

Archeology at the United States Pottery Co. Site in Bennington, Vermont

by Victor R. Rolando and Catherine Zusy

This is a two-part paper describing archeology at the site of the United States Pottery Company (USP) in Bennington, Vermont. Part I describes the background and excavation portion of the project; Part II describes the laboratory analysis and findings.

Part I: Background and Field Work by Victor R. Rolando

Introduction

Three archeology sessions during 1997 and 1998 at the site of the United States Pottery Company (Figure 1; VT-BE-263) resulted in the recovery and interpretation of thousands of artifacts, providing new and/or additional information regarding early pottery-making in Bennington. Project Director was Catherine Zusy, former curator at the Bennington Museum, currently a free-lance curator based in Cambridge, Massachusetts. Project Archeologist David Starbuck of Plymouth State College, New Hampshire, was assisted in the field by Victor Rolando. An additional 70 volunteers excavated the site and/or worked in the lab. (Except where noted, this paper is excerpted from Zusy et al. 1997 and 1999, and Starbuck and Rolando 1997).

Background

The goal of the project was to learn more about what wares the United States Pottery Company was manufacturing. USP operated in Bennington from 1847 to 1858 and was the first large-production pottery in New England. It is credited with being the first pottery in the United States to produce decorative figures in parian porcelain. While museums across the country have collected USP products since the early twentieth century, confusion has persisted about what USP made, especially in the area of parian. This is because USP marked very little of its parian (and no known decorative figures), published no illustrated price lists, and employed English designers who regularly copied English forms.

Parian is a type of porcelain that was invented in England around 1845, probably by several pottery makers simultaneously. The name "parian" is derived from the ceramic's likeness to white marble that was quarried on the Greek island of Paros. Unlike bisque porcelain, which soiled easily if left unglazed, parian has a dense, smooth surface that resists dirt and remains creamy. The public got its first "en masse" glimpse of parian at the 1851 Crystal Palace Exhibition in London, and it immediately set a new standard in the

decorative arts. English producers were soon sending huge shipments across the Atlantic to satisfy U.S. and Canadian demands, and it wasn't long before some American pottery makers began their own output in Ohio, Trenton, New York, Baltimore, . . . and Bennington, Vermont.

When one thinks of Bennington pottery, the name Norton comes to mind. But it was Christopher Fenton, who married the oldest daughter of Luman Norton, owner of Norton Stoneware Pottery, who founded the works that eventually became the United States Pottery Company. Fenton was born in Dorset, Vermont, the son and nephew of potters (Spargo 1926:108).

Julius Norton and his brother-in-law, Christopher Fenton, formed 'Norton & Fenton,' and began to make stoneware in 1842 while experimenting with the production of yellow ware with a mottled brown Rockingham and thick dark luster glazes. Two years later, they were experimenting with molded forms. The next year, the pottery burned and was immediately rebuilt.

In 1846, an English modeler named John Harrison, Jr., who had previously worked in the potteries at Stoke-on-Trent in England, was working in Bennington, and is credited with crafting the pottery's first parian figures. They are said to be the first made in the United States.

In June 1847, the 'Norton & Fenton' partnership was dissolved and Fenton, along with Harrison and Decius Clark, established a pottery in the north wing of Julius Norton's works. Clark was a native of Burlington, Vermont, and "the ablest of the men who worked in Bennington; he was one of the most remarkable men ever connected with the pottery industry in the country." (Spargo 1926:213). During this time, Henry D. Hall, son of Governor Hiland Hall, became Fenton's "silent partner," creating 'Fenton, Hall & Company,' "but it seems only to have been used where legal forms required it. So far as known, it never appeared upon any of the company's wares." (Spargo 1926:113). An 1847 company price list also identified the pottery as 'Fenton's Crockery Works.'

Fenton advertised Yellow Fire Proof Ware, Dark Lustre or Rockingham Ware, White Flint ware, Earthen ware, and China. The firm also made bricks with clay imported from West Troy (Watervliet), New York. In 1848, the company became 'Lyman, Fenton & Park,' the latter, Calvin Park, being a local business man who later became Fenton's son-in-law (Spargo 1926:118). Park withdrew from the firm November 1,

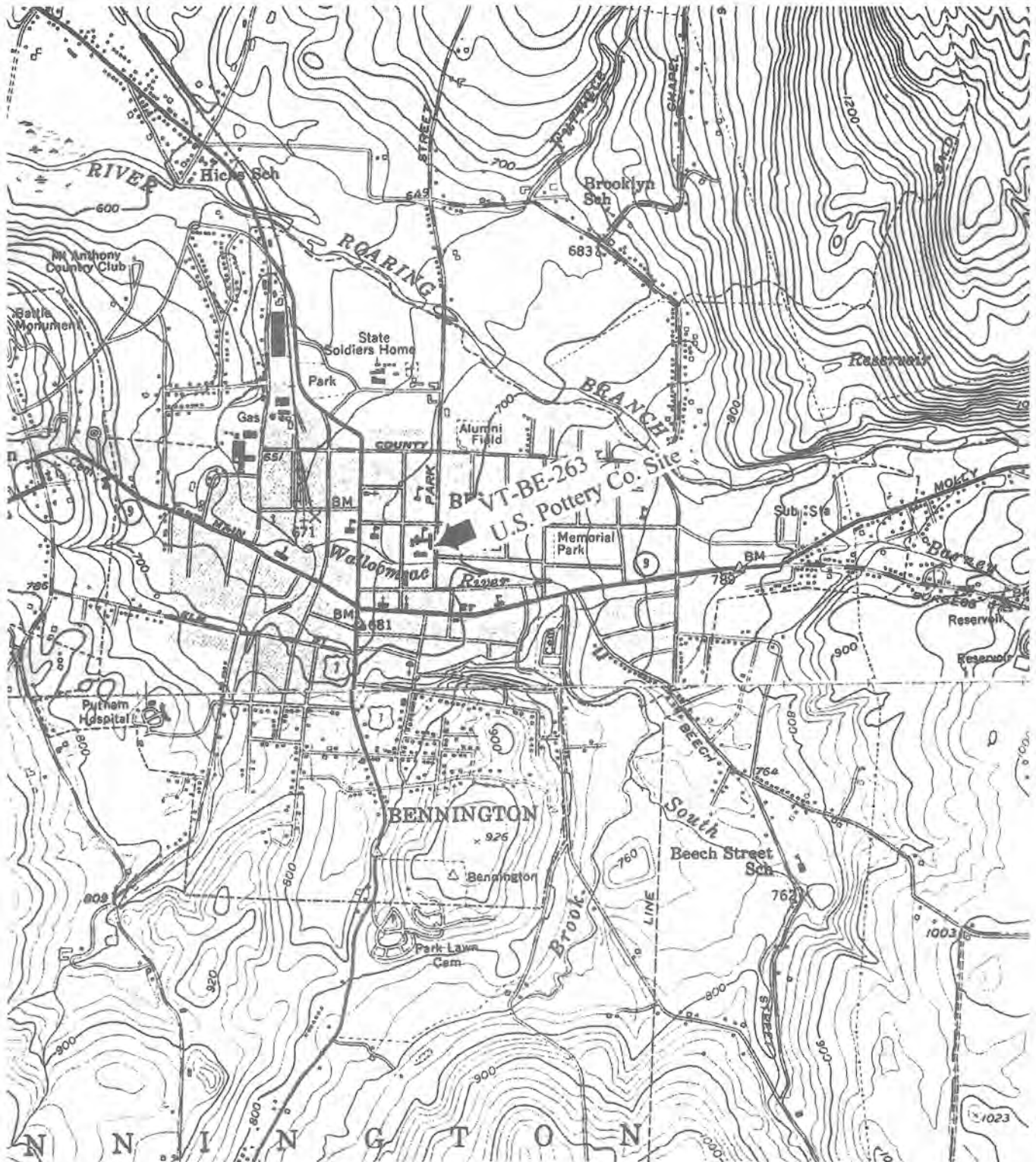


Figure 1. Location of the site of the United States Pottery Company, about 2½ blocks northeast of the downtown Bennington "four corners" (USGS Bennington and Pownal quadrangles, 7.5' series, 1954).

1849, after which (and until January 1853) the two remaining members alternated between 'Lyman & Fenton' and 'Lyman, Fenton & Company' (Spargo 1926:120-121). By then the company was distributing earthenware to country stores throughout Vermont, New Hampshire, and Massachusetts. In late 1849, the pottery introduced and patented flint enamel ware, which was soon copied by potteries in Maryland, New Jersey, and Ohio.

Fenton built his own pottery in 1850, directly (north) across the Walloomsac River from the Norton Pottery, on land that he purchased from Julius Norton. It is thought to cost between \$12,000 and \$15,000. At that time, the pottery employed about fifty workers. It was open and operating by November 1850, and was said to cover nearly an acre of ground and presented "a grand appearance, with its high towering chimneys, or craters to kilns, smoky and sending forth fire like so many volcanoes." (Spargo 1926:123). Fenton, however, had so many orders that he continued to work as well in the north wing of his brother-in-law's pottery.

The 1852 Presdee & Edwards *Map of the Village of Bennington, Vt.* shows the "Lyman & Fenton Flint Enamel Pottery" occupying the area between Pottery Street (today's Park Street) on the east, and where School Street now borders the property on the west. The pottery was also situated on the northern half of the property, along the south bank of an unnamed east-west waterway that provided waterpower to the mill. Directly across the Walloomsac River to the south is the "J. & E. Norton Pottery."

In 1852 the Western Vermont Railroad opened between North Bennington and Rutland, giving the pottery rail access to Albany and Boston via the Troy and Boston Railroad. Parian was in full production at Fenton's pottery; that same year he published a price list of 76 items in a variety of sizes, including 11 figures made of parian porcelain.

In 1853 the company was named the United States Pottery Company, and won great acclaim for its display at America's first World's Fair, the New York Crystal Palace Exhibition. That fall the pottery added a southern wing and planned to employ about 175 hands. In June 1855, \$200,000 was raised, mostly by Boston and New York investors, to support the cost of expanding the pottery, and 12 months later, the stockholders voted to expand the pottery, adding another double-kiln to the "already mammoth works" which now covered four acres and employed between 200 and 300 workers. The 1856 Rice & Harwood *Map of Bennington County* shows the "U.S. Pottery" as a main building parallel to Pottery Street with three attached wings in the rear.

The pottery started considering converting its fuel from wood to coal in December 1855, in an effort to reduce operating costs that were rising faster than profits. But the national economic depression of the 1850s caught up with the pottery and on May 15, 1858, due in large part by the inability to make collections on debts owed, the company shut down (Spargo 1926:132-134).

From about August 1858 to August 1859, the pottery was operated by A. Gilbert & Company. This new firm used the old molds and pottery marks and "many inferior Rockingham and porcelain pieces which every collector of Bennington pottery encounters, and which are known to have been produced here, were made by the Gilbert firm" (Spargo 1926:136-137). Meanwhile, Fenton had moved on to Peoria, Illinois, where he was involved in the establishment of the American Pottery Company the summer of 1859. It too failed, in 1864. He died from an accident at Joliet, Illinois, on June 7, 1965 at age 59 (Spargo 1926:153).

On September 30, 1859, the *Bennington Banner* reported that eight of the best workmen, realizing that "operations would soon cease for the present at least," had established a joint stock company to make the same kind of wares they made at U.S. Pottery, but in West Troy, New York. This soon failed. Various other attempts were made to resurrect the pottery business in Bennington: the New England Pottery Company (ca.1859-1860), and T.A. Hutchins & Company (ca.1860). The latter was the only one to use any other identification mark than those of the old company (Spargo 1926:141).

By May 1863, Henry F. Dewey had refitted part of the USP buildings, utilizing the associated waterpower to grind feldspar on a small scale for sale to other potteries elsewhere. Seven years later the pottery buildings were razed to make way for construction of the Bennington Graded School (Spargo 1926:141-142).

The 1891 *Sanborn Map of Bennington, Vt.* shows the school slightly west of center between today's Park and School Streets, occupying most of the area where the rear wings of the USP formerly stood. It was an imposing three-story brick structure. Photographs show its basement extended approximately 5 to 6 feet below ground level; therefore, excavation for the construction of the school's footings, floors, and foundation walls must have destroyed subsurface remains of the USP wings. The Graded School was demolished when the present Bennington Elementary School was built in its place in 1955.

Research by Zusy also provided valuable information about where on the school grounds the pottery might have been located. During 1914 and 1915, Burton N. Gates, a collector of American glass and ceramics, photographed the U.S. Pottery Company site and interviewed many potters who had worked in Bennington. William G. Leake, who had worked at USP as a young boy, also made a sketch of the pottery (Figure 2). Both Gates' and Leake's data were studied.

Leake's sketch shows a 2½-story building fronting on Pottery (Park) Street with three wings extending westward behind it. According to Gates' notes, the overall building footprint was about 150 by 150 feet. The front of the building was used for packing and storing finished ware, and a small 1½-story "pottery office" was attached to the southeast corner of the building. The double-decked kilns protruded 15 feet above the roofs at the west ends of all three wings. Rockingham wares were made in the north wing (built in late

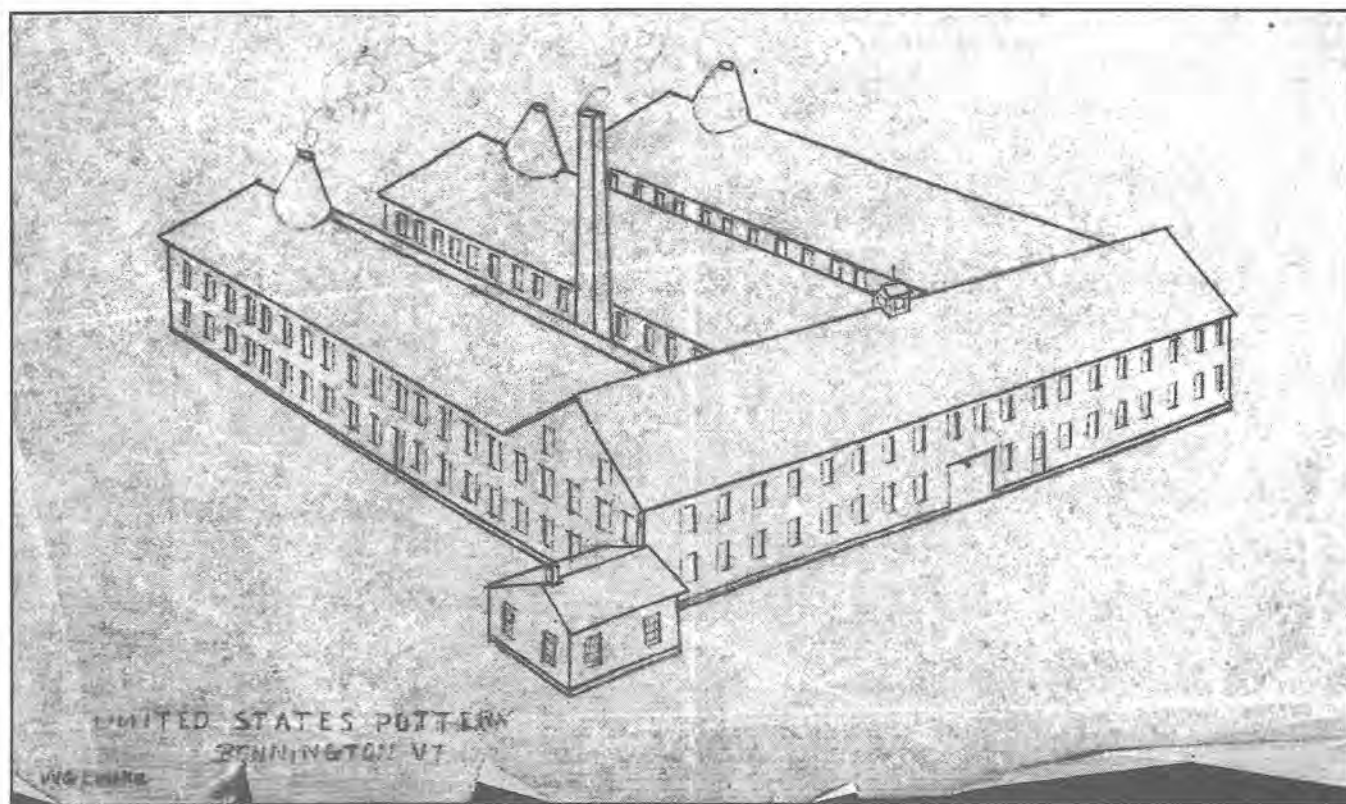


Figure 2. William G. Leake's sketch of the U.S. Pottery Company building facing on today's Park Street. Note kilns protruding through the roofs at the ends of the pottery wings (photo by Nicholas Whitman; courtesy of Bennington Museum).

1850), where grinding, throwing, and turning were also done; molds were made in the middle wing (also built in late 1850); and Parian and whitewares were made in the south wing (built in 1853).

Two photos were discovered in November 2000 that might have been taken in the 1850s-1860s of the U.S. Pottery buildings (Figures 3 and 4). Various physical features, such as proximity to the river, contour of the distant horizon, and the iron bridge in the immediate foreground, appear to match the site in the photos as that occupied by today's Bennington Elementary School. Certain details in Leake's drawing of the pottery, however, do not agree with the photos. Research is continuing in order to confirm the identification of the photos.

The May 1997 Field Session

Field Methodology

No surface remains exist today to hint of the exact location of the pottery. The elementary school building occupies almost all of the northern half of the approximately 3.4-acre lot, bounded on the east by Park Street, on the west by School Street, on the south by the Walloomsac River, and on the north

by private property. The southern half of the grounds are today's playground and soccer field, where two of the archeology excavation sessions took place.

On-site comparison of the Leake sketch with the school grounds indicated that the best area to excavate was an area slightly west of a point halfway between the school and the river, which is where we determined the west wing of the pottery's parian wing had stood (Figure 5). Assuming wasters were discarded out the end of the wing, this seemed a productive area to excavate, and on May 5, permission was granted by the School Board to dig behind the west goal posts of the soccer field during the week of May 26-30, 1997.

The dig was preceded by paperwork, soliciting volunteer diggers and lab workers, finding lodging for those who came from a distance, stocking up on forms, bags, and tools, and agreeing on dig strategy. Zusy commenced to solicit funding and locate volunteers for the project; Rolando provided lab space in the basement of his house, five blocks away. A small local advisory committee was also formed to act as a sounding board for the project and was kept up-to-date by Zusy.

On Sunday, May 25, David Starbuck, assisted by Victor Rolando, surveyed a datum (N0E0) in the corner of the playground south of the paved parking lot and west of the goal



Figure 3. A mid-nineteenth-century photo of what appears to be buildings of the U.S. Pottery Company, just north of the Walloomsac River. Today's School Street is in the immediate foreground. The building with the tall chimney might be the middle wing, built in late 1850. Note that the south wing, built in 1853, is not standing (courtesy of Bennington Museum).

posts. From this datum, two base lines were surveyed: west 21 meters long, and south 16 meters long. The south line stopped just short of a pathway fence that borders the playground on the south. Locations of five 1-meter pits were surveyed along each of the two base lines (total 10 pits).

Following a Monday morning informative meeting of the local advisory committee and volunteers at the Bennington Museum, volunteers gathered at the site and commenced to excavate the test pits. Large quantities of wasters and kiln furniture were recovered, and public education efforts successfully conveyed the importance of the site - and of careful archeological techniques - to visitors.

Over the five-day period, pits were excavated at S1W21, S1W16, N0W11, S1W6, S1W1, S8E0, S11W1, S11E1, S13W1, and S16W1 (Figure 6). Pit S8E0 was subsequently expanded into a two-by-two-meter pit identified as S9W1. Seven of these pits were commenced on May 26, and the other pits were added throughout the week as two-person teams

completed their initial assignments (Figure 7).

Pits were excavated by a mixture of shoveling and troweling, with all dirt then sifted through $\frac{1}{4}$ -inch mesh. Not all wasters or kiln furniture were saved, given the great density of materials in some pits, but thousands of pieces were nevertheless recovered.

All test pits had a surface layer of grassy sod underlain with hard clay topsoil that averaged about 25 cm thick, designated layer 1. Just underneath, the soil became somewhat looser and filled with kiln furniture, wasters of earthenware (especially Rockingham), nails, animal bones, coal fragments, and brick fragments. This layer of cultural material was designated layer 2. Below this, the soil turned to sterile yellow subsoil; this took the form of an easily-recognizable clay hardpan. The artifact-bearing strata easily peeled off the surface of this sterile layer. The deepest pits were excavated to a depth of about 75 cm, although less productive pits were halted by about 50 cm.



Figure 4. Another view of what are possibly buildings of the U.S. Pottery, this one taken from the Smith Street (today's School Street) iron bridge. Pottery Street (today's Park Street) bridge is visible in background, right (courtesy Bennington Museum).

One of the most productive pits was the 2-meter test pit at S9W1 (Figure 8), which had a topsoil depth of 27 cm, underlain by a zone of kiln furniture from 27 to 44 cm deep, underlain by field stones from 44 to 60 cm deep, underlain by earth from 60 to 76 cm, underlain by the unexcavated hardpan. Visible soil stratigraphy was minimal, and except for differences in artifact density, all pits had essentially the same pattern of soil layers.

There was some variation in depth across the surface of the playground, however, and cultural deposits became progressively deeper toward the south (e.g., deeper in S16W1 than in the S1-row of pits). The same was true for the number of round field stones that were mixed in; there were few stones at the west end of the playground and a great many mixed in with the artifacts in the east and toward the south.

Shards of parian porcelain tended to be concentrated in the bottom of the pits. This was especially evident in S11W1 where wasters were common toward the surface, underlain by many field stones and firebrick fragments. Parian was located

below this, yet, some were as shallow as 30 cm (S9W1) and were most commonly found between about 50 and 65 cm.

Pits were generally less productive at the western end of the dig site and most productive toward the southeast. Consequently, the western pits (such as S1W21) were abandoned almost immediately and pits continued to be added on the south until the very end of the session. Pits toward the south also contained the largest quantities of parian porcelain, so new pits were being added in this area right up to the final day of the dig. S8E0 and S11W1 contained the most parian (especially S8E0, which also had many decorated shards of parian), with S11W1 also containing the greatest quantity (3,448 pieces) of kiln furniture of all types. Near the end of the week, Rolando dug a series of small core pits across the eastern part of the playground. These revealed wasters in virtually every hole, and many nails at a great depth.

The work was recorded in black and white photographs and color slides, and these reveal informal work activities, soil stratigraphy, visiting groups, and diagnostic artifacts in situ.

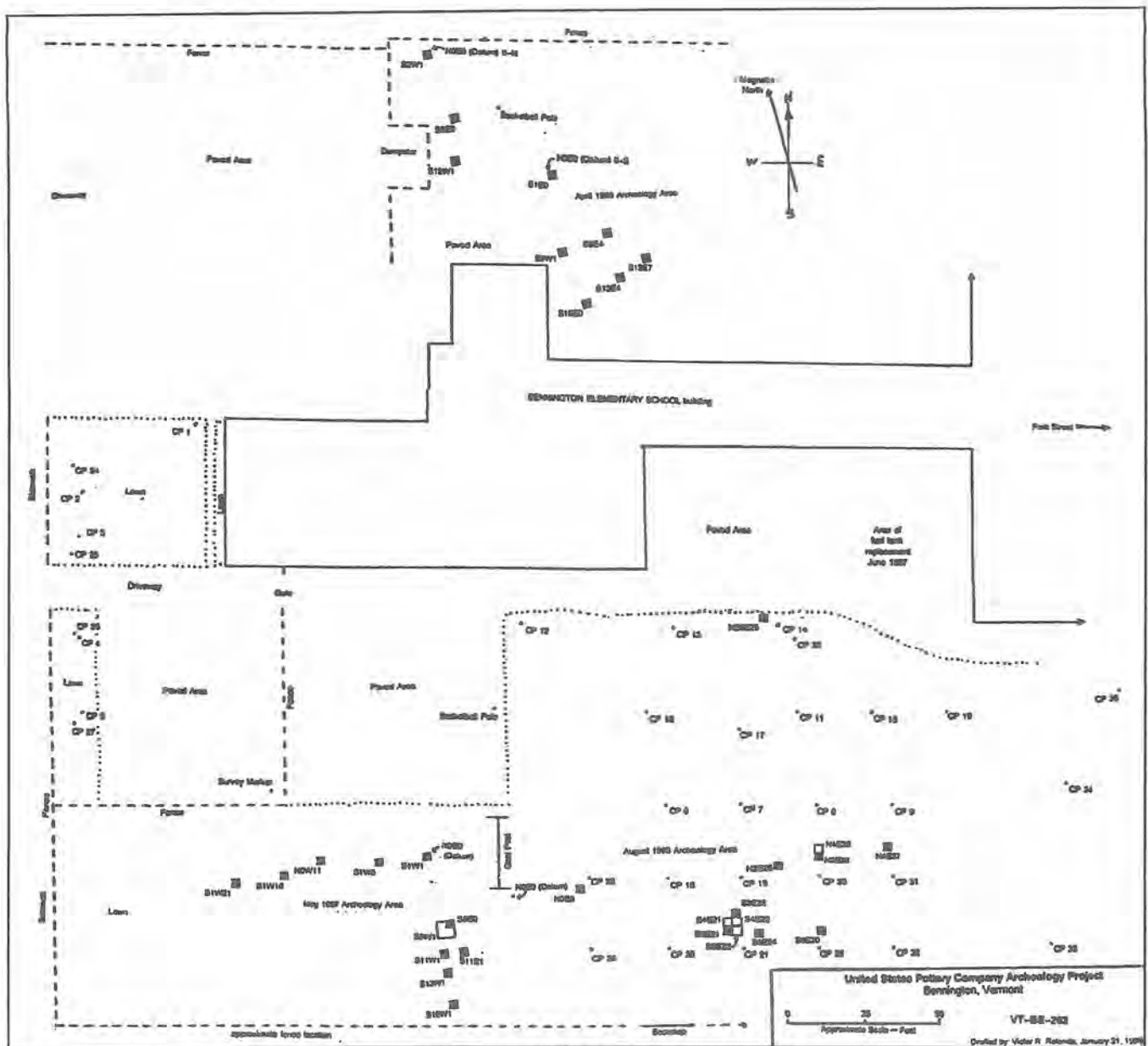


Figure 5. Overall site at Bennington Elementary School, indicating excavated pits and core pits. See Figures 6, 12, and 14 for the May 1997, April 1998, and August 1998 project areas (Rolando drawing).

Given the very limited stratigraphy and the shallowness of the pits, most pictures reveal very similar patterns from pit to pit. Upon the conclusion of the excavation, Starbuck and Rolando surveyed and recorded key points to permit the preparation of a base map of the site. The archeological grid included a permanent GIS pin found in the paved parking lot 1 of the Elementary School, about a dozen meters northwest of the site datum.

The lab in Rolando's basement was led by Betty Hall and Ann Clay. Assisted by other lab volunteers, the artifacts were processed during the dig and through most of the following summer months. Project Director Catherine Zusy and former Bennington Museum Curator Eugene R. Kosche subsequently did the identifications of the more diagnostic artifacts at the Bennington Museum. Zusy also did the final count and analysis of artifacts making up the bulk of the final report.

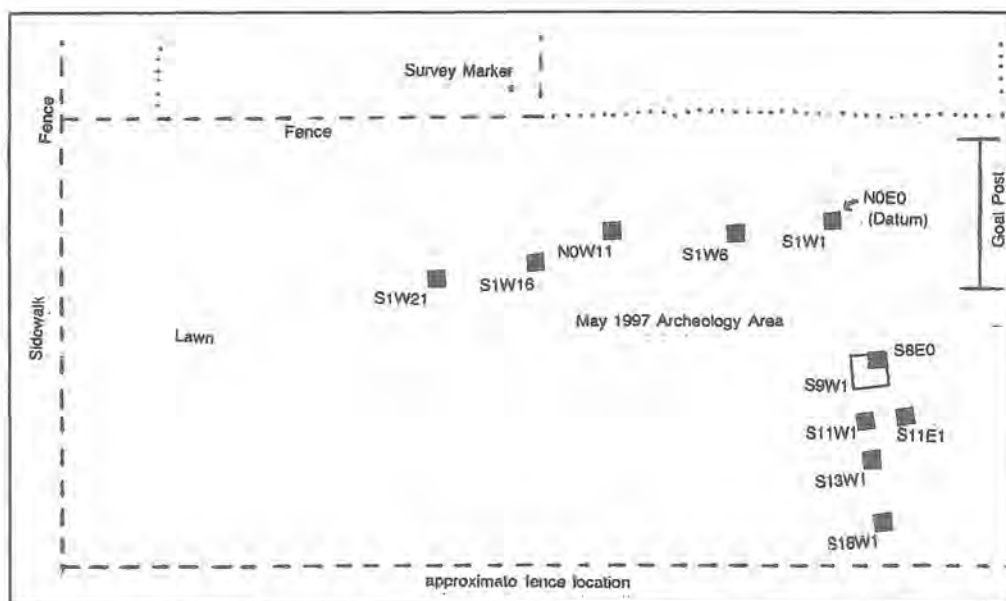


Figure 6. Disposition of the May 1997 pits, near the southwest corner of the Bennington Elementary School playground. Refer to Figure 5 for overall site location (Rolando drawing).

Cultural Features

No foundation remains were discovered so it appears that the entire 1997 project area was originally a dump adjacent to the south wing of the factory. The only significant intrusion into these deposits was a rusted water pipe found buried within S9W1. This extended below the 75 cm level and clearly had not been used for some time. Test pits varied greatly in artifact density, although virtually all had at least a few pieces of wasters and kiln furniture. In some cases, the quantities of wasters and kiln furniture were so high that it became impossible to save everything, so we saved only larger fragments - those that had a more recognizable shape, and those that were coated with traces of glaze. This selectivity was unavoidable for both the 1997 and 1998 sessions due to time constraints, but it would be preferable to save all fragments of all cultural materials in any future dig to avoid bias in collection procedures and obtain an accurate ratio of various types of artifacts.

Because we didn't find a great deal of variety in ceramic decoration or forms, this might have suggested that the material recovered may only represent waste from a few kiln firings. Fenton might also have dumped his waste materials elsewhere, since remains of some known articles of manufacture were not found. The largest numbers of artifacts were kiln furniture - used for separating vessels during firing inside the kiln - but unglazed ceramic fragments also numbered in the thousands. Least common were fragments of glazed pieces. We also recovered a number of fragments with pottery marks.

Kiln furniture took the form of small stilts, saggars, setting bars and more, of which a large sample was recovered, documented, and studied.

Not all artifacts recovered were USP products. Throughout the excavated area we found nails, pieces of window glass, stems from tobacco pipes, and more recent (twentieth century) artifacts such as bottle caps and plastic beads. There were modest numbers of red bricks and pieces of fire brick, either products of the pottery or discarded during the periodic reconstructions of the firing kilns.

Results of the 1997 Season

Relative to the short period of excavation and the small size of the crew (16 people, each for varying lengths of time), a great quantity of cultural material was recovered, totaling 19,635 pieces of parian, earthenware, kiln furniture, and other ceramics. However, there is no way of telling whether this corner of the playground contains materials representative of the entire playground, and we did not expose any recognizable cultural features that would permit us to project the location or layout of the pottery buildings. Consequently, future work appears warranted at this site to determine whether other parts of the playground contain significantly different products or wasters and to locate evidence for the bases of foundations or kilns. Seventy-five bags of artifacts were recovered from the 12 pits:

Pit	No. of Bags	Pit	No. of Bags
S1W1	8	S11E1	3
S1W6	9	S11W1	9
S1W16	11	S13W1	4
S1W21	2	S16W1	5
S8E0	8	N0W11	5
S9W1	11 (2-meter pit)		



Figure 7. View looking northeast across the 1997 digging area. The school building in the background stands about where the main U.S. Pottery buildings stood. Production wings behind the pottery extended almost to the dig site (Rolando photo).

Nature and Distribution of Artifacts Recovered

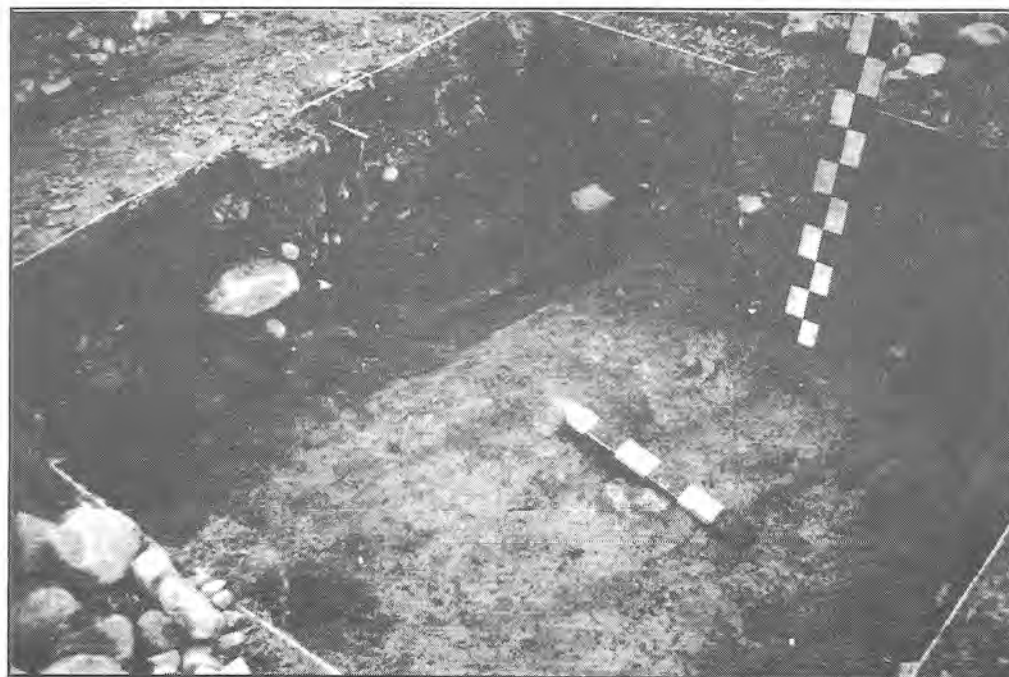
Thousands of ceramic shards and bits of kiln furniture were recovered. Size, concentration, and distribution of shards in certain pits suggests that at least part of the area excavated was the pottery's dump site. Most shards measured less than 5 by 5 cm and were recovered in second and third soil layers, about 30.5 to 61 cm below the surface. About two-thirds of recovered material was kiln furniture, small clay shapes (stilts, spurs, and tripods, etc.) shelves, and saggars.

The bulk of the pottery fragments recovered in terms of

overall size, not quantity, were pieces of unglazed earthenware with paneled, ribbed, and geometric designs. Also recovered were thousands of parian shards, including some pieces of blue and white parian, and some Rockingham, flint enamel, granite, and agate (also known as lava or scroddled) wares. Several fragments of porcelain telegraph insulators, made at the pottery or possibly elsewhere, were also recovered. Some non-ceramic objects were also found.

It is important to keep in mind that everything recovered had been discarded by the pottery. The preponderance of small

Figure 8. Two-meter pit S9W1, which started as 1-meter pit S8E0 (upper right), showing the typical stratigraphy and layer 2, the pottery artifact layer (Starbuck photo).



bits of parian ware found - particularly in the pond lily and wild rose pitcher patterns - may reflect the difficulty the manufacturer had producing these pieces, so great quantities of these designs were made. The lack of fragments of other parian pitcher designs may suggest that the forms predated the erection of the south wing of the pottery (which opened the fall of 1853), were less popular designs, or were forms that consistently fired more successfully.

A number of fragments of forms or decorations were found that until now have not been ascribed to the pottery. There is a good chance - especially if the fragments were found in a number of pits - that the pottery made them. In cases where only one example of a new parian form or design motif was recovered, interpretation has to be more cautious. These might be a form that the pottery experimented with but never produced in quantity or were even objects at the pottery that had been made elsewhere. The following is a breakdown of artifacts recovered:

Type Shard	No. of Pieces
Parian	3,802
Yellowware and Whiteware	2,600
Rockingham and Flint Enamel Ware	1,483
Glazed Whiteware	321
Agate (Lava or Scroddled) Ware	145
Other Ceramics	457
Kiln Furniture	10,827

Most of the parian recovered were in very small pieces, typically less than 1.5 cm square, and concentrated in the following pits (little parian was found in other pits):

Pit	Number of Fragments
S9W1	2,450
S8E0	807
S11W1	228
S11E1	211

Many parian shards recovered were white and have been identified as being pitcher fragments:

Pitcher Type	Number of Fragments	Recovered Mostly From Pits
Pond Lily	663	S9W1, S8E0
Wild Rose	546	S9W1, S8E0
Tulip & Sunflower	233	S9W1, S8E0
Palm Tree	122	S9W1, S8E0
Climbing Ivy	25	S9W1
Charter Oak	18	S9W1, S8E0
Cascade	9	S9W1, S8E0
Flower & Vine	4	(four pits)
Bird & Nest	3	S11W1
Arabesque	2	(two pits)

The 3,802 parian shards recovered included 48 blue-and-white parian of the following pitcher designs (which do not include the bisque parian that were mis-identified as earthenware in the 1997 report):

Design	Number of Fragments
Pond Lily	18
Charter Oak	7
Palm Tree	1
Unidentified	22

Fragments of unglazed earthenware recovered were generally 4 cm square and larger than the parian shards. While they were mostly found in the following pits, earthenware and parian were distributed throughout the site:

Pit	Number of Fragments
S9W1	942
S8E0	394
S1W6	306
S1W1	230

Fifty shards of known parian pitcher patterns were recovered, primarily from pits S8E0, S9W1, S11E1, S1W1, and S1W16. Much Rockingham and flint enamel wares were recovered in pits S9W1 (635 fragments) and S11E1 (373 fragments). Rockingham and flint enamel shards were distributed throughout the pits. Little glazed whiteware was recovered, and when found it was generally very small, less than ½ inch square. The majority were recovered in S9W1 (112 fragments) and S11E1 (81 fragments). Very small amounts were found distributed throughout the site.

Kiln Furniture

By far the largest single category of artifacts recovered (8,207 pieces) was kiln furniture. We also found 2,376 pieces of what might be bits and pieces of kiln furniture but are otherwise unidentifiable, along with 244 small pieces of pottery that were found mixed into the deeply filled boxes of kiln furniture. Pieces of kiln furniture were excavated and recovered in such quantities that in time, only good or whole, identifiable pieces were saved. Because of this, an accurate analysis based on the ratio to other pottery artifacts cannot be made. A total of 10,827 pieces of material were inventoried as kiln furniture (Figure 9).

Although some pieces of kiln furniture appeared to be in useable condition, they must have been considered "disposable" by the pottery. Earth-moving for construction following the demise of the pottery might have damaged otherwise good, reusable kiln furniture.

Kiln furniture was divided into whole or parts of the following categories: saggars, shelves and flat supports, tripods, cocksups, stilts, diamond-shaped bars, saggars wads,

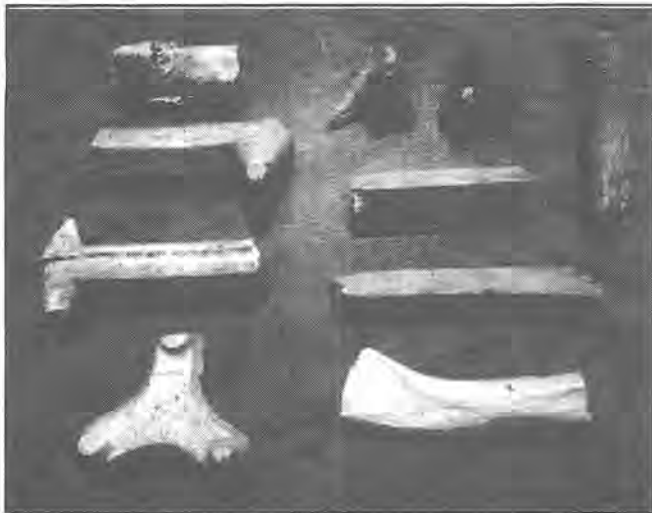


Figure 9. A sampling of kiln furniture recovered from the 1997 digging session. Clockwise starting at lower-left: tripod, tripod arms (3), cockspurs (2), flat support, stilts (2), and saggar wad (Rolando photo; courtesy Bennington Museum).

and unidentified pieces (Dr. Robert Fryman of Georgia State University found the same types of kiln furniture when he excavated a pottery dating 1852-1857 in East Liverpool, Ohio). According to Zusy's research, Burton Gates found that much of the kiln furniture was manufactured at the pottery. Frederick Godfrey made spurs and stilts for the pottery, making "so much for a gross." David McGuire and Nelson Moulds were saggar-makers; saggars were made from fire clay obtained from clay beds east of town. "This saved good clay."

Saggars were 10- to 12-inch-diameter cylindrical vessels made of fired clay that held wares to be fired in such a way that they neither touched each other nor the saggar. The purpose of the saggar was to isolate the unfired items from the salt and smoke of the firing. Saggars were closely stacked, one atop the other (as high as the kiln would permit) with the base of the one above becoming the cover for the one below. They rarely lasted for more than a few firings and were expendable. Parts of curved pieces of saggars recovered measured $\pm\frac{3}{4}$ inch thick; many had glazed insides, which presumably ran off wares during firing. Saggar pieces had definite curved wall sections (Figure 10); shelves had curved edges only. Parts or chips of either (glazed or unglazed) displayed either insufficient or no surface features to determine whether they were parts of saggars or shelves. Non-curved pieces averaged about $1\frac{1}{4}$ inches thick.

Shelves and flat support pieces measured about $\frac{3}{8}$ inch thick, were $1\frac{1}{4}$ to 4 inches wide and/or long, and were grayish in color. One edge was usually rounded; most had straight edges while some were curved. Some edges displayed a thin glaze. They appeared to be manufactured and might have

served as shelves. No whole piece was found.

Tripods (also known as bow-stilts) were three-legged pieces that appear to have functioned as separators between plates in the kiln. Leg lengths of whole tripods were $1\frac{1}{4}$ inches end to center; pointed cones on both sides of the ends of the arms. Some broken arms measured up to 5 inches long. Pointed cones varied from $\frac{1}{4}$ to $\frac{1}{2}$ inch high. Most were a golden-brown color although a few white pieces were found. All complete pieces were of the small, $1\frac{1}{4}$ -inch arm variety. Their consistent appearance suggests that they were made by machine.

Cockspurs were pyramid-shaped pieces that also would have served to prop or separate wares in the saggars. They generally measured from $\frac{3}{8}$ to $1\frac{1}{4}$ inches on a side by $\frac{1}{2}$ to $\frac{3}{4}$ inch high. Relative inconsistency in size, shape, and appearance indicate they were hand made.

Stilts were triangular bars (also called saddles) that measured $\frac{3}{16}$ to $\frac{3}{4}$ inch on a side by up to 3 inches long. Some displayed glaze and a few glazed pieces had small support points. They, also, were probably machine made.

Diamond bars were $\frac{1}{2}$ inch wide by $\frac{3}{8}$ inch high, most with tapered ends, 2 to $2\frac{1}{2}$ inches long, with a smooth, shiny surface. They appear to have been manufactured.

Hand-shaped pieces, saggar wads, came in many sizes and shapes. Small rolls (49.6% of all kiln furniture inventoried) were up to $\frac{5}{8}$ inch diameter although many were more flat than round. Others measured up to 4 inches. Some rolls were sausage-size with little consistent shape, appearing to have



Figure 10. A saggar fragment, showing base (right) and rim (left) (Rolando photo; courtesy of Bennington Museum).

been manually squeezed into shape (Dr. Fryman suggested that these were placed along the rims of the saggars to help stabilize them when stacked).

Table 1 lists the number and variety of pieces of kiln furniture found in all pits; table 2 lists non-ceramic objects.

Results of the May 1997 Field Session

All principals connected with the 1997 session agreed that the results were well worth our collective efforts. Zusy wanted enough artifacts to do a credible assessment of what the pottery made, and the field crew produced. Thousands of artifacts of varying types, designs, and function were recovered, washed, and identified; the relative site of the pottery had been confirmed; volunteers new to archeology technique had been trained, creating a valuable cadre for pos-

sible future endeavors; and public outreach was successful. The weather cooperated, giving us five full days of sunshine (it rained one lunch hour).

Many people new to archeology became some of our hardest workers. Most of them proved invaluable when we later decided to explore new parts of the playground in April and August of 1998. Some who started in the field quickly switched to the protection of the lab; others were lab people exclusively, working well for all.

One of the rewards of the project was the numbers of people who not only stopped to watch, but asked questions. A few knew bits and pieces of the history of the pottery. One casual onlooker joined in and became one of our most enthusiastic diggers. We were visited by newspaper reporters and the local public television crew.

Table 1. Breakdown of Kiln Furniture Recovered in 1997 (by test pit).

	S1W1	S1W6	S1W16	S1W21	S8E0	S9W1	S11E1	S11W1	S13W1	S16W1	N0W11	Total
Part of saggar (curved/glazed)	2	12	7	-	9	21	-	13	-	1	1	66
Part of shelf (flat/glazed)	-	-	1	-	1	-	-	4	1	-	-	7
Part of either (glazed)	5	70	26	1	34	58	20	69	1	1	3	288
Part of either (chips/unglazed)	39	42	14	3	50	29	7	48	-	20	9	261
Part of flat support	175	42	2	1	10	33	32	25	9	-	5	334
Tripod	-	1	1	-	1	3	3	2	1	-	1	13
Part of tripod	39	65	24	5	54	179	102	272	21	11	45	817
Cockspur	28	55	22	1	22	231	313	430	79	11	22	1,214
Part of cockspur	8	9	9	3	13	53	52	101	6	2	-	256
Stilt	10	32	20	-	17	98	83	259	13	5	7	544
Diamond bar	-	2	4	-	4	8	2	11	2	2	-	35
Saggar wad:												
small roll	381	376	166	18	457	294	53	2,172	13	107	37	4,074
large roll	81	49	13	5	33	37	3	41	-	7	2	271
other	16	7	2	-	-	-	-	1	1	-	-	27
Total	784	762	311	37	705	1,044	670	3,448	147	167	132	8,207
Unidentified (kiln furniture?)	321	234	66	-	256	111	68	1,210	-	110	-	2,376
Unidentified (pottery)	-	20	-	-	12	-	212	-	-	-	-	244

Table 2. *Non-Ceramic Objects Recovered in 1997.*

Object	Pits	Object	Pits
ash	S1W21	nails	S1W6, S1W21, S8E0, S9W1, S11W1, S13W1, S16W1, N0W11
charcoal	S13W1	castor	S1W6
coal	S1W6, S8E0, S13W1	copper strip w/nail holes	S1W16, S9W1, S13W1
slag	S13W1	ferrous metal fragments	S1W16, S8E0, S11W1, S13W1, N0W11
cinders	S1W16, S11E1, S13W1, N0W11	piece of feldspar?	S1W16
brick	S13W1	comb fragment	S1W21
tobacco pipe fragments	S1W16, S8E0, S9W1, N0W11	rusty bottle cap	S13W1
horse's tooth	N0W11	glass bead	S13W1
some shells	S8E0, S1W1	leather shoe	S16W1
glass fragments	S1W6, S1W16, S1W21, S8E0, S9W1, S11W1, S13W1, S16W1, N0W11	buttons	S8E0, S9W1
stoneware (water cooler cover fragments)	S1W1	metal buckle	S9W1
roofslates	S1W1, S1W6, S9W1, N0W11	metal rod	S9W1
small plaster pieces	S1W6, S11E1, S13W1	bone	S9W1, N0W11
		bead, wire, and hook	S11W1
		golfing tee fragment	S11W1

Many elementary school students were guided to the site by teachers during school hours and lunch time. The digging area was bounded with plastic fencing, but this was strained to its limit by the enthusiastic students (Figure 11). Most wanted to know if we were looking for dinosaur bones. If there was any negative aspect of the school's interest in archeology, it was the school board's attitude that the dig was "disruptive" to the school's classes since it wasn't part of the curriculum. Spontaneous archeology had apparently no place in education. The site suffered no vandalism.

A few months after the end of the dig, a contractor excavated and replaced the school's huge underground fuel tank beneath a paved section of the parking lot immediately south of the "connector" building between the main Park Street building and the gym. The excavation was noticed by chance on July 18, when Rolando drove by after most of the work had been completed and backfilling was in progress. Unfortunately, we had not been notified of this project as had been requested. The machine operator proudly described what he called "the kiln" at the bottom of the hole that had been dug for the new tank, but wouldn't elaborate further. It didn't seem plausible that the base of a kiln was that deep (12 feet?) in the ground. Pottery artifacts were strewn all about the surface work area. Some were collected and bagged and delivered to the Bennington Museum.

The April 1998 Session

Background

While 3,802 parian shards were recovered during the May

1997 session (mostly 1,628 shards of identifiable pitchers), fragments of the early pitchers "love & war" and "snowdrops" were not found at the site although the latter is known to be have been a product of the pottery. Also unrecovered were fragments of parian figures, vases, nor trinket boxes, which are noted and illustrated as a product of the pottery by Richard Carter Barret in his book (Barret 1958). By early 1998, therefore, the Project Director Zusy decided to resume archeology at the site, but at a different location on the grounds of the Bennington Elementary School - on the north side of the school buildings, behind an earlier (late 1850) wing of the pottery. See site map for locations of these sites in the Bennington Elementary School grounds.



Figure 11. "Outreach" isn't a problem when you're digging in the school playground. Here the sixth grade gets a hands-on look at progress during the 1997 dig (Rolando photo).

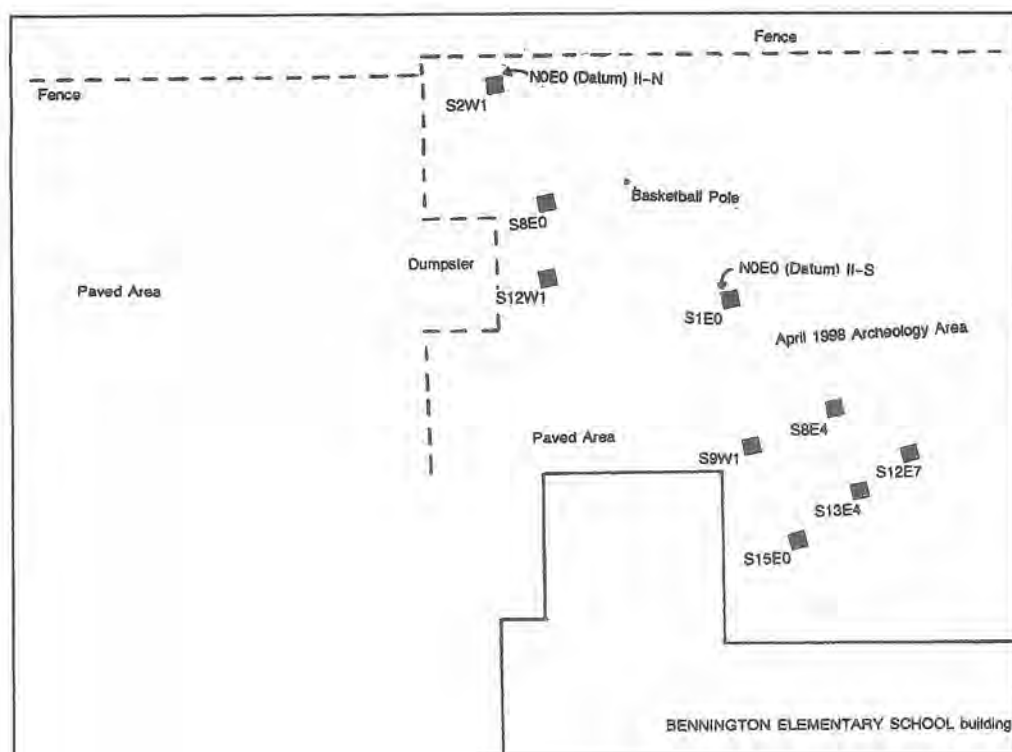


Figure 12. Disposition of the April 1998 pits, on the northwest side of the Bennington Elementary School building. Refer to Figure 5 for overall site location (Rolando drawing).

We received renewed permission by the School Board on February 2, 1998, and the Southwest Vermont Career Development Center allowed us use of their horticultural lab for processing artifacts. Since Starbuck could not be on-site for most of this session, Rolando assumed responsibility for the field work.

Field Methodology for the April 1998 Session

Based on a rough site map drawn by Zusy, pits were planned in two general areas, one in the inside corner of the building near the gym, and the other a few dozen feet to the northwest, in the open area bounded by the property fence to the north and the playground fence to the west (Figure 12). For control, the two new study areas were identified II-N and II-S (where II = Project #2; and N or S = the North or South area).

On Friday, April 17, Starbuck and Rolando surveyed the two datums, and also two reference lines which ran 180 degrees south (magnetic) from each datum. Both datums were identified as N0E0 and each area treated as a separate entity for recording purposes. The base lines were approximately 15 meters long. N0E0 for the II-N study area was established a few feet south of the east-west fence line that separated the school grounds from private property to the north, and 138 feet east of the School Street curb. N0E0 for the II-S study area was established 56½ feet SE of the N0E0 datum point for II-N. On Sunday, April 19, Zusy and Rolando identified and surveyed the six test pits along the two base lines in the study areas as follows: II-N: S2W1, S8E0, and S12W1; and II-S:

S1E0, S9W1, and S13E0.

Excavation started about noon on Monday, April 20, following a meeting with the local advisory committee and orientation at the Bennington Museum for all dig and lab participants. The six planned pits were opened and shards and other artifacts were immediately recovered. By the end of the first day, all except two pits had reached 20 cm in depth. If the stratigraphy data from the 1997 season was accurate for this site also, we were already at or near the boundary between layers 1 and 2. Within an hour of resuming excavations the next morning, however, we realized that something was obviously wrong. Very few shards were being recovered with respect to the depth we were excavating. In fact, the idle lab people were put to work excavating. By noon, only one test pit - S2W1 in study area II-N - was anywhere near productive; all the rest were essentially abandoned (S12W1 bottomed out at 60 cm) and four new test pits - S15E0, S8E4, S13E4, and S12E7 - all in study area II-S, were surveyed and opened. Close scrutiny of the period maps that we had used resulted in discovering that we were excavating too far north of the area that was once behind the pottery buildings. It appears that Bennington Elementary School is located directly over the stream that powered the pottery. Our attention then shifted to taking core samples immediately west and south of the school in an attempt to learn which areas might yield substantial amounts of ceramics for later excavating.

Core pits (CPs) were dug at various places west, southwest, and south of the school building. CPs I-5 were dug west

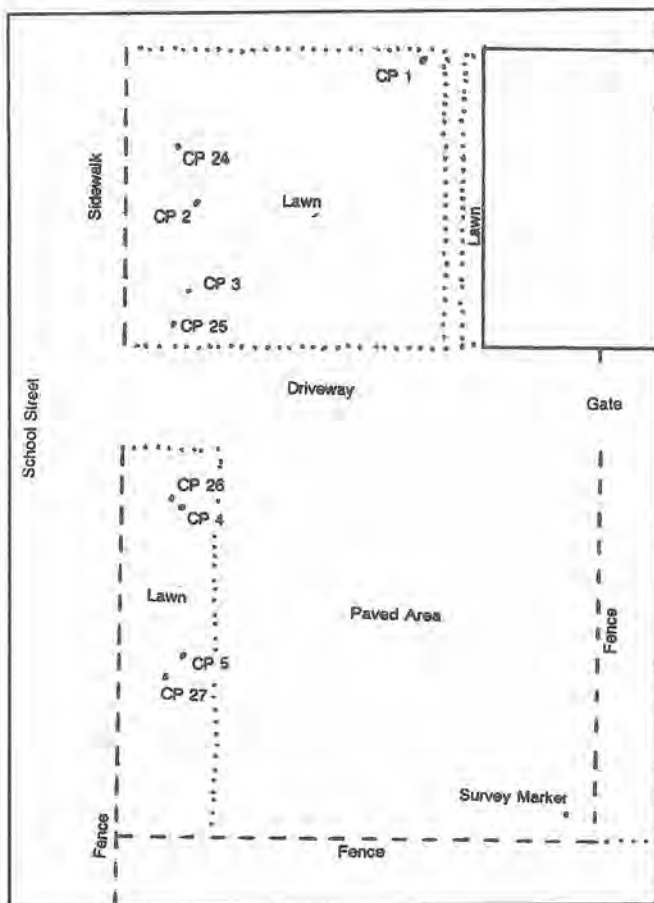


Figure 13. Core pits testing the area west and southwest of the Bennington Elementary School gym building. Refer to Figure 5 for overall site location (Rolando drawing).

of the school, between the gymnasium and School Street (Figure 13). CPs 6-14 were in the south playground with CPs 6-9 on a line due east from the southeast corner of the paved parking lot, and CPs 10-14 on another east line about 6 feet south of the driveway (see Figure 14). CPs 6-9 and 10-14 were dug approximately 25 feet from each other, to determine where likely areas might exist for later excavating. Corings were done by Rolando, Starbuck, and Doug Drummond. Locations of all core pits are indicated on the site map. As a result of preliminary analysis of artifacts recovered by the corings, we closed the dig in order to save the remaining unused days for a possible later dig since we could not get immediate permission from the School Board to dig elsewhere on the site that week.

The August 1998 Session

Background

On May 4, 1998, the School Board gave us permission to

continue the dig during the only week in which the whole playground would be available without disrupting summer activities at the school - the week starting August 17. It was with the understanding we were to dig only three days - the three unused days from the April dig. Plans were immediately set in motion to contact volunteers (the August dig also competed somewhat for volunteers with the UMF-ARC contract project on the Bennington Bypass, going on during the same summer months), and the Southwest Vermont Career Development Center again allowed us use of their horticultural lab to process artifacts. Starbuck not being available for the week, Rolando continued as Field Director and commenced digging a pattern of coring samples in the playground for a better analysis of exactly where to drop the initial pits (Figure 14).

During the week before the commencement of excavations, Rolando dug and analyzed 17 additional core pits. Except for those made along School Street (CPs 1-5 in April and 25-27 in August), the pits were made along east-west lines, about 25 feet apart, creating a broad grid pattern that provided a sense of what artifacts lay under the heart of the playground. The August CPs were dug with a posthole digger (Starbuck's corer being unavailable), which had an inside diameter of about 6 inches.

Analysis of the core pit contents resulted in learning that CPs 14, 21, 22, 28, 30, and 31 were relatively rich in artifacts. It was therefore decided that six initial pits would be dropped in close proximity to these core pits (see below). Table 3 presents results of the April and August corings.

Proximate Core Pit	Associated 1-meter pit
14	N28E25
21	S5E24
22	S5E30
28	N0E6
30	N3E30
31	N4E37

Datum Point and Reference Lines

The new datum point and base lines were surveyed about noon on Sunday, August 16, by Starbuck and Rolando. Site datum (N0E0) was established at a point southeast of the west goal posts, which were firmly bolted to the ground (2.65 m from the west bolt; 75 cm from the east bolt). From N0E0, a 50-meter base line was surveyed east 110 degrees (magnetic) across the playground. Half-way down the line, at N0E25, a 28-meter base line was established north 20 degrees to near the paved driveway, and another south 200 degrees for 10 meters to near the walkway fence. Five 1-meter pits were surveyed in close proximity to the above-mentioned artifact-rich core pits.

Field Methodology for the August 1998 Session

Following an orientation at the Bennington Museum by Project Director Catherine Zusy for all dig and lab participants,

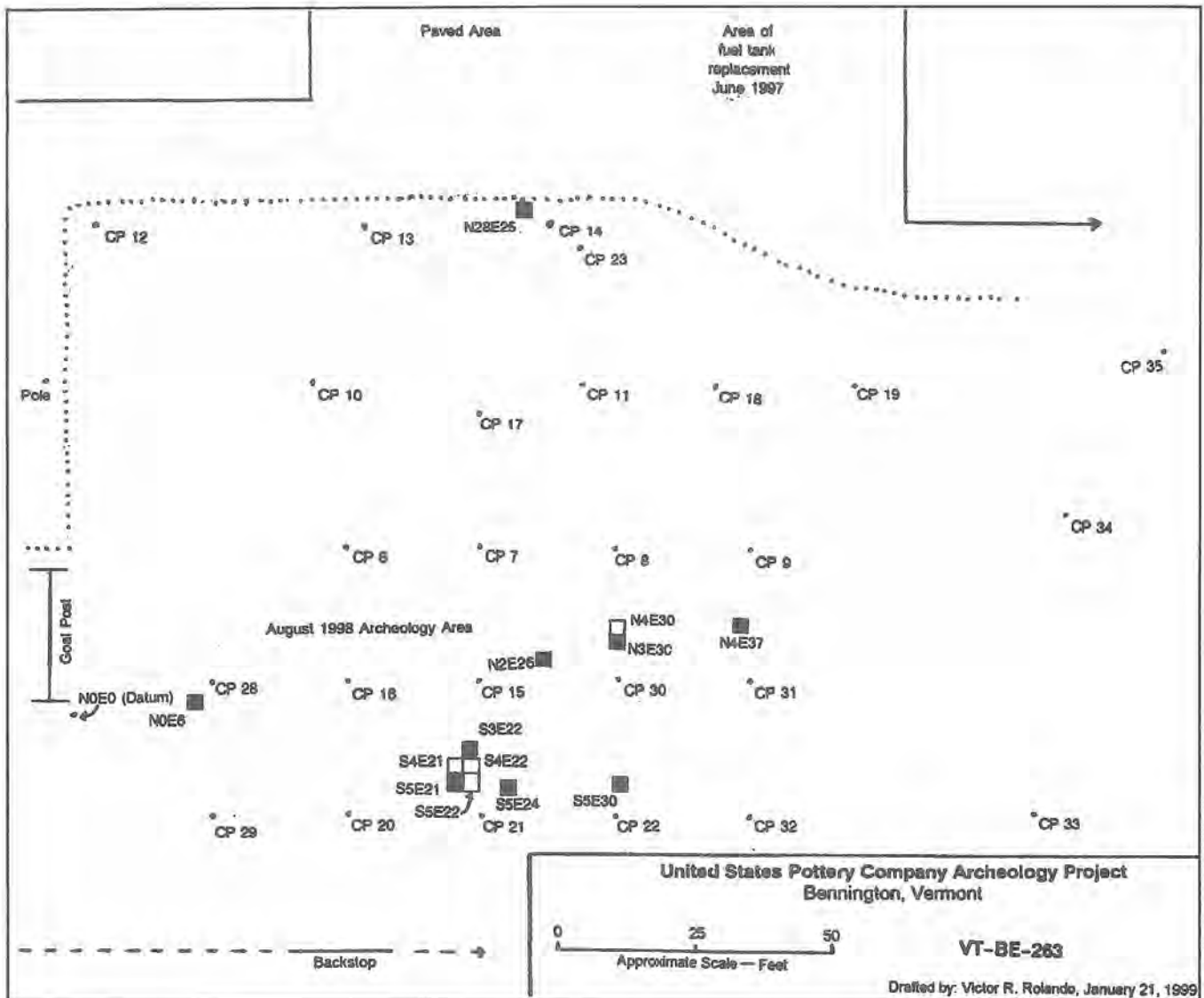


Figure 14. Disposition of August 1998 pits and corings, on the south side of the Bennington Elementary School building and driveway. Refer to Figure 5 for overall site location (Rolando drawing).

excavation of N0E6, S5E24, S5E30, N3E30, and N4E37 commenced just before noon, August 17. All pits were productive with parian found in all and by the end of the day all pits were well into layer 2. One pit was closed at end of day.

Three new pits were opened the next morning, while two were closed at the end of the day. Pit N28E25, adjacent to the south edge of the paved driveway and considered very close to the west end of the pottery's parian wing, proved too difficult to dig into and was abandoned a few centimeters down with no shards forthcoming. By the end of the second day, 56 bags of shards, including much parian, had been recovered. At the request of the project director, CPs 33-35 were dug east of the

general dig area to assure nothing of significance was being missed. Very few artifacts were found compared to numbers found in other pits. CP 35 was sterile to 30 cm, at which point a large stone was encountered.

On the planned final day of the final session of the dig, new pits S5E21 and S3E22 were opened. The quality and quantity of parian being recovered from pits N3E30, N2E26, and the S5E22-S5E21 area, however, prompted our requesting, and receiving, permission (from Grounds Supervisor Gerald S. Prue in the absence of the School Board) to extend the dig to the end of the week as long as the grounds were repaired and ready for school the next Monday morning.

Table 3. Core Pits at U.S. Pottery Site, April and August of 1998.

Core Pit No	Date Cored	Coring Tool Used	Artifacts Recovered			Depth Range (cm)
			Parian	Other	Unk.	
School Street (west) side of gym/parking lot:						
1	4-22	*	-	1	-	unk
2	4-22	*	-	21	-	?-36
3	4-22	*	-	43	-	?-40
4	4-22	*	-	3	-	?-96
5	4-22	*	-	3	-	?-46
South playground:						
6	4-23	*	-	13	-	?-61
7	4-23	*	1	17	-	?-81
8	4-23	*	-	3	2	unk
9	4-23	*	-	2	2	unk
10	4-23	*	2	3	5	unk
11	4-23	*	-	5	2	unk
12	4-23	*	-	11	-	?-46
13	4-23	*	-	0	0	?-20
14	4-23	*	1	1	-	unk
15	8-12	**	-	91	-	20-30
16	8-12	**	-	17	-	20-30
17	8-12	**	-	2	-	20-30
18	8-12	**	-	32	-	20-35
19	8-12	**	-	2	-	20-30
20	8-13	**	-	37	-	27-38
21	8-13	**	3	60	31	23-35
22	8-13	**	1	79	-	30-40
23	8-13	**	-	23	-	30-36
West side of gym/parking lot:						
24	8-14	**	-	38	10	23-34
25	8-14	**	3	26	11	24-35
26	8-14	**	-	4	-	33-45
27	8-14	**	-	1	-	24-40
South playground:						
28	8-14	**	1	54	70	20-40
29	8-14	**	-	157	-	30-40
30	8-14	**	2	187	-	20-39
31	8-14	**	-	100	-	24-41
32	8-14	**	-	167	-	24-42
33	8-18	**	-	36	-	26-50
34	8-18	**	-	13	-	4-58
35	8-18	**	-	-	-	sterile pit - hit rock at 30 cm

* 2-inch diameter coring tool

** 6-inch diameter posthole digger

In the S5E22-S5E21 area, the trail of parian led to opening these pits to a full 2-meter pit on day four with the addition of new pits S4E21 and S4E22. On Friday, with time running out, the trail of relatively large, 7- to 10-cm pieces of parian was followed into newly-opened pit N4E30.

Pit Analysis

By the end of the session, 13 pits had been excavated, providing 95 bags of shards for the lab to process. Time constraints did not allow the opportunity to fully study stratigraphy detail of the pits as much as desired before they were backfilled; however, the following are examples of what was recovered from the richer excavations during the August session:

Pit N4E37: Artifacts bottomed out at approximately 50 cm. More than the usual number of bricks were excavated in this pit. That plus the relative dearth of pottery artifacts lead to the belief that this pit was dug close, if not under, the site of the pottery building. Two fire bricks (one with partially glazed, broken end; the other with a burned/broken end), and one good red brick were recorded.

Pit S5E22: Dark brown top soil and small stones to 30 cm; artifact layer 30 to 44 cm ending in ash mix and an inactive clay sewer pipe, running generally 22 degrees north. Discovery of the pipe further confirmed our suspicion that the area is highly disturbed. Large stones in association with the pipe; much dirt found inside the pipe. The pipe was found to be laying flat per a level bubble. Cored to 84 cm through light brown sandy soil without finding stones or artifacts.

Pit N0E6: Topsoil to 24 cm; medium-to-large rocks in light sandy soil 24 to 42 cm; artifacts in dark brown soil 42 to 65 cm; artifacts in hard, crusty soil 65 to 80 cm. Cored to 96 cm through light sandy soil with no artifacts. Four pieces of firebrick and one whole red brick were recovered.

Pit N3E30: Topsoil to 22 cm; small to medium stones 22 to 55 cm; artifact layer 22 to 50 cm. White clay at 35 to 44 cm with 3- to 4-inch diameter pieces of parian mixed, in north quarter of pit. Few pieces of saggar, generally light distribution of kiln furniture with most at the bottom 5 cm. Hard-packed layer of kiln furniture at 44 to 49 cm. Cored to 60 cm through light brown sandy loam with no artifacts.

Pit S5E21: Topsoil and small stones to 23 cm; artifact layer 23 to 43 cm. Cored into SW corner to 60 cm through light brown sandy soil with no artifacts.

Pit N4E30: Due to time constraints, only the south half of this pit was excavated, following the rich north side of N3E30. Top soil to 23 cm; artifact layer 23 to 41 cm; gray clay (possibly local kaolin) 31 to 41 cm. Much parian in this clay, continuing into the north (unexcavated) half of this pit.

Pit S4E22: Due to time constraints, only the west half of this pit was excavated, which followed the clockwise trail of parian found in pits S5E22, S5E21, and S4E21, nearly creating a full 2-meter pit. Most parian was found at 36 to 46 cm.

Considering the quantity and size of parian recovered, the time and energy expended on dropping core pits during the

Table 4. Analysis of Parian in Two Selected Artifact Bags.

Parian Description	Size of Piece (cm)	Qty
Bag 104 (S4E21):		
Lily of Valley	±2 dia.	6
Arabesque	±2 dia.	46
Cascade	2-5	17
Tulip & Sunflower	2-5	82
Pond Lily	2-7	26
Acanthus	2-15	16
Wild Rose	2-5	19
Palm Tree	2-5	47
unknown	±2 dia.	102
also in Bag 104 (blue/white):		
Tulip & Sunflower	2 dia.	1
Charter Oak	2-5	14
Pond Lily	2-3.8	3
Paul & Virginia/ Palm Tree	2-3.8	59
unknown	2-5	58
Bag 113 (N4E30):		
Wild Rose	±2 dia.	10
Tulip & Sunflower	±2 dia.	36
Flower & Vine	2-5	13
unknown	±2 dia.	12

weeks preceding the dig paid off handsomely. Over half of the 56 bags of artifacts recovered from 12 of the 13 pits excavated provided a rich amount parian. Table 4 presents a brief analysis of parian in two selected bags.

A Possible Prehistoric Preform

What appeared to be a prehistoric spear point was recovered from pit N4E30 during the final hour of the dig. It was found laying flat at the interface of layers 1 and 2 (top of the pottery artifact layer). It measured 6.6 cm long, 3 cm wide, and 1.5 cm at its thickest, with serrated edges. It could have been dropped by a pottery worker or student attending one of the later schools on the site, or imported to the site in topsoil fill.

The artifact was shown to Starbuck, who was at the time directing archeology at Fort William Henry in Lake George, NY, and also to Belinda Cox (UMF-ARC) Director of the archeology work at the Cloverleaf Site in Bennington. Both agreed it was a preform. It appears similar in material and color to quartzite flakes/chips seen many years ago at the Homer Stone (prehistoric) Quarry Site (VT-RU-105) along the Long Trail in Wallingford, Vermont. The discovery of this point at the U.S. Pottery Site is merely an interesting, if not intriguing, anomaly.

Site Stratigraphy

Analysis of the August pits resulted in identifying the following three layers, similar to those described during the May 1997 session:

Layer 1 - generally hard-packed top soil, mostly clay but mixed with small stones, in which such things as combs, crayons, pencils, and pieces of glass and aluminum beverage containers were found, exactly what one would expect to find in ground that has been a playground since 1874. Some shards were, however, excavated in this layer, which averaged from 20 to 25 cm deep. The boundary between layers 1 and 2 was better defined in some pits than others, where shard finds increased gradually with pit depth. In these pits, the entrance into layer 2 was somewhat arbitrary.

Layer 2 - the main artifacts layer, which yielded the greatest concentration of shards. In most pits, there was no pattern in artifact finds; in others, certain shard types seemed to be in pockets. Only rarely were pieces found separately that were later found to fit together. Layer 2 generally extended to 50 to 70 cm deep - with one pit to 78 cm - varying with geographic location on the grounds.

Layer 3 - the sterile layer below layer 2, and was generally entered rather distinctly. Although this layer might have yielded prehistoric or further historic materials if pursued, most pits were sampled with a corer or posthole digger as far as each would reach. One core reached 96 cm deep before closing the pit. In no case did coring the bottoms of excavated pits result in finding additional artifacts. Layer 3 was generally light brown sandy soil.

Results of the August 1998 Session

Archeologically, the excavations for pottery remains at Bennington Elementary School was a success. Many pits yielded extensive amounts of shard materials, providing information regarding the types and styles of pottery goods manufactured. Both productive and non-productive pits also yielded information on disposition of waste dumps and probable locations of rear (west) wings of the pottery. Zusy's artifact analysis in Part II reflects the good spread of types of materials recovered for study.

It was unfortunate that the April 1998 dig resulted in relatively little diagnostic materials, but we did learn two important things from the experience: (1) We discovered the northern boundary of the former pottery property, and (2) We learned to sample before digging. The value of sampling the field prior to resumption of digging in August 1998 proved the value of the effort. The grid of 36 core pits pinpointed areas of

high yield, which saved much "blind" digging and provided diagnostic materials almost immediately. Additionally, 12 of 13 pits excavated during August 1998 yielded at least some parian shards, with 8 pits yielding moderate to large amounts; the exception being a pit adjacent to the paved driveway, which was started but not fully and seriously pursued.

Of particular interest was the pattern of the productive pits in August as compared to the productive area during the May 1997 dig. Whereas an east-west line of pits dug in 1997 just south of the parking lot fence yielded little material, becoming successively less productive to the west, a north-south line of pits just southwest of the goal posts were quite productive. Fanning eastward from these north-south pits into the playground covers the area in which productive pits were dug in August 1998.

The notable exception to pits in this area was N4E37, dug the farthest east. Although this pit did yield some good materials, their relatively small amounts along with the amounts of brick indicated the possibility of that area having been very close to (or maybe even under) the west wing of the factory. Further work in that area might yet yield remnants of a foundation wall.

During the fourth day of the August session, the town water department was noticed digging in the center of Park Street, about 200 feet northeast of our closest test pit. Following up on curiosity, Rolando (already known by the town water department for often stopping to "inspect" their holes) was allowed into the 10-foot-deep hole to study its profile. Not surprising, many shards were found imbedded in the walls, on the muddy floor, and in the already-excavated dirt piles. Measurements and calculations resulted in determining the top of the artifact layer in the hole coincided closely with the top of layer 2 at the site after compensating for differences in surface elevations.

Although we still have no physical evidence of any part of the pottery buildings or kilns, two photos of what appear to be some of the factory buildings were found while writing this paper, and they match, to some degree, the Leake drawing made some 55 years after the fact. Unfortunately, there seems little official interest in pursuing the archeological significance of the site, other than in salvaging shards. The discovery of the U.S. Pottery's actual location is nearly within grasp, and School Board interest coupled with existing, strong, local volunteer archeology enthusiasm could result in finding it, thus providing significant information concerning one of Bennington's early premier industries.

Part II: Artifact Analysis and Findings by Catherine Zusy

The Process of Lab Analysis

After the finds were dug and bagged they were taken to the lab for initial recording, cleaning, sorting and analysis. While this process began at the horticultural lab at the Southwest Vermont Career Development Center, it continued for many weekends, sometimes in Vic Rolando's garage, other times at Sam and Marietta Hibbard's Flying Feathers Farm in Pownal, Vermont. I led this work with the able assistance of Betty Hall and Ann Clay to begin with, and then with Marcy McCarthy, Marge Galvin and other extraordinarily dedicated volunteers. After we completed an initial sort by material, the ceramic shards were further sorted by design. Fragments that we could not identify immediately as belonging to a particular known form were then taken to the pottery gallery at the Bennington Museum where we compared our fragments with whole pieces in the collection. Former Bennington Museum curator Eugene Kosche assisted with this, as did a team of other puzzle-solvers. While we were able to identify most of the shards, some remained "mysteries" and were set aside for further study.

Over time we reduced our pile of mysteries from thousands to hundreds and eventually to about 75. I did the final artifact count and analysis of our finds at my home in Cambridge, Massachusetts, producing the bulk of the information included in the two reports "Archeology at the United States Pottery Co., 1997 and 1998," which include lists of findings per pit and images of representative and particularly significant shards. Representative and particularly interesting finds were then photographed and Eugene Kosche and I put together two exhibits about the digs at the Bennington Free Library. All of our finds now reside at the Bennington Museum.

Findings

During our three short digs we found over 27,588 fragments of pottery: including thousands of shards of bisque earthenware (12,291), thousands of parian shards (8,488), relatively little Rockingham or flint enamel (3,139) or glazed yellow or whiteware (2,017) and very little agateware (309) - samplings of the various products of the United States Pottery Company. (See Table 5 for a quantitative analysis of our findings.) In addition, we found over 18,250 bits of kiln furniture (see Part I for a discussion of the kiln furniture).

From the standpoint of a pottery historian, the dig was very successful, yielding not only a plethora of shards, but also much new information about what the Pottery made. While we had hoped that the excavations would teach us more about the Pottery's production of parian - the area where there is greatest

confusion regarding the Pottery's output - we ended up learning as much about the firm's earthenware products. Our excavations confirmed that over a dozen objects previously thought (without proof) to have been made in Bennington were in fact made there; revealed information about variations on several documented pitcher designs; and brought to light about 75 mystery pieces which may, in time, reveal yet unknown forms and designs. Perhaps most importantly, we also learned about two new forms that the Pottery made: a small parian pitcher and a Rockingham vessel form, possibly a teapot or sugar bowl.

Please note: In the text that follows, I make many references to Richard Carter Barret's 1958 *Bennington Pottery and Porcelain*. This seminal book has been the standard guide to identifying Bennington Pottery for over forty years. It, and the collection of pottery that Barret formed while Director/Curator of the Bennington Museum, have prompted great confusion and more recently controversy, because many of the objects included in both the book and at the museum cannot be proven to be of local manufacture. In fact, some pieces have been known for decades to be of English manufacture. I give page numbers from Barret's book in this paper to help collectors, scholars and archeologists update their identification guides.

Parian

Almost one-third of our ceramic finds were parian (8,488 of 27,588 shards unearthed). Over half of these, 4,746 shards, could be identified as fragments of twelve documented Bennington parian pitcher designs: *pond lily* (1,214), *wild rose* (815), *tulip & sunflower* (750), *palm tree* or *Paul and Virginia* (651), *charter oak* (553), *arabesque* (304), *cascade* (161), *acanthus* (117), *climbing ivy* (36), *flower and vine* (22) and *bird and nest* (4). While most of the other parian shards were undecorated or otherwise unidentifiable - e.g., pitted but with no distinctive decoration or form - some provide new information about other forms that the Pottery produced.

Among these "unidentifiable" shards were 112 (found in five different pits in August 1998) of a small paneled and unstippled pitcher with lily of the valley flowers and foliage at the bottom, grape leaves and grape clusters at the top and a masked spout, a form unknown to us until now (Figures 15-17).

We also found several fragments which illustrate previously unknown variations in known pitcher designs. These include a variant base design for *charter oak*, a stippled version of *wild rose*, and parian versions of the *ivy vine* pitcher (known to have been made in flint enamel, but not in parian) and the *acanthus leaf* creamer (we had known of Rockingham and whiteware examples, but none in parian).

The only documented pitcher designs that we did not find represented at the site were *love and war* and *snowdrop*. This may be because these designs - sometimes impressed with the "Fenton's Works" mark, suggesting that they were made be-

Table 5. Summary of Findings During the Three Digs.

	May 26-30, 1997 <u>Southwest Corner</u>	April 20-24, 1998 <u>Northwest Corner</u>	August 17-21, 1998 <u>South</u>
Total Parian	3,802	20	4,666
Marked Parian	11	1	58
Identifiable Pitcher Fragments	1,628	7*	3,111
<i>acanthus</i>	3	0	114
<i>arabesque</i>	2	0	302
<i>bird & nest</i>	3	0	1
<i>cascade</i>	9	0	152
<i>charter oak</i>	18	0	535
<i>climbing ivy</i>	25	0	11
<i>flower & vine</i>	4	0	18
<i>lily of the valley ("new")</i>	0	0	112
<i>palm tree/Paul & Va</i>	122	0	529
<i>pond lily</i>	663	0	551
<i>tulip & sunflower</i>	233	0	517
<i>wild rose</i>	546	2	269
Parian Figures	0	0	1
Total Bisque Earthenware	2,600	534	9,157
Marked Earthenware	49	3	40
Undecorated	2,065	504	7,978
Ribbed	176	4	152
Paneled	181	1	168
Diamond	89	9	823
Other Decorated	89	10	30
Total Other Ceramics	2,406	395	3,997
Rockingham/Flint Enamel	1,483	145	1,511
Lava Ware	145	20	144
Glazed Whiteware	321	155	1,385
Glazed Yellowware		18	138
Grey Ware**	6	487	
Stoneware		22	282
Other Pottery Types	457***	29	50
Total Pottery Fragments	8,808	943	17,837
Total Kiln Furniture	10,827	496	6,929
Total Other Miscellaneous	605	955	801
Total Objects Found	20,240	2,394	25,567

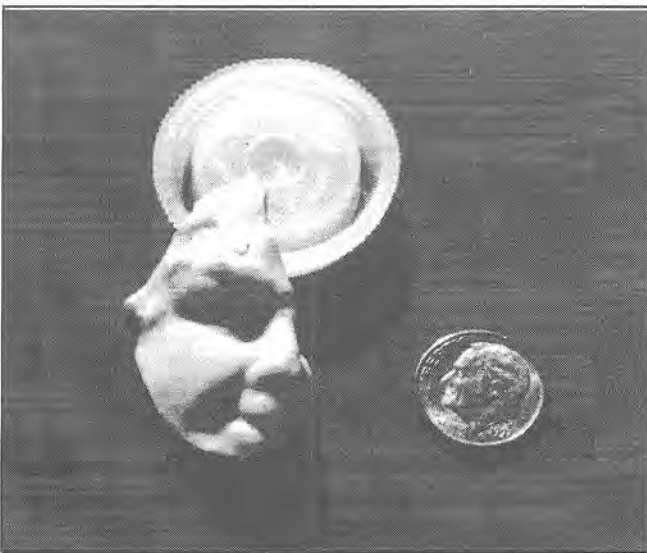
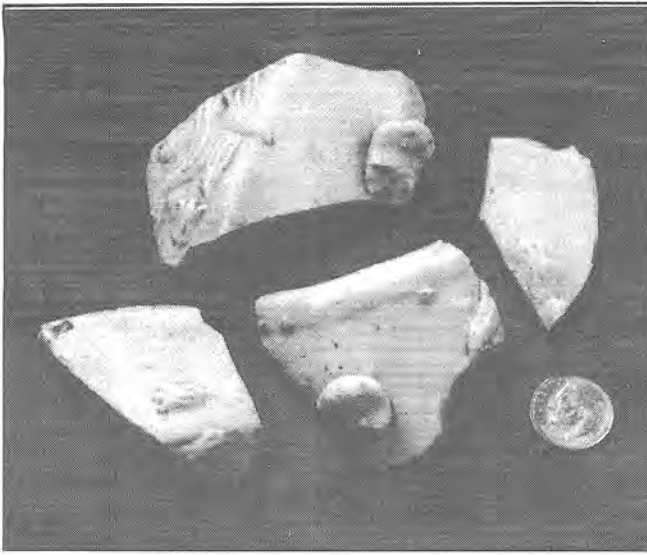
* Two *wild rose* shards and five other fragments which bore floral or foliage decoration but were too small to attribute to a specific pitcher design (see Zusy et al. 1999:13)

** Probably bisque earthenware

*** Includes yellowware, grey ware and stoneware

Note: Discrepancies in totals are due to:

1. Some marked pieces were also identified as part of a known design (double-counted).
2. Parian totals include unidentifiable and undecorated pieces (not included as categories above).
3. Grey-colored ware was sometimes noted as earthenware, stoneware or grey ware.



Figures 15, 16, and 17. In August 1998 we found 112 fragments of this unknown parian pitcher with the lily of valley design. The intact pitcher is in a private collection (photo by Jay A. Lewis).

tween 1847 and 1853 - were made prior to 1850, when the Pottery started manufacturing at the site. Or perhaps they will be found elsewhere on the Pottery site one day or in another yet-to-be-found dump site. (Fragments of parian were not found at the Norton Pottery site, just to the south, when some exploratory archeology was done there by Hartgen Archeological Associates in April 1990. According to Bennington Pottery historian John Spargo, Christopher Webber Fenton had begun experimenting with making porcelain in the 1840s, in the north wing of the Norton Pottery.)

While we had hoped that our excavations might yield fragments of many of the parian figures that the Pottery manufactured, we found only one fragment of a figure during our three digs. In August 1998, we found part of a spaniel,

probably from *sailor boy and dog*, one of eleven figures noted on the 1852 Pottery price list. The Bennington Museum [BM] has three *sailor boy and dog* figures with incomplete provenances: one in Rockingham, one in parian, and one in cobalt-decorated stoneware (BM 74.164). While I had long thought that these were probably made locally - because of the variety of ceramic and glaze types - this find is fairly conclusive evidence that this small figure was made in Bennington (Figure 18).

Six other parian shards confirm that pieces thought to have been made in Bennington (but there was no proof), were, in fact, made there. These include: a doorplate (like BM 75.122); a small porcelain letter "E" or "F" for the doorplate was also found; a curtain tie back (like BM 75.395); and an

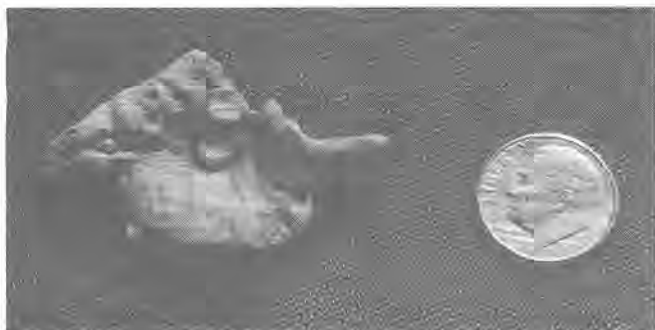


Figure 18. The only fragment of a figure unearthed during the 1997 or 1998 digs - part of "sailor boy and dog" - noted on the Pottery price list dated 1852 (photo by Zusy).

old man bearded cane head (like BM 1017, which is illustrated by Barret (1958:327), and noted "as the only known example").

We also found what appears to be the end of a glazed porcelain door knob and two fragments of porcelain insulators (Figure 19). Over twenty other parian "mystery" fragments were also found. These include: 4 shards which seem to relate to one another with a raised band and ivy or grape leaf design (found in three separate pits); a very flat fragment of blue & white parian; and 3 unfamiliar-looking handles (Figure 20).

While Barret attributes hundreds of vases and trinket boxes to the United States Pottery Co. in his *Bennington Pottery and Porcelain*, we only found one possible parian vase fragment and no evidence of trinket boxes at the Pottery site.

Note: Most of the parian shards excavated had been fired and bore the shiny, translucent, vitreous look of finished parian. Over a thousand of them, though, looked like bisque earthenware in parian pitcher designs. At first we thought they were earthenware, a significant discovery, since earthenware examples of these pitchers are not known. Puzzled by the fact that many of the fragments were shiny on the inside (suggesting that they had been glazed and fired), we asked David Gil, President of Bennington Potters, Inc., to refire three fragments at 2,200 and 2,300 degrees F. to see if they would vitrify. Gil fired the pieces and they became porcelain (if earthenware, they would have melted). As a result of this test, we know that the earthenware-appearing fragments are also parian. They were discarded because they were fired at too low a temperature or because they failed during their first firing. (In Staffordshire, England, parian was sometimes fired twice. We do not know whether this was the practice in Bennington.)

Bisque Earthenware

Forty-four percent of our ceramic finds (12,291) were bisque earthenware shards colored white, yellow and grey. David Gil has suggested that the differences in body color may have been

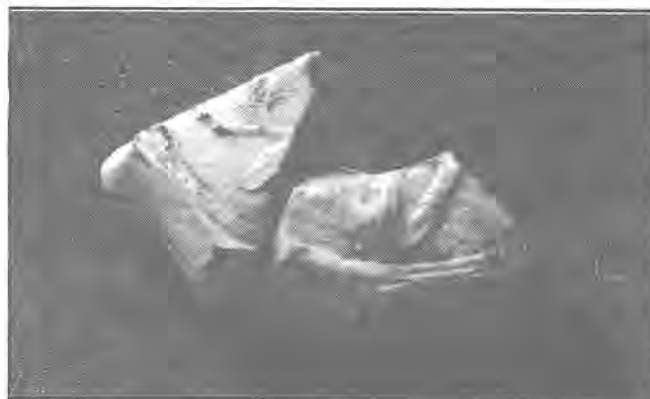


Figure 19. We unearthed three fragments of a parian curtain tieback, represented in the Bennington Museum collection, but until now, not documented as Bennington (photo by Zusy).

caused by variations in the kiln temperature, the location of objects in the kiln, or variations in the content of the clay. The fact that the majority of our finds were earthenware is not surprising. In 1852 Christopher Webber Fenton advertised over 60 forms in Rockingham and flint enamel; it has long been thought that these brown-colored earthenwares were the firm's greatest output.

Most of these fragments are of forms previously documented as Bennington. Many bear a diamond, paneled or ribbed design and a few exhibit a raised band (and may be part of a teapot; see Barret 1958:99, plate 137, A, C, & E). We were able to identify fragments of the following forms:

Objects made for the table:

- Toby creamer (Barret 1958:319)
- acanthus leaf* creamer (BM 75.74; not in Barret)
- tumbler (Barret 1858:97, plate 133, top row)
- mug or beaker
- 12-sided mug (Barret 1958:97, plate 133)
- raised goblet (Barret 1958:96, plate 132)
- coffeepot
- teapot
- vegetable dish (relates to BM 66.1074)
- paneled bowl
- diamond pattern pitcher with pronounced stippling
- alternate rib vessels
- cow creamer (Barret 1958:297)
- paneled pitcher with heart design (Barret 1958:26)
- hound-handled pitcher (Barret 1958:32)

Objects made for elsewhere:

- toilet set (BM A484)
- soap dish
- footbath (BM 66.1195 & BM 75.15)



Figure 20. Four parian "mysteries" which seem to relate to one another. Found during August 1998 dig (photo by Zusy).

Objects made for elsewhere (cont'd):

- slop jar
- wash bowl or chamber pot (Barret 1958:119)
- humidor
- shell spittoon (Barret 1958:128)
- bedpan (Barret 1958:123)
- door handle
- insulator
- Gothic water cooler (Barret 1958:114)
- candlestand (Barret 1958:134, plate 195)
- candlestick (Barret 1958:135, plate 198)
- raspberry flask (Barret 1958:93)
- frame (Barret 1958:138; BM A189)

Some of these finds are particularly significant, since no marked examples of the forms are known. These include: the candlestand, candlestick, raspberry flask, tumbler, pedestal goblet, shell spittoon, hound-handled pitcher and cow creamer. While there are examples of these objects at the Bennington Museum, the discovery of these fragments at the Pottery site confirms that they were made locally.

Two of our most exciting finds were fragments of an until now unknown paneled form, probably a teapot or sugar bowl, with foliage and grape design and a pitcher with *fleur-de-lis* decoration. Thirty fragments were found of the probable teapot or sugar bowl in seven different pits; a few of these had a Rockingham glaze, suggesting that the finished product was brown (Figures 21 and 22). Eleven fragments with an unknown *fleur-de-lis* design (also found in seven different pits) were found. In 1997, ceramic scholars Diana Stradling and J. Garrison Stradling identified these fragments as being part of an undocumented Rockingham pitcher attributed to the U.S. Pottery in the Bennington Museum collection (1987.96). This

pitcher is not illustrated by Barret and, until now, has not been known as a product of the Pottery.

We found over thirty other "mystery" shards. These include:

- 4 fragments with a lily pad design (not part of the pond lily pitcher)
- 5 fragments with unidentifiable foliage decoration
- 7 fragments with a foliage and bellflower design which appear to relate to the known graniteware toilet set (see Barret, p. 122), but are different; found in three different pits
- 1 grey fragment with stylized floral pattern
- 2 grey matching fragments with raised veins and a form that flares out
- 15 fragments of unidentifiable handles
- 1 hand-carved vase model
- 2 fragments of a hanging planter
- 1 stippled fragment with leaf and scroll design.

We also found a thick fragment with foliage decoration of a known toilet set (BM A484) of a form not represented at the Bennington Museum. We hope that publication of these fragments will lead to the discovery of whole forms (Figures 23-29).

Curiously, we found no fragments of glazed or unglazed earthenware of tulip vases, book flasks, coachman bottles, lamp bases, sign letters or animal mantel figures, objects known to have been made at the U.S. Pottery. We also found only one fragment of a hound-handled pitcher, one fragment of a picture frame and two fragments of cow creamers. This makes us wonder whether other areas of the Pottery site might yield fragments of these forms or whether the Pottery also dumped elsewhere.

Rockinghamware

Relatively few fragments were found in Rockingham and flint enamel, only 11% (3,139 shards) of our total ceramic finds. This may be because most damage occurred to wares during the bisque (the first, higher temperature firing) and not the glaze firing (the second, lower temperature firing) or because damaged "finished" wares were dumped elsewhere. Among the more interesting finds were some shards of a lid of the new grapes and foliage design, four fragments which bear unknown floral and foliage motifs and a rim with unknown floral decoration. Also of interest is an unknown bulbous-looking finial we found with floral decoration, glazed brown inside and out.

While most Rockingham/flint enamel fragments found were too small to associate with a specific design, shards were identified as belonging to the following forms: *acanthus* pitcher/teapot, washbowl, eight-sided mug (almost the entire form unearthed), footbath and mug with handle.



Figures 21 and 22. Sherds of newly discovered paneled teapot or sugar bowl with grape and foliage design. Fragments found in 1997 and 1998 (photos by Rolando).

Glazed Whiteware

Only 1,861 glazed whiteware fragments were found - less than 7% of all the ceramic fragments unearthed. Most of these shards were very small and were unidentifiable; none that appeared to be nineteenth century had painted decoration. The few pieces that we could identify were fragments of known toilet set designs (Barret 1958:122, 123). One "mystery" piece was found with tulip or bellflower decoration in relief, similar to that found on a known graniteware toilet set (Barret 1958:122, plate 173), but different.

We did not find any fragments of hand-painted "sweetheart" presentation pitchers, illustrated by Barret on page 37. This does not prove, however (as some have suggested), that the U.S. Pottery did not make this form. While no marked Bennington presentation pitchers are known and these pitchers are not listed on the Pottery's (last surviving) 1852 price list, we believe the Pottery made them because:

1. The names of Bennington people can be found on many of these pitchers; also there is a pitcher in the Bennington Museum collection inscribed (but not marked) "Samuel H. Johnson/76 Pearl St./New York" on one side, and "United States Pottery Co., Bennington, Vermont" on the other side.

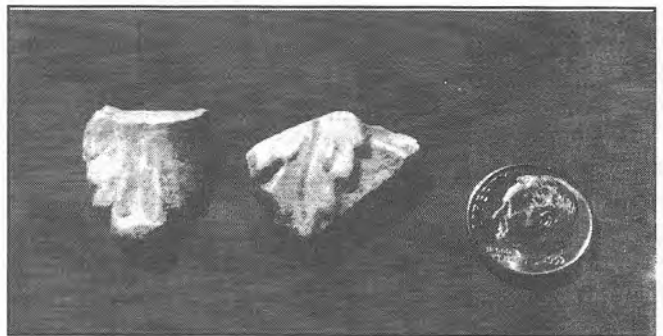
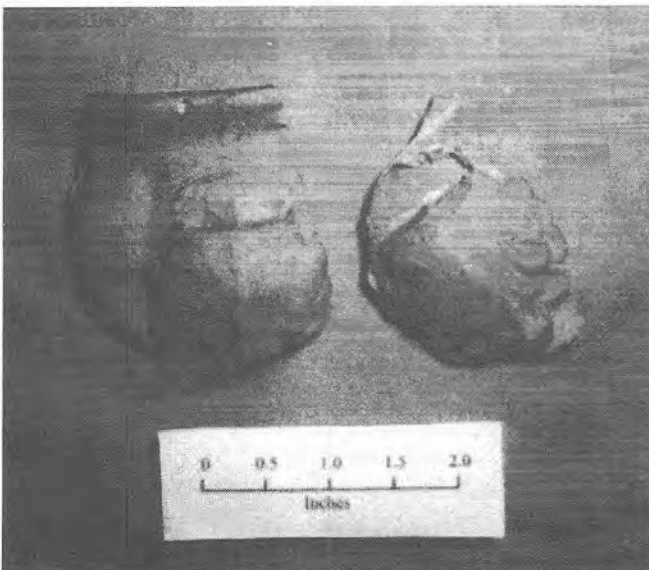
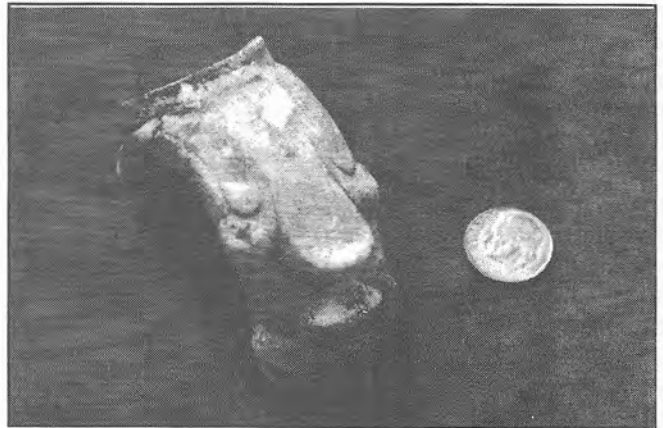
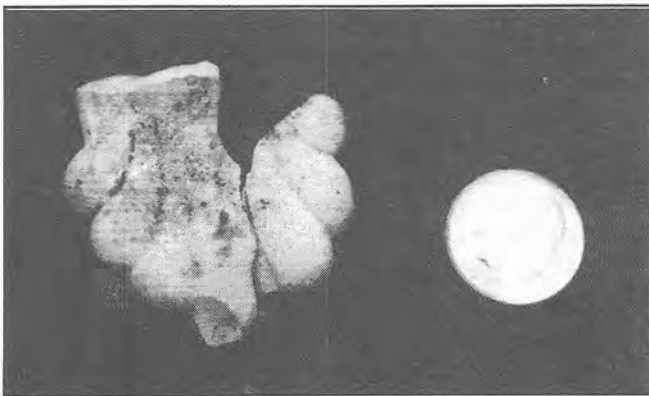
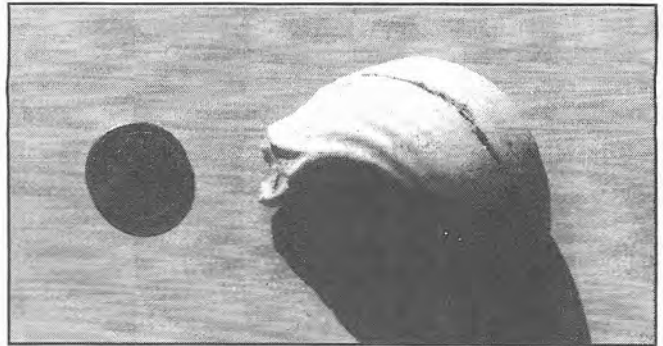
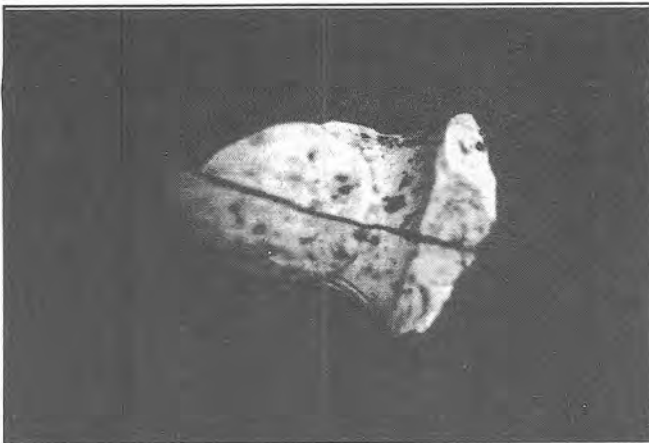
Johnson was a major stockholder of the Pottery and served as the firm's retail agent in New York City in 1855 and 1856.

2. The Pottery employed Swiss decorator and gilder Theophile Frey between 1854 or 1855 and 1858 to paint toilet sets "and a variety of other ware" (*Vermont State Banner*, March 28, 1856).

3. It appears that the Pottery did not begin manufacturing graniteware until at least 1855, so it is not surprising that presentation pitchers are not listed on the 1852 price list.

Lava (or Agate) Ware

Only 309 lava or agateware fragments were found. This is not surprising because, according to Spargo, "it was probably the least popular of all the wares made at the United States Pottery." Among our finds were a huge agate finial from a chamber pot or slop jar not represented in the Bennington Museum collection; two fragments of the lip and socket of a candlestand (Barret 1958:134, plate 195A; BM 71.173); and shards of an acanthus leaf teapot or pitcher. As many as ten fragments were also found of the relief shell from a spittoon (Barret 1958:128, plate 184B) confirming that this design was made in Bennington, and one fragment of the lid of a soap dish



Figures 23 thru 29. Some bisque earthenware "mysteries" found during the August 1998 dig (photos by Zusy and Rolando).

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in the diamond pattern (four fragments of this design were also found in whiteware).

We found one agateware shard which has an unknown double-diamond motif.

Glazed Yellowware

We found 156 fragments of glazed yellowware. All of these fragments were of unidentifiable design and form. Some of them may actually be fragments of Rockingham or flint enamel ware where the metallic oxides did not run.

Marked Pieces

Of the 27,588 ceramic fragments found, 108 were impressed with a Pottery mark and 35 with a benchmark (see Table 6 for a listing of marks found.) Most benchmarks are impressed on the bases of pieces and consist of a combination of numbers and letters. We think they may denote who made a piece or were used to track experimental pieces of pottery. According to Dr. Burton Gates' notes from 1914 and 1915 interviews with Bennington potters, U.S. Pottery Co. potter Silas R. Wilcox was "49," Henry M. Tuttle was "46?" and G. Byron Sibley was "50+." (Gates' notes are in the collection of the Bennington Museum.)

Other Pottery

We found 304 fragments of stoneware and 536 fragments of other types of pottery. The stoneware fragments may be from water coolers or other storage containers used at the Pottery. One fragment stamped "OY/ TERY," with cobalt infill, probably came from a pottery in Troy, New York. (There was much trade between Troy and Bennington.)

Among the "other types of ceramics found" were three fragments of unfired banded ware (found in two different pits). Pitkin, Barret and Spargo do not mention banded ware as a product of the Pottery. Could this have been made by one of the potteries established at the site after the U.S. Pottery closed in 1858?

Other Miscellaneous Objects

We found 2,361 miscellaneous artifacts, including building materials, metal, clothing toys, animal bone and shell fragments. Some of the more interesting finds were ceramic pipe fragments, a clay cone and several objects relating to the site's use as a schoolyard: a jack, a marble, a plastic bunny head, bubble gum and an ink bottle. We also found a partial Native American preform (see Part I).

Conclusion

Our excavations failed to answer some important questions, most notably: 1) Which figures did the U.S. Pottery make? 2) Did they manufacture vases? 3) What was the nature of the Pottery's parian production?

Our excavations also failed to provide us with a complete

Table 6. *Marked Shards Found During the Three Digs.*
(for illustrations of marks, see Barret 1958:14)

<u>Ceramic Type</u>	<u>No. of Pieces</u>
Parian:	
"Fenton's Works"	6
ribbon	39
lozenge	5
Bisque Earthenware:	
"1849"	56
USP oval mark	2

We found shards with the following benchmarks:

Parian: A5, 10, 19A, 36D, 46C, 49, 49, 53C, 55E
60, [?]C, [?]6[?]

Bisque Earthenware: 1F, 7C, 12D, 18E or 18F, 19,
19, 19E, 19E, 21C, 21D, 25B or 28B, 26B, 27C,
35C, 49E, 50D, 54A, L, N, asterisk, floral motif

Rockinghamware: P

Glazed Whiteware: PG

All but two of these benchmarks were found on base fragments. "36D" was found on the side of a cascade pitcher and "21D" on a mystery earthenware handle.

list of the firm's products. However, they have added to our knowledge of the company's overall production - they have helped to fill in the picture. The digs provided us with confirmation that the Pottery really did make many objects long attributed to it and revealed that the Pottery may have made - or at least experimented with making - many forms that we have not known about until now. These gleanings, this positive evidence, are the real contribution of the archeology. What we did not find, the negative evidence, proves nothing. There is just too much that we still do not know.

First, we do not know what else might be found on the Pottery site. During the three digs (which covered 15 days total), about thirty 1- by 1-meter pits were dug in an area comprising less than 1% of the four-acre Pottery site, a site that has been disturbed twice since the Pottery buildings were demolished in the 1870s. A school and its surrounding blacktop are located directly above the Pottery, which prevented us from doing a thorough sampling of the entire site. (For example, when a fuel tank was removed from under the blacktop to the south of the Elementary School in July 1997, shards of objects we did not unearth elsewhere were found, including fragments of a tile trivet, Rockingham doorknobs, and two mysteries: an earthenware fragment with oak leaves and acorns, and a handle which looks like a branch.) Our excavation was limited by time and by the area which we were allowed to probe. Our digs were exploratory and not comprehensive.

Second, was the Pottery dumping elsewhere as well? There were many documented forms that we did not find at the

site, among them the *love and war* and *snowdrop* parian pitchers, and earthenware tulip vases, book flasks, coachman bottles and mantel figures. And why did we find so few shards of the firm's renowned hound-handled pitcher, the cow creamer and picture frames? Did all of these ceramics fire perfectly? Or is there another dump site (or two) for the Pottery?

Third, more historical research, archeological and otherwise, needs to be done in the area of English and American lowbrow parian. There were dozens of potteries in England, Europe, and even New York, New Jersey, Ohio and Maryland that were all making parian, mostly between the 1850s and 1880s, and few of these firms marked their products. Price lists for these companies are rare; illustrated price lists are even rarer. Most English museums have not collected "lowbrow" parian (lower-end mantel ornaments), so there are few unmarked English pieces with good provenances. Little archeology has been done in England, Europe or the United States of nineteenth-century potteries that produced lowbrow parian. Consequently there is a plethora of unmarked parian - that was often broadly distributed - and a paucity of information about it.

It is my hope that Benningtonians will rally and dig at the Pottery site once again when it is time to replace the Bennington Elementary School. I hope I get a call one day from someone in the Bennington community who has found an incredible pile of ceramic wasters in their backyard and a call from another, who has just found a wad of illustrated price lists for the Pottery dating from 1853 to 1858 stuffed in their attic wall. Finally, I hope that along with more archeology (in Europe, Great Britain, and other places in America, at other locations of potteries that made parian), scientific tests are conducted on English and American specimens of parian. Tests that Wendell S. Williams, Ph.D., ran on three parian fragments we unearthed in 1997 suggest that X-ray diffraction and SEM/EDS (Scanning Electron Microscopy/Energy Dispersive X-ray Spectroscopy) might help us to distinguish Bennington parian from English parian (Zusy et al., 1998). Any and all of these things would help to further unravel the mystery of the United States Pottery Company's production. (For copies of Zusy, Rolando, and Starbuck's 1997 and 1999 reports, send a check made out to Catherine Zusy to 202 Hamilton Street, Cambridge, MA 02139. The 1997 report costs \$10; the 1998 report costs \$13.)

Acknowledgments

The authors thank David R. Starbuck for the major part he played in this project. David not only shared his expertise and knowledge of archeology technique and interpretation, but also allowed us the use of his personal equipment - trowels, screens, and shovels - plus all the dozens of other big and little things that make this kind of an activity possible. Without his superb cooperation and valuable presence, this project might

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References Cited

Barret, Richard Carter

1958 *Bennington Pottery and Porcelain: A Guide to Identification*. New York: Crown Publishers, Inc.

Gates, Burton N.

(Notes are in the collection of the Bennington Museum.)

Resch, Tyler

1975 *The Shires of Bennington: A Sampler of Green Mountain Heritage*. Bennington: The Bennington Banner and the Bennington Museum.

Rolando, Victor R.

1999 Archeological Investigations at the United States Pottery Company Site, Bennington, Vermont in 1998: Field Archeologist Report. Bennington, Vt., February 5, 1999.

Spargo, John

1926 *The Potters and Potteries of Bennington*. Boston: Houghton Mifflin and Antiques. Reprinted by Cracker Barrel Press, Southampton, L.I., N.Y. (n.d).

Starbuck, David R. and Victor R. Rolando

1997 Archeology at the United States Pottery Company, Bennington, Vermont, May 26-30, 1997. Fort Edward, NY (Oct 1997).

Vermont State Banner

March 28, 1856

Zusy, Catherine, David R. Starbuck, and Victor R. Rolando

1997 Archeology at the United States Pottery Company: Report on the May 26-30, 1997 Exploratory Excavations of the U. S. Pottery Co. Site in Bennington, VT (VT-BE-263). Cambridge, Massachusetts.

Zusy, Catherine, Victor R. Rolando, and David R. Starbuck
1999 Archeology at the United States Pottery Company, 1998: Report on the April 20-24 and August 17-21 Exploratory Excavations of the U.S. Pottery Co. Site in Bennington, VT (VT-BE-263). Cambridge, Massachusetts.

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