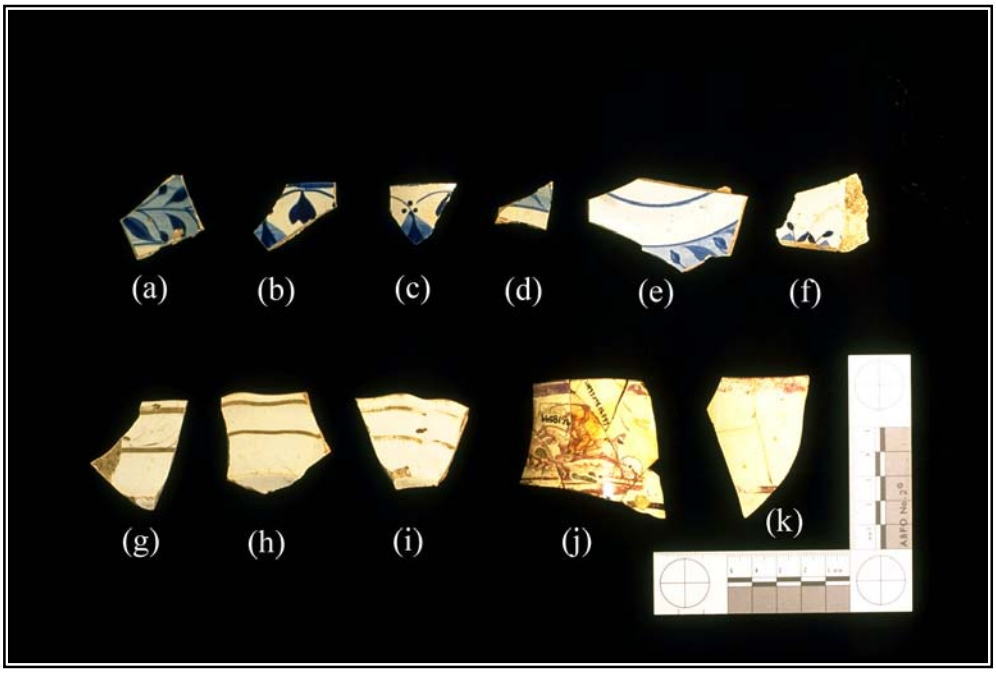


Figure 8.5. Refined earthenware: (a-f) hand-painted, monochrome (*IIIf-UG-18*); (g-i) gilded (*IIIf-OG-19*); (j-k) lustreware (*IIIf-OG-20*).

(IIIf-U-21) Earthenware, refined, embossed (England/United States): This ware is characterized by vessel forms with embossed and molded decoration. The molding generally includes geometric fluting, with floral, grape cluster or wheat designs (Chapman 1993: 83). Hand-painting and applied color decorations upon this ware were not present in the Castle Hill assemblage.

Earthenware (IIIg):

Common earthenwares (*IIIg*) include coarse redwares, Russian faience, and delft. This class of earthenware includes wares with soft paste characteristics and thick lead or tin-based glazes. The pastes of both delft (*IIIg-TG-33*) and Russian faience (*IIIg-LG-34*) measure 1.5 to 2.5 on the mohs hardness scale (Thompson 1999).

(IIIg-TG-33) Tin-glazed ware (Holland/France): Common as small, thick-walled jars, this ware "has a thick, opaque tin-oxide glaze which is very obvious as a distinct layer from the body" (Blee 1986: 92). The glaze is poorly bonded to the paste, prone to flaking, and has been observed in either an opaque white or cobalt blue. Paste color varies from tan to light pink, and can be easily scratched with a fingernail. Early 19th century vessels of this type are commonly associated with the Dutch or French pottery industries, and were produced primarily as apothecary, mustard or ointment pots (Hume 1969: 209).

(IIIg-LG-34) Lead-glazed faience (Russia): Documented by Thompson (1999), this ware classification is new to Russian Alaskan ceramic typologies. This lead-glazed, unrefined earthenware is common to a finite variety of vessel types, including plates, soup bowls, mugs and holloware bowls. The salient characteristic of this faience is a poorly bonded glaze, which separates in large flakes from the body. This Russian earthenware has a clear lead glaze, not the opaque colored tin-glaze common to delftware. The paste is easily scratched with a fingernail and is tan in color. Decorated examples are extremely rare, and include simple green or black hand-painted lines or floral sprays.

(IIIg-LG-36) Redware (Unknown provenience): This class of ceramic includes holloware forms with reddish-colored pastes. Archaeological examples were lead-glazed, undecorated, and associated with storage jars of various sizes.

(IIIg-35) Crucibles (Unknown provenience): Thirty-four (n=34) crucible sherds were recovered from all units and strata. A minimum number of vessel analysis of rim sherds indicate at least seven (mnv=7) individual crucibles were present. These crucibles ranged in diameter from ¾" to 2", and were conical in form. Rims were straight, flat and range in thickness from 1/8" to ½".

Paste characteristics included a temper with high content of large, angular white quartz with lesser amounts of weathered gravel. The clay body ranged in color from light pink to dark gray.

Although unglazed, most sherds were covered in residual slags and flux from use in metal-smelting applications. Consolidated lead and cuprous residues were noted in the

wells of six specimens. These residues were not cleaned or removed, and hold promise for future metallurgical analysis.

Dating the Deposits

A goal of this ceramic analysis was dating stratigraphic deposits. The results of chronological analyses have delineated the major occupational sequences within the metal-smithing locus at Castle Hill. This information was integral to cultural interpretations of the site.

Methods:

The *mean ceramic dating* (MCD) formula was the primary analytical tool used in this analysis. The *terminus post quem* (TPQ) was also used when definitive manufacturing mark dates were present. *Minimum number of vessel* (MNV) count was used to measure the frequency of ceramics.

Three major strata were identified during excavations. Stratum I, heavily disturbed by mid-late 20th century construction, was not analyzed. Strata II and III represented undisturbed Russian period deposits and were the focus of this analysis.

Stratum III, and each of the six sub-strata identified within Stratum II were individually analyzed. The MCD and TPQ quantitative methods were used, when possible, to date these deposits. In some cases the absence of data precluded their use.

An insufficient sample of manufacturing marks was present in strata IIi, IId, and III. The use of the MCD formula was deemed inappropriate for these strata. Stratum IIi and IId lacked reliable manufacturing mark dates (TPQs). All other strata contained sufficient ceramic samples for the application of mean ceramic dating. MCD analysis was applied to data derived from typological and manufacturing mark analyses.

Typological MCD analysis:

The sample size used in typological MCD analysis consisted of the ten (n=10) unit sub-sample listed in Figure 8.1. Within each unit and stratum (II and III), the MNV count for each typologically classified ware was multiplied by the known median date of manufacture (Table 8.3). The product for each ceramic ware within a stratum was then summed and divided by the total MNV count. The result was the mean ceramic date, a relative dating technique representing the mean date for manufactured ceramics, and the presumed mean date of occupation for each stratum. One hundred and twenty-nine (mnv=129) datable ceramic vessels were used in this analysis.

The dates of manufacture for 18th and 19th century ceramics were extracted primarily from Hume (1970), Samford (1997) and Majewski (1987). The terminal ceramic date of 1890 was used to bracket selected ceramic manufacturing techniques that are still in use today. This date was based upon 19th century photographic evidence that had documented structural/domestic abandonment and destruction at Castle Hill by that date.

Table 8.3. Manufacturing dates used in the typological MCD analysis of strata II and III.
(* Terminal date of 1890 based upon site abandonment data)

WARE	WARE DESCRIPTION	DATE RANGE	MEDIAN	REFERENCES
Ib-UG-01	Canton Blue&White Porcelain	1800-1830	1815	(South 1977:210a)
Ib-OG-02	Chinese Overglaze Trade Porcelain	1790-1825	1808	(South 1977:210a)
Ia-OG, Ia-U	White, overglaze European Porcelain	1755-1890*	1823	(Noel Hume 1970:137)
IIIf-UG-14	Edgeware; shell, feather etc.	1780-1860	1820	(Majewski 1987:151,152) (South 1977:212a)
IIIf-UG-16	Mochaware	1795-1890	1843	(South 1977:212a)
IIIf-UG-17	Annularware	1780-1890*	1835	(South 1977:212a)
IIIf-UG-18	Hand-painted, fine sprig/floral decoration	1795-1835	1815	(Noel Hume 1970:129)
IIIf-OG-19	Overglaze gilded earthenwares	1830-1890*	1860	(Majewski 1987:153)
IIIf-OG-20	Lustre ware	1790-1860	1825	(Chapman 1993:81)
IIIf-U-21	Embossed	1840-1890*	1865	(Sussman 1985:7) (Chapman 1993:83)
IIIf-UG-22	Transfer-printed, Underglaze lt. blue	1818-1867	1843	(Samford 1997:20)
IIIf-UG-23	Transfer-printed, Underglaze blue	1784-1859	1822	(Samford 1997:20)
IIIf-UG-24	Transfer-printed, Underglaze dk.cobalt blue	1802-1846	1824	(Samford 1997:20)
IIIf-UG-25	Transfer-printed, Underglaze red	1828-1890*	1859	(Majewski 1987:139,142) (Samford 1997:20)
IIIf-UG-26	Transfer-printed, Underglaze green	1828-1890*	1859	(Majewski 1987:139,142)
IIIf-UG-27	Transfer-printed, Underglaze brown	1818-1869	1844	(Samford 1997:20)
IIIf-UG-28	Transfer-printed, Underglaze black	1828-1890*	1859	(Majewski 1987:139,142) (Samford 1997:20)
IIIf-29	Transfer-printed, Flowing colors	1835-1890*	1865	(Majewski 1987:142)
IIIf-30	Transfer-printed, Spode Patterns	1836-1867	1852	(Ross 1977: 211)
IIIf-31	Transfer-printed, Line engraved	1785-1890*	1838	(Samford 1997:23)
IIIf-32	Transfer-printed, line and stipple engraving	1807-1890*	1849	(Samford 1997:23)
IIIg-TG-33	Tin-glazed Delft, Apothecary/Ointment Jars	1780-1830	1805	(Noel Hume 1970:209)
IIIg-LG-34	Lead-Glazed Russian faience	1815-1860	1838	(Thompson 1999:4-5)

Backmark MCD Analysis:

Manufacturing marks from all 162 excavated units were included in this analysis. Within stratum II and III in all units, the MNV count for each marked vessel was multiplied by the known median date of manufacture. The dates of manufacture for vessels with potter's marks in strata II and III are presented in Table 8.4. References for mark dates can be found in Appendix 8.5.

The product for all marked ceramic vessel dates in each stratum were summed, then divided by the total MNV count. The resulting mean ceramic date of the backmark assemblage was compared to the MCD derived through typologically-based analysis. Twenty-eight (mnv=28) vessels with datable marks were used in this analysis.

TPQ Analysis:

Within each stratum assemblage, *terminus post quems* (TPQ's) were recorded. These represent the most recently founded ceramic company or manufacturing technique. The TPQ is useful for defining the date of depositional cessation, and was used to crosscheck results derived through MCD analyses.

Results:

The results of mean ceramic dating derived through typological and backmark analyses are presented in Table 8.5. TPQ's are also included for comparative purposes. Data and computations used in these MCD analyses are available in Appendix 8.2**.**

Table 8.4. Manufacturers used in the backmark MCD analysis of strata II and III.

CERAMIC MARK	DATE RANGE	MEDIAN	REFERENCE No.
Clews	1818-1834	1826	Mark 1
Edward&George Phillips	1822-1834	1828	Mark 27
Godwin, Rowley and Co.	1828-1831	1830	Mark 16
Hartley,Greens and Co.	c.1800-1821	1811	Mark 17
Hicks and Meigh	1806-1835	1821	Mark 20,21
St. Anthony's Pottery	c.1835-1878	1857	Mark 33-35
Wedgewood	c.1775-1860	1818	Mark 36
Francis Gardner	c.1770-c.1830	1800	Mark 43
Francis Gardner	c.1770-c.1780	1775	Mark 38
Francis Gardner	c.1812-c.1870	1841	Mark 40
E.M. Gusyatnikov	1817-c.1830	1824	Mark 47
Nikita Khrapunoff	1815-c.1840	1828	Mark 50-51
P.T. Fomin	c.1800-1883	1842	Mark 37
The Brothers Novyi	1818-c.1830	1824	Mark 52
Terikhov	c.1830-1867	1849	Mark 57

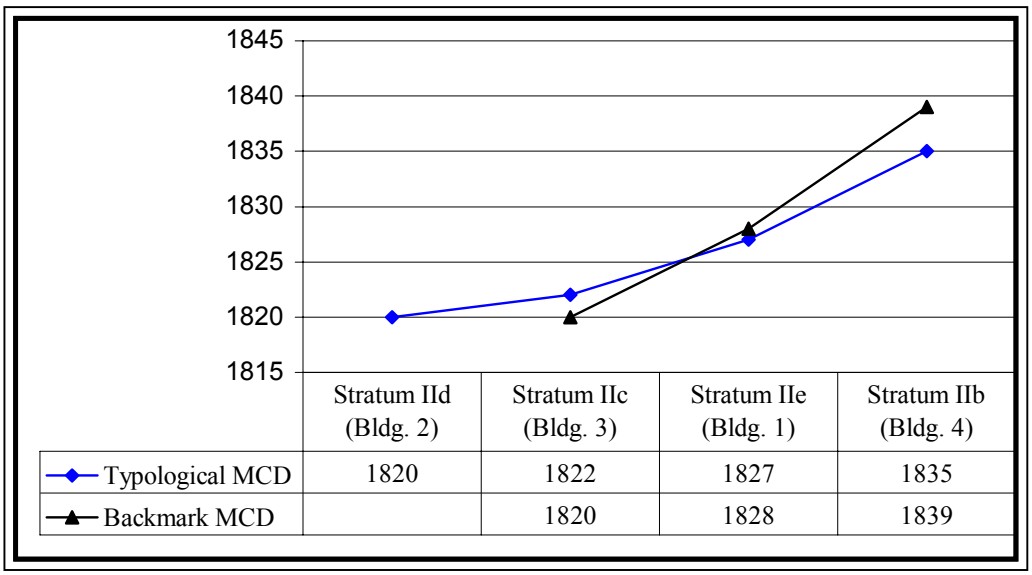
Table 8.5. Mean ceramic dates and terminus post quems for stratum II and III deposits.

Analytical Method	Stratum						
	IIb (Bldg. 4)	IIe (Bldg.1)	IIc (Bldg. 3)	IId (Bldg. 2)	IIa (Midden)	IIi (Indeterminate)	III (Substrate)
Typology MCD	1835	1827	1822	1820	1824	1813	1814
Backmark MCD	1839	1826	1820	n/a	1818	n/a	n/a
Backmark TPQ	c. 1835	c. 1830	1818	n/a	1828	n/a	c.1800

Discussion:

The concurrence of mean ceramic dates from typological and backmark analyses substantiated the depositional sequence identified during field observations. Referencing the typologically derived MCD results, the chronological sequence of structurally related deposits was stratum IId (1820), stratum IIc (1822), stratum IIe (1827) and stratum IIb (1835). The same linear relationship of strata was defined by backmark-derived MCD analysis, with stratum IIc (1820) followed by stratum IIe (1826) and IIb (1839). The concurrence of analytical results is presented in Figure 8.6.

The results from available TPQs also substantiated this sequence. The most recent ceramic from stratum IIb was a flow blue transfer-printed sherd, representing a date after 1835 (Majewski 1987:142). The TPQ for stratum IIe consisted of a marked vessel from the Terikhov manufacture (Ross 1968:309). (Appendix 8.5: Mark 57) The most recently marked vessel from stratum IIc was from the Clews manufacture, founded in 1818 (Godden 1991:151). (Appendix 8.5: Mark 1)



	Stratum IId (Bldg. 2)	Stratum IIc (Bldg. 3)	Stratum IIe (Bldg. 1)	Stratum IIb (Bldg. 4)
Typological MCD	1820	1822	1827	1835
Backmark MCD		1820	1828	1839

Figure 8.6: Mean ceramic dates associated with structural features at Castle Hill.

The independent correlation of analytical results suggests that an occupational sequence for the four buildings can be inferred. Building 2 (IId) was probably the first structure occupied at the site, followed by Building 3 (IIc). Building 1 (IIe) was later occupied, with Building 4 (IIb) likely used during the last phase of Russian occupation. These relationships are supported by field observations.

Basic stratigraphic evidence had documented that destruction of Building 2 (IId) preceded Building 3 (IIc). It was also known that Building 4 (IIb) intruded all other deposits, and represented a single structure postdating the workshop activities represented in Buildings 1, 2 and 3. The 15 to 19 year difference in MCDs between Building 4 (IIb), and Buildings 2 (IId) and 3 (IIc), also indicate that Building 4 deposits represent a later episode of Russian-American Company use at Castle Hill. The archaeological and chronological evidence suggests that deposits associated with stratum IIb were not associated with the metalworking complex represented by Buildings 1-3.

The MCD data indicate that the decade of the 1820s was the peak of activities for Buildings 1-3. Although time lag and the long use-life of ceramic goods may overestimate the age of these deposits, the absence of an important complex of ceramics corroborate this interpretation.

The presence of Spodeware is the primary indicator of post-1840 HBC supply at Russian-American sites (Ross 1977; Jackson 1991). While stratum I contained twenty-one (mnv=22) Copeland and Garrett marked vessels and countless sherds, vessels of this manufacturer were not present in strata II and III deposits. The absence of this chronologically sensitive ware in strata II and III indicates that Buildings 1-4 were not occupied beyond this critical supply transition. The absence of stamped-wares, sponge-wares, and gaudy hand-painted wares in undisturbed context also substantiate a pre-1840 interpretation of strata II and III deposits.

Stratum IIa, the extensive midden deposit directly associated with the four buildings, also was dated using mean ceramic dating and available TPQs. Ceramic dates indicate that this deposit was contemporaneous with the activities associated with

buildings 1-4. Future intrasite analysis using vessel refits could potentially identify the spatial (structural) origins of the sheet midden ceramics. This information could help delineate the functional organization of this Russian metalworking complex.

This analysis also substantiates the position of stratum III within the stratigraphic sequence. Stratum III was dated using limited typological data and a single TPQ from a marked vessel. Results indicate that this soil deposit represents the first phase of occupation at Castle Hill, and was not significantly impacted by later intrusive activities.

Conclusions:

The absence of Spodewares in stratum II and III deposits was evidence for ascribing a pre-1840 bracketing date for undisturbed deposits at Castle Hill. The most recent ceramic in these strata was limited to a single (mnv=1) vessel of flow blue transfer-print, indicating either contamination or the continued occupation of building 4 after 1835.

Documents indicate that historic settlement at Castle Hill began with Russian-American Company activities following the 1804 founding of New Archangel (Gibson 1976). Based upon this historic documentation, and the absence of Spodewares, strata II and III deposits are attributed the period ca.1804-ca.1840, with a median of 1822.5.

Mean ceramic dating corroborates these results. (Appendix 8.3 and 8.4) The MCD of all deposits associated with strata II and III deposits, derived from typological analysis, was 1824.7. The MCD date derived from marked vessels was 1821.6. These dates are very close to the median date of 1822.5 derived through simple historic bracketing. This independent correlation of median dates is consistent with results where similar analytical methods were used (South 1977: 236).

Supply of Ceramic Goods: the Paradigm

The paradigm of Russian American ceramic supply was tested using data from the undisturbed stratum II and III deposits. Dated to ca.1804-1840, these deposits were associated with 'Phase One' of supply to Russian America (Jackson 1991: 41). Part A of this section addresses the origins of ceramic goods, while Part B considers the quantity of ceramics available at Castle Hill consumers.

The period predating the 1840 RAC/HBC contract has been characterized as a period of material dependency. It has been concluded that "supplying Russian America with provisions and manufactured goods of Russian origin proved to be unprofitable" (Jackson 1991:44). The prohibitive cost of Russian transportation has been suggested as a primary reason for reliance upon alternate, regional means of supply. As a result, the RAC purchased goods from non-Russian sources (Jackson 1991:45).

Archaeological evidence from sites in Southwestern Alaska and Fort Ross, California substantiate this hypothesis (Jackson 1991; O'Connor 1984). The evidence suggested that English and Chinese ceramic goods were the primary ceramics used by the RAC, and Russian produced wares were not exported to the eastern Pacific. At Ft. Ross "only one of the 7,812 sherds analyzed could be attributed to Russian manufacture" (Jackson 1991: 43-44).

In addition to an absence of Russian wares at RAC sites, Jackson (1991) proposed that "in the early years of Russian presence in Alaska, metal tableware appears to have predominated over ceramic" (Jackson 1991:43). The paucity of ceramic wares at Three Saints Harbor, representing the pre-1820 period of Russian supply, was the basis for this

conclusion (Crowell 1997). The results of ceramic analyses at Castle Hill substantiated and refuted components of this supply paradigm.

Part A: Pattern of Ceramic Supply:

Methods:

Marked ceramics and typologically-attributed vessels were analyzed to delineate the pattern of ceramic supply. Both data sets were independently employed to gain an inclusive representation of ceramic origins. This correlative approach was initiated to account for the selectivity of vessel marking practices of the 19th century (Majewski 1987). Typological quantification was based upon MNV counts for ceramics within the 10 unit strata II and III subsample. The ware and country of origin was recorded for each ceramic vessel, quantified by nationality, and then compared to the results from marked vessels. Backmark quantification used manufacturing mark data from strata II and III deposits in all 152 1m x 1m units. Unlike typological analysis, attributions were based upon the marks of individual potters, which were researched, linked to company records, country of operation, and quantified.

Results:

Based upon data derived from backmark quantification, marked vessels were limited to English (61%) and Russian (39%) manufacture. The results from typological analysis suggest a more diversified collection of ceramic goods. Typological attributions indicated that English (33.3%), Russian (20.6%) and Chinese (19.1%) manufactured ceramics were the predominant wares used by the employees at Castle Hill.

Table 8.6. Frequency of attributable strata II and III ceramic vessels.

Country	Typology MNV	Backmark MNV
ENGLAND	63 (33.3%)	17(60.7%)
RUSSIA	39 (20.6%)	11 (39.3%)
ENGLAND/RUSSIA	39 (20.6%)	0
CHINA	36 (19.1%)	0
ENGLAND/GERMANY/RUSSIA/CHINA	7 (3.7%)	0
FRANCE/HOLLAND	3 (1.6%)	0
ENGLAND/US	1 (0.5%)	0
INDETERMINATE	1 (0.5%)	0
MNV=	**189 (99.9%)**	**28 (100%)**

The divergent results reflect the limitations and biases inherent in attribution studies based solely upon marked vessels. Major classes of ceramics, including English edgewares (*IIIf-14*) mocha/annularwares (*IIIf-16, IIIf-17*), and Chinese porcelains (*Ib*) were traditionally not marked by the manufacturer, and were under-represented in backmark-derived quantification. For example, ceramic specimens from China, Germany, and France or Holland, although represented in typological analysis, were absent in the backmark assemblage. Although the relative frequencies of attributable vessels differ within by analytical method, the intersection of these data has increased confidence in the results.

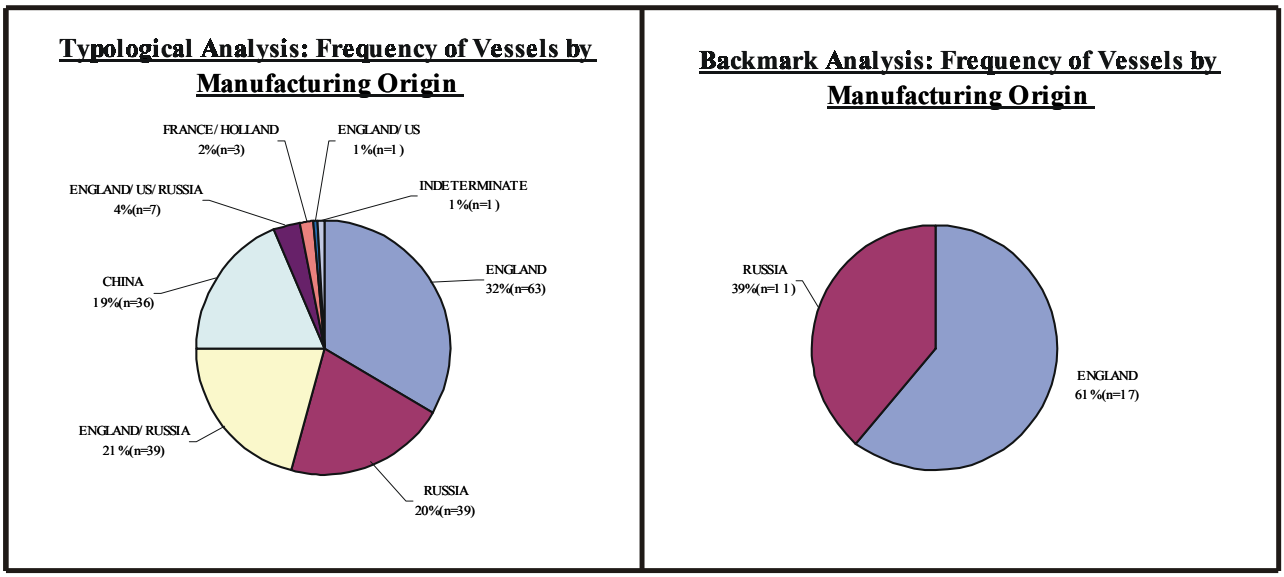


Figure 8.7. Ceramic manufacturing origins from strata II and III (c1804-1840).

Discussion:

This analysis has substantiated the documented dependency upon English ceramics in Russian America during the period before 1840. The relative frequency of Staffordshire earthenware vessels within strata II and III ranged from 33.3% of the typologically based assemblage, to as much as 60.7% of the marked collection. Although the origins of English wares before 1840 could be ascribed to direct European-Russian trade with England or American middlemen, some ceramics indicate that American merchants were, at least in part, the purveyors of ceramics used at Castle Hill (Jackson 1991:45). The presence of transfer-printed patterns with American subjects substantiated that RAC interactions with American traders included ceramic purchases.

A minimum of two vessels with transfer-printed patterns of American historical events and places were recovered in stratum II. These include 'Lafayette at Franklin's Tomb' (UA98.052.2278), and 'Fair Mount Near Philadelphia' (UA98.052.6320) (Snyder 1995: 71, 101). These scenes were produced exclusively for the U.S. market and were exported from England to the Atlantic seaboard in vast quantities (Snyder 1995: 6). Restricted in distribution to the eastern seaboard of the United States, these specific transfer-printed wares were likely a component of Yankee trade cargoes involved in the Northwest coastal fur-trade. Whether procured by the RAC through direct trade with U.S. merchants, or indirect purchases in the Sandwich Islands or California is indeterminate. Evidence for the direct purchase of these wares from Americans is suggested in the historic record.

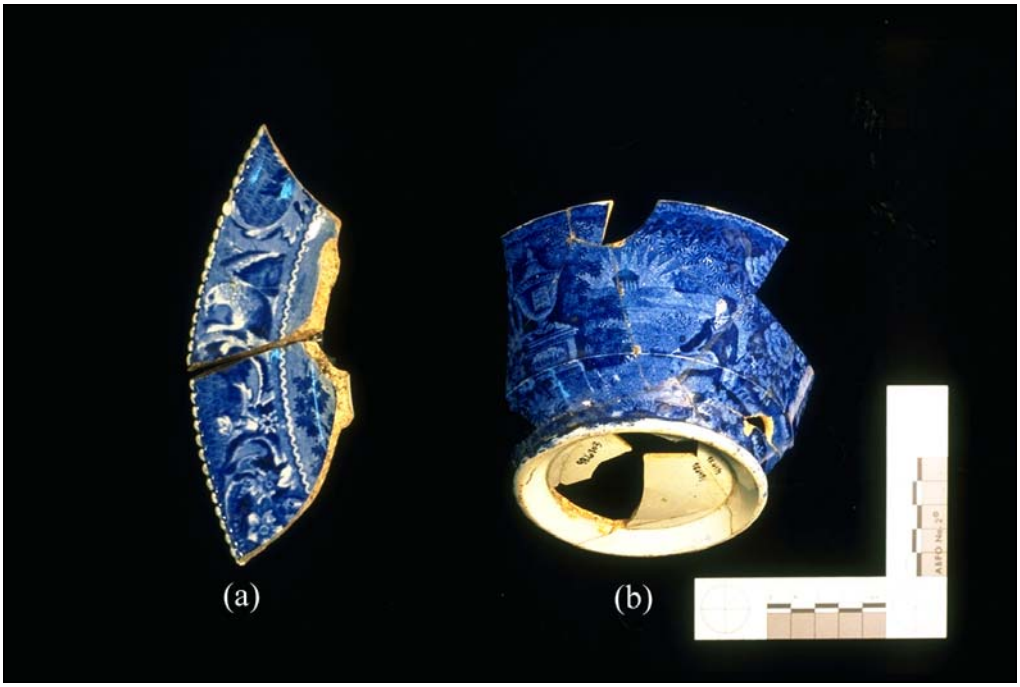


Figure 8.8. Transfer-printed American scenes: (a) "Fair Mount near Philadelphia"; (b) "Lafayette at Franklin's Tomb"

Russian American Company trade with Americans is well documented. A historical analysis of this trade system concluded, "Of the approximately 120 trading vessels (involved in 19th century commerce with the Russian American Company), only nine were not American" (Gibson 1976:168 in O'Connor 1984:79). Howay noted,

> With the increasing competition for furs, the (American) trading vessels, in order to make a saving voyage, looked more and more to the Russians as possible purchasers of their wares, and selected their cargoes with this prospect in mind [Howay 1973:61].

The combined historic and ceramic evidence appears to suggest that American mercantile trade along the Northwest coast included the ceramic provisionment of Russian America. Substantial frequencies of Russian manufactured wares were present within strata II and III. These ceramics represented 20.6% of the typologically-quantified assemblage, while 39.3% of all marked vessels were of Russian manufacture. The large quantities of these ceramics indicate that the employees at Castle Hill were significant consumers of European Russian manufactured wares.

Chinese wares (*Ib*), representing 19.1% of the typologically-quantified assemblage, were also an important component of the strata II and III deposits. Purchased at Canton, China, these ceramics could have been supplied through direct American or Spanish, or purchases at ports from California to Manila (Gibson 1976).

The presence of Sino-Islamic Chinese porcelain (*Ia-UG-03*) does have special implications for understanding the China trade in the Pacific. This porcelain has been recovered from Spanish mission sites in California in appreciable quantity, but is inexplicably absent from both U.S. colonial sites on the Atlantic seaboard and Hudson's Bay Company sites. The absence of this ware in the eastern U.S. and British Northwest suggests that Bostonian merchants and the HBC were not involved in its procurement and trade. The restricted regional distribution of this ware is compelling evidence for direct trade between Russia and Spanish California, or an indeterminate shared supply source.

Conclusions:

This analysis confirms that quantities of ceramic goods of Russian origin were available to consumers in the Castle Hill workshop complex. Cursory physical examination of 19th century ceramic collections from Kodiak Brick Kiln (KOD-011), Russian Bishop's House, and various contact sites indicate that these wares were not isolated to New Archangel, but were widely distributed throughout Russian America.

The very selection of these wares for distribution in the North Pacific may be linked to economic policy. According to Bubnova (1973: 7), a series of restrictive tariffs were initiated in the first quarter of the 19th century to subsidize and protect the burgeoning European Russian ceramic industry from foreign (English) competition. It is possible that RAC supply strategy included consideration of these factors in the selection of Russian manufactured ceramics for distribution.

The presence of Russian manufactured ceramics at Castle Hill is both chronologically sensitive, and tangible evidence for the maritime supply of Alaska. The difficulty of overland travel from European Russia to Okhotsk and the Russian Far East precluded the transport of eastern Russian ceramics by terrestrial methods.

> The company and navy supply ships generally transported items that were too bulky, heavy or fragile to be packed from Yakutsk to Okhotsk--manufactures such as ship materials, metal goods, textiles, leather goods, *glass and earthenware utensils*… [Gibson 1976: 82].

Although pottery works beyond the Urals were known to exist during this period, and are predicted to occur archaeologically on Russian sites in Siberia and Alaska, domestic Siberian wares have not been identified at Castle Hill (Bubnova 1973:6-7). Russian ceramics at Castle Hill were restricted to the products of the western industrialized provinces outside Moscow and St. Petersburg. This evidence suggests that the presence of European Russian ceramics in Alaska can be generally ascribed to after ca. 1804, the date of arrival for Russia's first round the world voyage to the North Pacific (Pierce 1990: 312). The emergence of this new conveyance network, consisting of nearly 65 voyages from European Russia to the North Pacific from 1803 to 1867, may explain the absence of these wares at 18th Century sites such as Three Saints Harbor (Gibson 1976:76; Crowell 1997).

The diversity of ceramics from multinational sources is a striking component of the early 19th century deposits at Castle Hill. English earthenware, Chinese porcelain, European delft, and Russian earthenware and porcelain were all available and used by the artisans at Castle Hill. This diversity indicates that Jackson's Phase One hypothesis for ceramic supply to Russian America was not fully applicable to the deposits at Castle Hill.

The data from strata II and III deposits suggest that the period preceding the HBC/RAC contract was characterized by unique exchange systems reflected in significant quantities of available English, Russian, and Chinese manufactured ceramics.

The selective presence of cheap English earthenware (edgewares, mochawares), but the complete absence of English porcelain also indicates that cost was an active consideration in the supply of ceramic goods to Russian America. This accumulated ceramic data suggest that RAC supply from ca.1804 to ca.1840 was influenced by careful market decisions and a diversified network of supply sources.

Part B: Quality and Quantity of Ceramic Tableware:

Phase One of ceramic supply within Russian America has been characterized by a paucity of ceramic tableware, and reliance upon metal tableware (Jackson 1991). The dearth of ceramics recovered from Three Saints Harbor (Crowell 1997), and selected ethnohistoric documentation has supported this hypothesis. In 1825, Ciril Khlebnikov reported that at Sitka,

> Coppersmiths have three shops. Two of these make new kitchen utensils of copper and tin, such as kettles, drinking cups, teapots and coffeepots, siphons, funnels and other utensils; part of these are used for trade with California and with savages of North America, as well as supply to other colonies, because utensils are not supplied from Russia [Khlebnikov 1976:75, in Jackson 1991: 183].

By the early 1830's, Khlebnikov suggested to the RAC Board of Directors that copper and ceramic tableware was costly enough to consider the establishment of a pottery works at Ft. Ross, California (Khlebnikov 1976:128 in O'Connor 1984: 74). Although no archaeological or documentary evidence exists for the establishment of this pottery works, the proposition suggests that the demand for tableware was greater than supply.

The results of ceramic ratio analysis of stratum II does not substantiate the hypothesis that "most Russian American tableware during the pre-1840 period seems to have been made of iron, copper, and tin (Jackson 1991: 42-42 in Crowell 1997:156).

Methods:

The frequency of ceramic storage and tableware sherds within the 10 unit stratum II subsample was recorded and compared to the total number of non-food serving artifacts within the assemblage. The *ceramic ratio* was determined "by subtracting the total (ceramic sherd number) from the entire artifact count for the site, and dividing the ceramics by the resulting artifact total" (South 1977: 171). The use of sherd count was required to accommodate the lack of consistent MNV quantification within comparative site samples. The number of fauna, organic specimens, and brick fragments were not included in assemblage totals, for these items were not present or used in the comparative site assemblages. The scope of the study did not allow for the inclusion of stratum III deposits in this analysis.

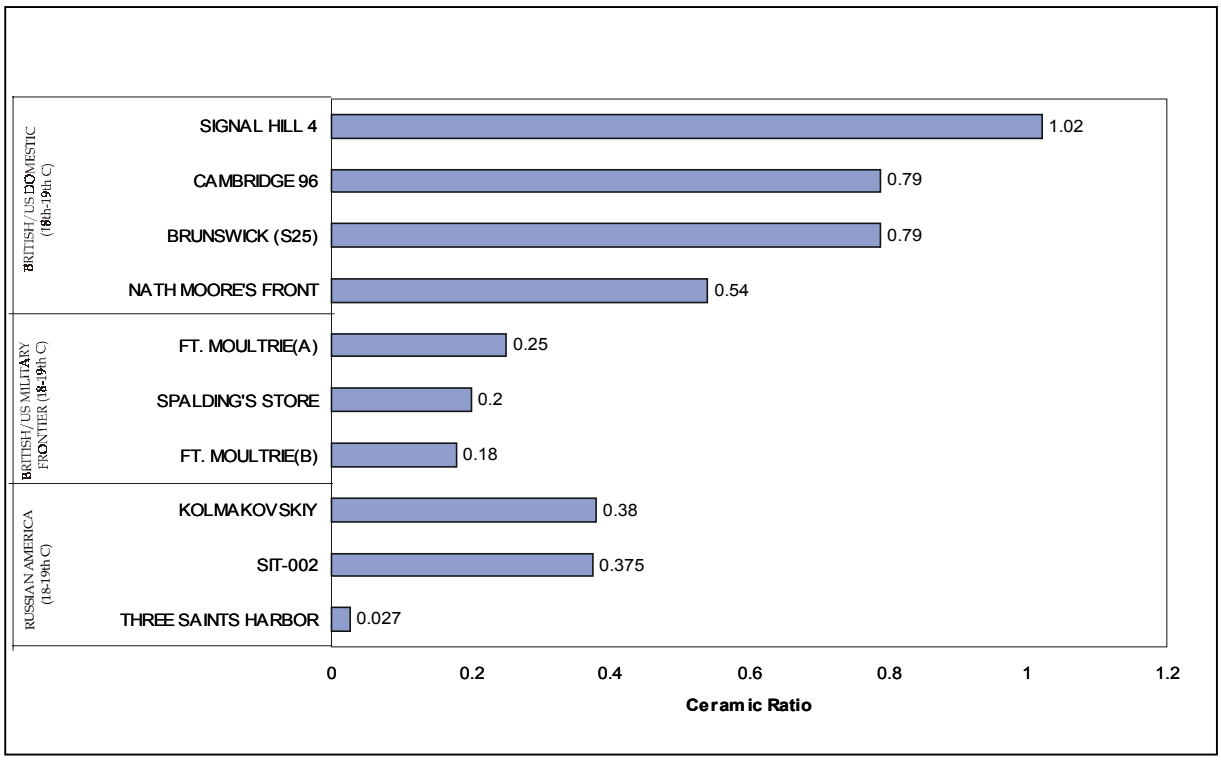


Figure 8.9. Ceramic ratio patterns at selected 18th-19th century Russian, British and American sites.

The ceramic ratio from stratum II was compared to a selected sample of 18th and early-19th century domestic site assemblages with known patterns of ceramic supply (Figure 8.9). This comparison between Castle Hill and other Russian-American sites was expanded to include contemporaneous British and American ceramic utilization patterns (South 1977). This comparison was useful for ranking Russian colonial patterns of ceramic use within the systemic context of global market behavior.

Results:

Seven hundred and eighty-four (n=784) sherds of ceramic storage and tableware vessels were recovered from the stratum II sample. The calculated ceramic ratio of ceramics to the 2,873 non-organic artifact assemblage was 0.375, or 27.3% of the sample collection. The ceramic ratio for the ca.1804-1840 occupation at Castle Hill is not consistent with the derived pattern from Three Saints Harbor (0.027). However, the ceramic ratio at Castle Hill (0.375) is nearly identical to that at Kolmakovskiy Redoubt (0.38), supplied after the 1839 Hudson's Bay charter.

The correspondence of the Castle Hill ceramic pattern to well-supplied, but culturally dissimilar, Euro-American colonial sites was also worth consideration. The ceramic ratio at Castle Hill (0.375) was well within the observed range of U.S. and British ceramic utilization (0.18-1.02) during the 18th and 19th centuries. Ceramic utilization at Castle Hill and Kolmakovskiy Reboubt, although greater than patterns observed at frontier sites, was less developed than domestic sites based in agricultural

economies. The lack of a dairying-based ceramic component within Russian American domestic structure may account for this difference.

The results of this analysis suggest that impediments to market access and supply had a limited affect upon the quantity of available ceramic wares at Castle Hill. Although quantities of copper vessels were produced and discarded at Castle Hill, the relatively high ceramic ratio at Castle Hill indicate that the use of iron, tin and copper vessels was a supplementary, rather than primary, component of early 19th century Russian American food serving behavior.

The high ratio of ceramic wares at Castle Hill (0.375) compared to Three Saints Harbor (0.027) has many implications. The paucity of ceramics at the late 18th century Kodiak site could be explained by temporal and supply differences, or independent variables such as ethnicity, socioeconomic status, and recycling behavior. The data from Castle Hill does suggest that the availability of ceramic goods may have improved following the abandonment of Russian activity at Three Saints Harbor.

The correspondence of Castle Hill (ca.1804-1840) ceramic ratios to Kolmakovskiy Redoubt (established in 1841) may indicate that ceramic supply in the first few decades of the 19th century was comparable to supply derived by the HBC. Future comparison of the Castle Hill assemblage to a greater sample of Russian sites founded after the 1839 Hudson's Bay contract will be useful in refining these conclusions based upon now limited inter-site data.

Vessel Form Analysis

Analysis of vessel forms was useful for delineating the pattern of ceramic availability and use for the craftsmen at Castle Hill. Results from vessel form analysis were used to study of Russian food serving and storage behavior, socioeconomic status, ethnicity, and supply (Spencer-Wood 1987).

Part A: Vessel Description and Frequencies:

Methods:

The attribution of vessel forms followed the procedure outlined for MNV analysis. The *ware*, *class*, and decorative *varieties* were recorded for each vessel of the 10 unit Strata II and III sample.

Two vessel categories, Indeterminate Holloware and Indeterminate Vessel, represent vessels not attributable to specific ceramic form. Two additional categories, Teacup/Saucer and Ink/Ale bottle, reflect those categories with multiple functional possibilities.

The undecorated vessel attribution (U), represents completely undecorated vessels, or vessels where decorative sections were not represented by remaining sherd fragments in the assemblage.

Results:

A minimum of 191 vessels was present within the 10 unit Stratum II and III subsample. Fourteen ceramic vessel form categories were delineated within the assemblage and are described below. The relative frequency of each vessel type is summarized in Table 8.7**.**

Tea cups (mnv=29): A minimum of twenty-nine (mnv=29) teacups were identified within the sample. Porcelain vessels were represented by eight vessels (mnv=8) of white (Russian) porcelain (*Ia-U, Ia-OG*), two (mnv=2) Canton blue and white (*Ib-UG-01*), and five (mnv=5) of Chinese trade porcelain (*Ib-OG-02*). At least fourteen (mnv=14) refined earthenware teacups were also present. These included four (mnv=4) hand-painted English (*IIIf-UG-18*), eight (mnv=8) transfer-printed English (*IIIf-UG-23, 24, 25*), and two (mnv=2) undecorated (*IIIf-U*) vessels.

Tea Saucers (mnv=20): At least twenty (mnv=20) saucers were identified. Porcelain vessels included seven (mnv=7) Russian (*Ia-U, Ia-UG*), and three (mnv=3) Chinese export vessels (*Ib-OG-02*). Ten refined earthenware (mnv=10) saucers were represented by one (mnv=1) parian/embossed vessel (*IIIf-U-21*), three (mnv=3) hand-painted English (*IIIf-UG-18*), and six (mnv=6) blue and red transfer-printed English (*IIIf-UG-23,24,25*) vessels.

Teacup/Saucer (mnv=7): This category included at least seven (mnv=7) vessels attributable to either teacups or saucers. These included one (mnv=1) undecorated porcelain vessel (*Ib-U*) that could represent any of the three Chinese varieties found in the collection. Other porcelain vessels included one (mnv=1) Canton blue and white (*Ib-UG-01*), and two (mnv=2) of Chinese export manufacture (*Ib-UG-02*). Earthenware was represented by three (mnv=3) English hand-painted teacups/saucers (*IIIf-UG-18*).

Teapot (mnv=4): A single (mnv=1) teapot of overglaze, hand-painted Russian porcelain, and three (mnv=3) undecorated earthenware (*IIIf-U*) teapots were identified in the subsample. Based upon small sherd sizes, these three English undecorated earthenware teapots could easily represent the undecorated portions of decorated vessels.

Pitcher (mnv=1): One (mnv=1) overglaze black transfer-printed (*IIIf-OG-28*) pitcher was identified from three mended sherds.

Tankard (mnv=1): A single (mnv=1) tankard of very thin-walled undecorated refined earthenware (*IIIf-U*) was present in the sample.

Plates (mnv=45): Porcelain plates in the assemblage were limited to ten (mnv=10) vessels of Canton (blue and white) manufacture. Earthenware plates included seven (mnv=7) English edge-decorated vessels, three (mnv=3) of English blue transfer-print (*IIIf-UG-23, IIIf-UG-24*), eleven (mnv=11) Russian lead-glazed faience vessels (*IIIg-LG-34*), and fourteen (mnv=14) undecorated creamware plates of either Russian or English manufacture (*IIIf-U*).

Tureen (mnv=1): One (mnv=1) tureen of undecorated refined earthenware (*IIIf-U*) was identified in the sample.

Bowls (mnv=11): Porcelain bowls in the sample were limited to two (mnv=2) vessels of Chinese Sino-Islamic decoration (*Ib-UG-03*). Refined earthenware bowls included one (mnv=1) English annular-decorated (IIIf-UG-17), one (mnv=1) English

hand-painted (*IIIf-UG-18*), one (mnv=1) English blue-transfer-printed (*IIIf-UG-23*), and four (mnv=4) undecorated (*IIIf-U*) creamware type vessels. Bowls of common earthenware included two (mnv=2) of Russian lead-glazed faience (*IIIg-LG-34*).

Jars/Crocks (mnv=5): Porcelain jars included one (mnv=1) storage jar of Chinese (*Ib-UG*) and one (mnv=1) jar of white porcelain (*Ia-UG*). Three (mnv=3) large stoneware (*IIe-13*) storage vessels were also present.

Crucibles (mnv=3): Three sherds representing three (mnv=3) individual crucibles (*IIIg-35*) were present in the subsample.

Ink/Ale Bottles (mnv=2): A minimum of two (mnv=2) stoneware bottles of different manufacture were represented. Country of manufacture for these specimens was indeterminate.

Ointment Jars (mnv=2): Jars associated with the storage of ointments or salves were represented by at least two (mnv=2) specimens consistent with Dutch or French manufacture (*IIIg-TG-33*).

Indeterminate Hollowares (mnv=33): At least thirty-three (n=33) holloware vessels were present in the sample assemblage. Due to small sherd size these could not be classified with certainty beyond assessment as holloware forms. These could represent any of the preceding twelve identifiable vessel forms, excluding plates.

Indeterminate Vessels (mnv=27): Twenty-eight (mnv=27) vessels were not attributable to a specific form. Each of these was compared to the identifiable vessels and was found to be separate vessels with unique paste, color, and decorative characteristics.

Part B: Vessel Use within the Context of Russian America:

This vessel form data is valuable for understanding the types of ceramic forms available to the occupants of Castle Hill during the first four decades of the 19th century. Thirteen categories of vessel forms were identified within the sample. Teacups, saucers, plates, and bowls dominate the assemblage. Lower numbers of vessel forms such as tankards, teapots, pitchers, tureens and storage jars are also present.

The relative frequency of vessel forms was compared to other Russian American sites to examine the context of this vessel assemblage within the greater pattern of Russian American consumer and cultural behavior. Previous studies had documented a strong cultural connection between the selection of tea wares and ethnicity in Russian America (Jackson 1991). Jackson's (1991) conclusions indicate that Native Alaskan populations in Southwest and Interior Alaska in the 19th century selected and incorporated manufactured tea wares for use in a highly developed tea ceremony. This unique behavioral pattern is reflected in vessel form assemblages with high ratios of tea vessels to other vessel forms.

Table 8.7. Frequency of ceramic vessel forms present within strata II and III 10 unit subsample.

	STRATUM							
	IIi	IIa	IIb	IIc	IId	IIe	III	Totals
VESSEL								
Teacup	1	11	1	4		12		29
Saucer	1	7	1	1		9	1	20
Teacup/saucer	1			4		2		7
Teapot		2				2		4
Pitcher							1	1
Tankard		1						1
Plate	3	19		6	4	12	1	45
Bowl		4				7		11
Tureen		1						1
Jar/Crock		2				3		5
Ink/Ale bottle		2						2
Ointment jar		1				1		2
Crucible		2				1		3
Indeterminate Hollowware	3	19	1	1	2	6	1	33
Unknown vessel	1	9	4	7	1	3	2	27
Total (mnv)								**mnv=191**

Methods:

Vessel form data extracted from strata II and III of the 10 unit subsample were compared to seven other Russian American ceramic collections. The ratio of teawares to other vessels at each site was quantified by comparing the sum of the minimum number of teawares to the sum of all other vessels present in each archaeological assemblage.

The teaware functional group at each site included ceramic teapots, teacups, saucers, creamers, mugs and tankards. This functional structure was derived from Jackson (1991). All other ceramic tableware and storage vessels were classified as other vessels.

Comparative collections included Jackson's Southwest Alaskan study sample, comprised of six largely Native Alaskan sites, and data from Feature 12 at the Russian Hospital trash pit (Jackson 1991; Blee 1986).

Results:

The results of this comparison are presented in Figure 8.10**.** Two distinct patterns were identified from this comparison. The highest teaware ratio was associated with the six Southwest and Interior Alaskan sites studied by Jackson (1991). Teawares in these assemblages clustered above 75% in each total ceramic vessel assemblage.

Castle Hill and the Russian Hospital midden teaware ratios represent the second distinct pattern of vessel use. At Castle Hill, 62 vessels of the 191 minimum number of vessels, or 32.4% of the collection, were ascribed to tea serving functions. This result was analogous to the Russian Hospital trash pit assemblage where 36% of all ceramic vessels were attributed to tea-related behavior.

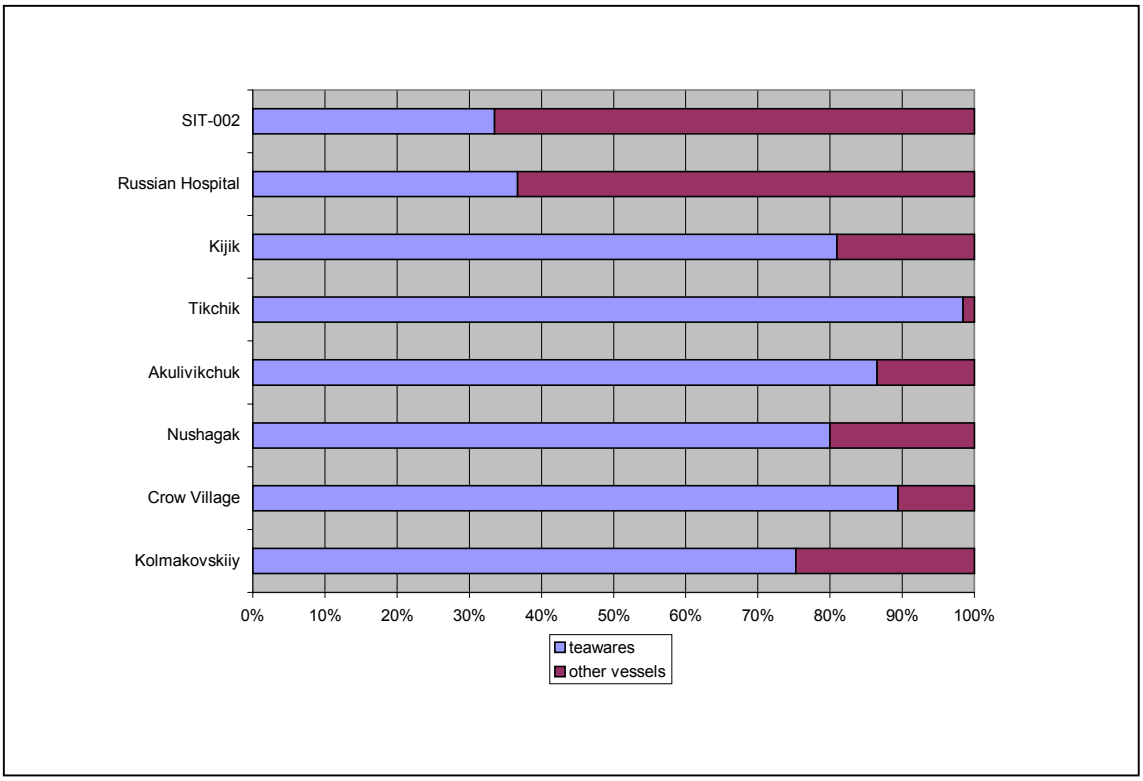


Figure 8.10. Teaware ratios at selected Russian American sites.

Part C: Ethnicity and Class:

The disproportionately high frequency of teawares within the Southwest Alaskan assemblages, and their correlative relationship, was the unique pattern defined as the tea ceremony (Jackson 1991). This material manifestation was inconsistent with the pattern of material discard at Castle Hill.

This absence of patterning associated with the tea ceremony at Castle Hill and the Russian Hospital site may reflect a difference in vessel selection and core cultural behavior. Although the use of tea as a social beverage was a common cultural component in Russian America, it would appear from the vessel data that the incorporation of teaware vessels was of lesser significance to the domestic behavior within New Archangel.

This conclusion is compelling when compared to the suggested demographic structure of the metalworkers at Castle Hill. Modified ceramics, ground slate blades, socketed harpoons, and ivory games, figures and debitage indicate Native Alaskan participation at the metalworking complex. Historic documents also indicate that that Creole participation in the metalsmithing industry at Castle Hill was commonplace (Khlebnikov 1994:140-141).

Puzzling however, was the absence of a pattern of vessel use consistent with the Native Alaskan tea ceremony. This divergence between expectation and archaeological pattern may suggest that acculturative processes upon traditional behavior practices were manifested by shifts in material selection. This compelling hypothesis suggests that that

Native Alaskans/Creoles in service with the Russian American Company at Castle Hill had incorporated a pattern of material selection unique to their class as skilled artisans.

Another hypothesis to explain the divergent pattern of teaware selection between New Archangel and native village/trading post sites could be related to the affects of formation processes upon the deposits at Castle Hill. It is quite possible that the impact of Native Alaskan behavior upon the archaeological pattern was diluted by the behaviors of ***other*** contributors to these deposits. Those Native Alaskans practicing traditional behaviors may be archeologically underrepresented by a vessel pattern derived from the cultural majority.

Part D: Supply and Cultural Continuity:

It is noteworthy that the proportion of teawares at Castle Hill (ca.1804-1840) is virtually unchanged by ca.1860, when compared to the Russian Hospital trash midden (Blee 1986). The correlation of these tea vessel frequencies suggests that the availability of tea wares was not affected by the commonly characterized pattern of irregular supply. It appears that the ceramic supply infrastructure in the late 1850's, following the failure of the RAC to renew contracts with the Hudson's Bay Company, provided for the demands of consumers. Although a qualitative shift in vessel manufacturers and patterns occurred from 1840-1850 (Spodewares), this correlative pattern of teaware ratios suggests continuity in ceramic availability and consumer selection throughout this period.

Conclusion:

Although the use of tea was an integral component of 18th and 19th century social behavior in most of the western world, the manifestation of this behavior appears to have differed greatly within Russian America (Roth 1961: 63). The marked differences between teaware ratio patterns at New Archangel and Southwest/Interior Alaska sites indicate that ethnicity/and or class affected the consumer choice of tea vessels. The similarities in these patterns of vessel use at Castle Hill and the Russian Hospital suggest a continuity of behavior, and a continuity of supply at New Archangel during the 19th century. This consistency is surprising in the face of dynamic supply challenges that are known to have plagued Russian American provisionment strategies. Future studies of sites throughout Russian America will be of value for determining affects of these intersecting variables upon archaeological patterning. Ethnicity, class, supply and temporal differences can be further explored and used to answer questions pertaining to Russian American cultural behavior.

Modified ceramics

Introduction:

Three categories of modified ceramics were recovered from Castle Hill. They include drilled mending holes, ground disks of various sizes, and a single unifacial tool.

Drilled Ceramics: Eleven (n=11) sherds with drilled holes were present, representing a minimum of six (mnv=6) individual vessels (Figure 8.11). Four (mnv=4) of these vessels were deep soup plates of Russian faience (*IIIg-LG-34*), one vessel (mnv=1) was a red-transfer-printed teacup of English manufacture (*IIIf-UG-25*), and one vessel (mnv=1) was a plate of blue transfer-printed English manufacture (*IIIf-UG-24*) (plt

x: h). These mending holes ranged in diameter from 2.2mm to 5.0mm, and lacked wear patterns associated with the use of non-organic binding such as staples or wire. One soup plate contained two well-preserved sections of spruce root binding.

Figure 8.11. Drilled ceramics

Ground Ceramics: Three (n=3) sherds of ground ceramics were present, representing three (mnv=3) vessels. One specimen (Figure 8.12, a) was a semi-circular 4.0cm x 3.5cm diameter disk with a straight or slightly convex ground edge. A series of roughly parallel scratches were present on the undecorated reverse of this disk. Derived from the well of a plate or saucer, this artifact was of dark blue transfer-printed English earthenware (*IIIf-UG-24*). The pattern has been identified as "Pastoral Scene" and was manufactured by Edward and George Phillips between 1822 and 1834 (Godden 1991: 491; Little 1969: 156-157)(Appendix 8.5; MARK 27). The second circular ground disk (Figure 8.12, b) was fragmentary and was the modified well section of a plate or soup plate of undecorated Russian faience (*IIIg-LG-34*). The remaining sherd of ground ceramic was a 1.3cm x 0.8cm corner section of a square or rectangular artifact with rounded edges. (Figure 8.12, c) This specimen was derived from the well section of a plate or saucer, and was of blue transfer-printed (*IIIf-UG-23*) English manufacture.

Unifacial tool: One (n=1) 9.2cm x 8.5cm ulu-like tool of modified undecorated Russian faience (*IIIg-LG-34*) was recovered (Figure 8.12, d). Three edges of this specimen were unifacially pressure flaked, and one plane was unmodified. Small abrasion flakes along the unmodified edge surface suggest that this tool was handled. This tool was derived from the well section of a plate or soup plate, and was marked by the manufacture of Terekhov (Appendix 8.5: MARK 57).

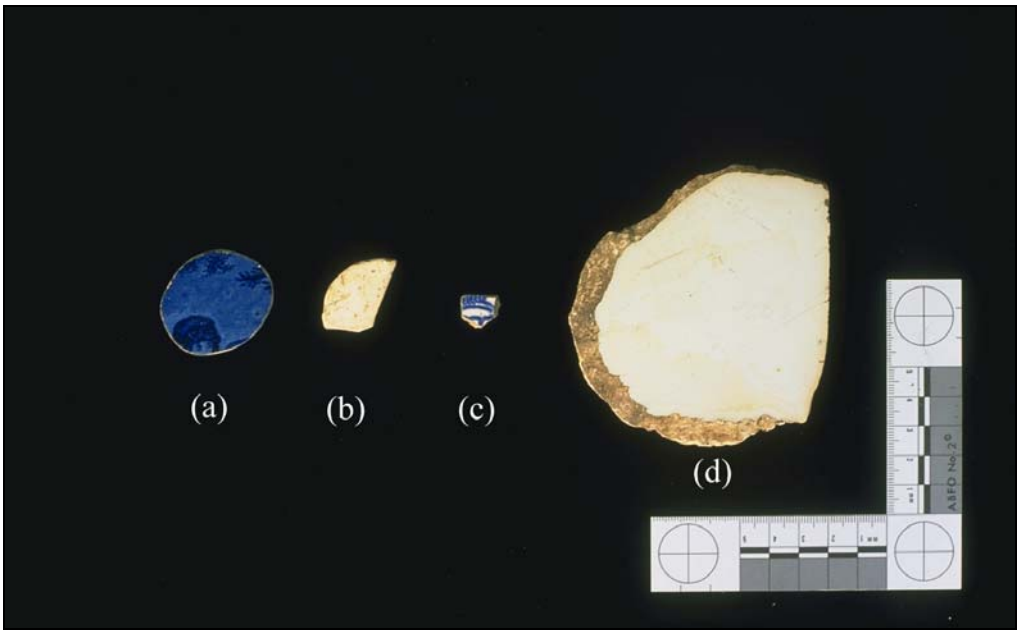


Figure 8.12. Modified ceramics: (a-c) ground; (d) unifacially-flaked ceramic tool

Discussion:

The unique characteristics of modified ceramics suggest the presence of Native Alaskan cultural technology within the confines of Russian American industry at New Archangel. The variety and methods of modification are closely analogous to 19th century Native village collections from Prince William Sound to Western Alaska. The tradition of drilling and repair of historic Euro-American ceramics has been documented at Nunakakhnak, Afognak Artel, Akulivikchuk, and Kolmakovskiy Redoubt (Knecht/Jordan 1985; Woodhouse-Beyer 2001; VanStone 1970; Oswalt 1980). Although the known geographic range of this tradition is limited to Eskimo/Koniag affiliation, future analyses may better define the cultural distribution of this behavior.

Numbers of ground ceramic disks, although less common than mending holes, have also been documented within 19th Century Native Alaskan assemblages, as well as Ft. Ross, California. Less regionally and contextually restrictive than mending holes, these artifacts have been decribed as labrets, inlays, or unidentified gaming pieces (Oswalt 1980; VanStone 1970; Silliman 1997; Fladmark 1973).

The presence of a unifacial ulu-style tool at Castle Hill suggests a strong ethnic affiliation with the technology and traditions of a wide spectrum of Native Alaskan cultures. The ulu knife is a well-documented component of selected Native tool kits, and is evidence for traditional technological persistence within 19th century Russian America.

If indeed this unifacial tool was designed and used traditionally as a woman's knife, its presence would also suggest active female participation within RAC domestic structure and behavior. Other artifacts from stratum II indicate the presence of children. These include three white kaolin (n=3) ceramic doll limbs from a single (cloth-bodied) doll, and a miniature wooden toy musket.

Historic accounts indicate that RAC male workers often had families. RAC policy recognized that marriage and family bonds among the promyshlenniks increased the limited labor force while serving an intermediary political role between cultural factions

(Fedorova 1973: 206). The evidence suggests that family units were present at Castle Hill.

The specific ware types selected for re-use and modification at Castle Hill are unique to Russian America. At other sites associated with this repair tradition, only decorated teawares were targeted for drilling and re-use (Jackson 1991; Oswalt 1980).

Within the pre-1840 deposit at Castle Hill, only one (mnv=1) of the six drilled vessels was a decorated teacup. One (mnv=1) was an English transfer-printed plate, and four (mnv=4) vessels were undecorated plates of Russian faience. The selection of largely undecorated plates is a significant anomaly.

Conclusion:

The modified ceramics are evidence for the persistence or transmission of Native Alaskan technology at Castle Hill. These material remains also substantiate ethnohistoric analyses that have documented a diversified demographic structure within the Russian American Company (Fedorova 1973). Gender and age specific artifacts also verify the participation of Native Alaskan workers and families within the artisan-based complex at Castle Hill.

These artifacts document that the processes of lateral cycling and re-use were present at New Archangel. The selection of ceramics for secondary use, and the mending of ceramic vessels, is somewhat surprising. Analysis of ceramic quantities, (Part V), had suggested that ceramic availability was remarkably high. Re-use and recycling, although consistent with Native Alaskan behavior at materially and geographically isolated, poorly supplied sites, would not be predicted at Castle Hill.

This paradox may suggest that overall availability of ceramics was not without periodic lapses in supply. Although these episodes may not be reflected in the overall pattern of archaeological ceramics, the process of re-use may suggest that this was an occasional problem for the workers at Castle Hill.

Ceramic Manufacturing marks

Background:

The analysis of ceramic backmarks has impacted the understanding of Russian supply, and has been an integral component in the chronological refinement of strata at Castle Hill. This section is designed to present the basic documentary information not found within the specific research sections and analyses.

Methods:

Each sherd of the collection was examined for manufacturer's marks. In some cases the presence of lightly impressed ceramic marks, (ie. *IIIg-LG-34*), necessitated the systematic use of cross lighting when exploring the collection. Following examination, refitting was completed to arrive at an MNV count for each mark. Illegible marks were not included in analyses. Manufacturers marks were recorded by stratigraphic layer, and are presented with individual company and country of origin information. Complete company names, accession numbers and references are included in Appendix 8.5. The analysis of manufacturing mark data was limited to marks within undisturbed strata II and III. Marks found in stratum I, surface collections, and those not used during chronological analysis are included in both Appendix 8.5 and Table 8.8.

Results:

Identified from all proveniences at Castle Hill were 272 manufacturers marks, representing a minimum number of 216 vessels. These 272 marked sherds represent .04% of the total sherd collection. Eighty-one different potter's marks are included in Appendix 8.5, with company information, accession number, and pertinent references.

Summary and Conclusions

The results of ceramic analyses have substantially contributed to the interpretation of Russian American history during the first decades of the 19th century. Data analyses revealed insight into the supply, use, and patterns of behavior associated with the use of ceramic goods.

Chronological analysis substantiated the construction sequence of four archaeological structures and associated deposits present at the site. Typological analysis, coupled with the quantification of manufacturing marks, delineate the dates and derivation of ceramic vessels. Dating to ca.1804-ca.1840, the two major undisturbed strata (II and III) at Castle Hill represent a crucial and little studied period of Russian activity.

The correlation of analyses from Castle Hill indicate that the supply of ceramic goods preceding the RAC/Hudson's Bay Company contract was characterized by careful market decisions and a diversified approach to provisionment. Shipping records and manifests substantiate the purchase of ceramics directly from California, Canton through American contractors, and American ships at Sitka (Khlebnikov 1994: 20,22,113). Records indicate that Russian American policy during this period included a strategy to withhold selected durable goods, including ceramics, for barter with foreign nations. This approach suggests that the supply of ceramic goods was effective enough to result in significant surpluses, which were then resold for food provisions. As Khlebnikov states,

> All manner of small goods are shipped to (Spanish) California, especially white calico, all kinds of clothing, haberdashery, glass and crockery…[Khlebnikov 1976: 64].

The quantity of ceramics available to the artisans did not reflect the persistent stress of ill provisionment. An inter-site comparison of ceramic assemblage ratios instead suggests that vessels at Castle Hill before 1840 were available for purchase in quantities analogous to Russian sites post-dating the Hudson's Bay contract. This analysis also suggests that Russian American supply was superior to that of Euro-American sites functioning within frontier markets.

The presence of significant numbers of Russian ceramic wares suggests that New Archangel was an important market for manufactured ceramics from European Russia. Coupled with this provisionment of Russian ceramics, American, Spanish and Chinese trade was also substantiated.

Drilled and repaired ceramics, interpreted as a cultural and/or class induced repair strategy, may suggest that the pre-1840 period was affected by periodic shortfalls in supply. However, these presumed shortfalls in supply were ***not*** reflected in the greater ceramic patterns. The skilled craftsmen class was apparently not significantly affected by the persistence of poor ceramic supply.

Table 8.8. Manufacturers and provenience of marked vessels at Castle Hill
***Numbers reflect MNV values**

	MANUFACTURER	MARK DATE	STRATA							
			I	IIa	IIb	IIc	IIe	III		
ENGLAND	HARTLEY, GREENS AND CO.	c.1800-1821	18	4		1	1	1		
	COPELAND AND GARRETT	1833-1847	22							
	JOHNSON BROTHERS LTD.	1891-present	1							
	JOHNSON BROTHERS LTD.	1899-1913	1							
	JOHN HALL AND SONS	c.1822-1832	8							
	HICKS AND MEIGH	1806-1835	37	2	1					
	PATTY AND COMPANY	19th c.	1							
	ALFRED MEAKIN LTD.	1891-present	1							
	ST. ANTHONY'S POTTERY	c.1835-1878	4							
	ST. ANTHONY'S POTTERY	1804-1878	4		1					
	DAVENPORT	c.1805-1887	6							
	DAVENPORT	1852-c.1860	2							
	DAVENPORT	1860	1							
	DAVENPORT	1836-c.1860	6							
	JOSIAH WEDGEWOOD	c.1775-1860	5	1						
	W.T. COPELAND	1847-1864	3							
	RALPH AND JAMES CLEWS	1818-1834	2	1			2			
	EDWARD AND GEORGE PHILLIPS	1822-1834	1				1			
	SPODE	c.1810-1833	2							
	SPODE	c.1784-1833	1							
	JOHN ROGERS AND SONS	1815-1842	1							
	JOHN/GEORGE ROGERS AND SON	c.1784-1842	1							
	GEORGE JONES AND SONS	1861-1873	1							
	GODWIN, ROWLEY AND COMPANY	1828-1831	1	1						
RUSSIA	FRANCIS GARDNER	c.1770-c.1830	11	1			1			
	FRANCIS GARDNER	c.1770-c.1780	2	1						
	FRANCIS GARDNER	c.1812-c.1870	6	1						
	FRANCIS GARDNER	c.1812-c.1830	1							
	FRANCIS GARDNER	(c.1825-50)-1891	1							
	TERIKHOV	c.1830-c.1867	2				1			
	E.M. GUSYATNIKOV	1817-c.1830	8			1				
	NIKITA KHRAPUNOFF	1815-c.1840	3	1			1			
	POSKOCHIN	1817-1842	2							
	P.T. FOMIN	c.1800-1883	2	1			1			
	THE BROS. NOVYI	1818-c.1830	1			1				
	SAMSONOV BROTHERS	1819-1875	1							
	A.G. POPOV	1811-c.1850	1							
	GULIN	c.1820-c.1850	1							
GERMANY	MARX AND GUTHERZ	c.1876-1889	1							

The deposits within the workshop locus did not reflect the patterning of ceramics indicative of the Native Alaskan tea ceremony. This absence highlights a distinct pattern of ceramic use found only at sites in New Archangel.

Limited numbers of modified ceramics in the assemblage suggested the presence of Native Alaskan traditional technology. The presence of a unifacial ceramic ulu-like tool, coupled with doll parts and toys, also implied the participation of women and children in the Russian domestic household structure at Castle Hill. This inferred kinship structure, coupled with the diverse pattern of cultural behavior, has developed an understanding of the cultural context and domestic strategy of skilled craftsmen.

The ceramic assemblage, linked to skilled artisan class of consumers, can be used as a baseline to test the relationship of material culture and socio-cultural variables. The immense size of the ceramic assemblage, including identified Russian ceramics, undocumented transfer-printed patterns, and restorable vessel forms will remain invaluable for inter-site comparisons.