WILLIAM M. BEAUCHAMP CHAPTER, 7 Vol. 7, No. 3 - March 1976
New York State Arch. Assn. Newsletter Syracuse

A PRELIMINARY REPORT ON EUROPEAN GLASS BEADS AND THEIR MANUFACTURE

James Bradley and Henry Wemple

European glass trade beads are among the most common artifacts which occur on historic Onondaga sites. But despite their abundance, it has only been recently that serious research has been done on them and the information which they can provide.

On an informal level, anyone familiar with historic Iroquoian sites probably knows something about beads. For one thing, they changed in style frequently. Many of us are familiar with and may have used some of the slang terms which describe these general changes. For example, "Dutch" beads occur on the late 15th and early 17th century sites. These include the "star" or chevron beads, large polychrome (multi-colored) round beads and large polychrome tubular beads. By the mid 17th century, "French" bead types begin to replace the "Dutch" ones. These new styles are usually tubular, rather than round. At first they are most frequently un-tumbled (shart, broken off ends) with blue, and then red the most common colors. Increasingly though after mid-century, these tubular beads show evidence of being tumbled (the ends smoothed off). These tunbled tubular beads are shorter than the untumbled ones and are most commonly red, black, white or a striped combination - like black with red stripes. By about 1680, bead styles change again as "English" types become more common. The most frequent of these "English" types is the round, pea-sized beack, usually red, sometimes black. Some new polychrome varieties appear, but they lack the attractiveness and quality of the earlier "Dutch" styles. The last of the "English" types are the wire wound beads (so called because they are made by winding a string of molten glass around a wire). This type of bead appears about 1700 and continues until the period of the American Revolution.

This is a brief summary of the "common knowledge" about European glass beads, based largely on what people have seen in the field. Labels of "Dutch," "French," or "English" are attached to certain styles of beads because it is assumed that these were the styles which certain nations traded. Since the changes in bead types do roughly correspond with the changing influences of the European nations, this assumption is not entirely unwarranted. Another assumption is that most of these beads, regardless of which nation traded them, were made in Venice.

During the last several years, new research has enabled us to re-examine some of this "common knowledge" and see how well it holds up. These new studies have been of two types. The first has provided better classification systems so that specific beads can be described not only in detail, but so that others can understand the description. Among these are Dr. Peter Pratt's Oneida Iroquois Glass Trade Bead Sequence (1961) and Dr. Kenneth Kidd's Classification System for Glass Trade Beads (1970).

The second type of research has been the study of the bead's chemical makeup. This work was done largely by Dr. W. G. N van der Sleen, a Dutch chemist. Van der Sleen 's work was done in part on glass beads which he and others found in the Netherlands. These beads were found either near the remains of 17th century glass works or in the

areas which produced 17th century refuse. What van der Sleen discovered was that there is a chemical difference between the beads found in the Netherlands and beads of the same style made in Venice.

Bead glass is composed of silica, coloring agents, and an alkali. In the beads from Venice, soda ash (Na_2O) was used as the alkali, while in the beads from the Netherlands, potash (K_2O) was apparently used. By testing specimans of glass with a spectograph and comparing the resulting amounts of Na_2O and K_2O, van der Sleen felt he had discovered a way to identify the place where that speciman of glass had been produced (van der Sleen, 1963).

In an effort to see how these findings might apply to beads from Iroquoian sites, we did a preliminary test on five beads. All five are from The Pompey Center site, the first historic Onondaga site on which beads are frequent. This site is presently dated circa 1600 - 1620. The five beads analyzed were as follows:

	Description	Kidd #	Pratt #
#1	Round, sky blue, opaque - with three white stripes	II b 56	47
#2	Round, brick red, opaque - three broad white stripes with a narrow blue stripe in center	II bb 1	22
#3	Round, deep blue, translucent	II a 50	9
#4	Round, "star" or chevron	IV K 3	16
#5	Round, polychrome white with 6 brickred stripes alternating with 6 blue stripes. Transparent outer coat.	IV n 2	28

The results of spectrographic analysis included the following percentages:

	Na_2O	K_2O
#1	13.0	2.4
#2	8.5	2.2
#3	10.0	1.0
#4	5.8	1.0
#5	8.0	2.4

According to van der Sleen's findings, these results indicate that all the beads tested were probably of Venetian, rather than Dutch manufacture since the Na_2O content is significantly higher than the K_2O context in all specimans.

So, what does this tell us? In part it supports some of the "common knowledge" about beads. While all the beads found on Iroquoian sites were not made in Venice, these particular beads were. It is also known that the glassworks in Amsterdam were not producing large quantities until the second decade of the 17th century. As it is highly probably that Dutch traders would have used Dutch-made beads, rather than those of the Venetian competition, the fact that the beads in this sample were Venetian may indicate that the Pompey Center site can be dated pre-1620. Perhaps it was not until the establishment of formal Dutch trading companies that the Dutch-made beads came to the New World in large quantities. Further testing is now being done to test this, as well as other ideas.