

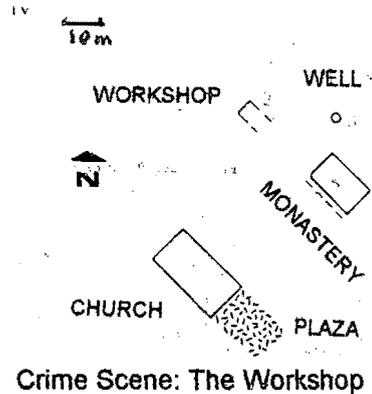
The MARGARETOLOGIST

The Beads from St. Catherines GA

St. Catherines Bead Gazette

Sneaky Guale Get Away with Beadmaking

St. Catherines (AP): Under the very noses of their Spanish "keepers," the native inhabitants made beads of highly symbolic meaning, tying them to other members of the group and perhaps farther afield. And they had the gall to do it in a Spanish building! Read the shocking story beginning on page 3.

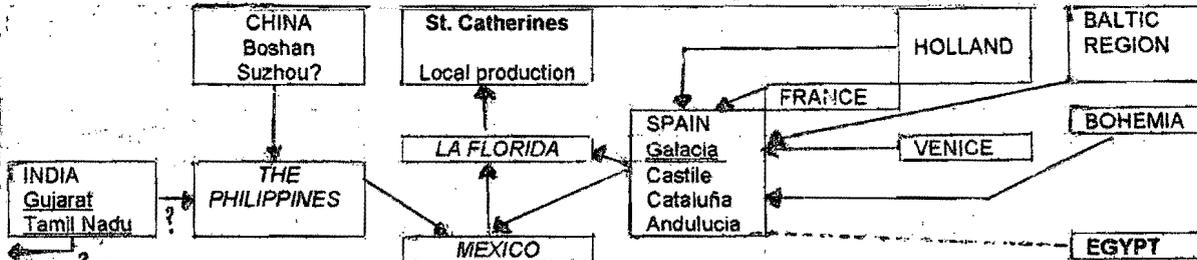


Little Mission that Could: Where Did All the Beads Come From?

St. Catherines (Reuters): The shocking news was that the poor, isolated St. Catherines mission was somehow making money on the side (see p. 3 inside). What did they do with the money? Why, they bought beads. Not just any beads, mind you, but gilded ones, semiprecious ones, and fine glass ones.

The police are on the trail of what was apparently an International Bead Trade, feeding the insatiable bead hunger of the inhabitants. The sheriff's department released the chart below today. A glance shows the extent of the global chicanery. Story starts page on page 5.

Schema of the Bead Trade to St. Catherines



Places that are underlined furnished beads other than glass. Places in italics are transshipment locales; they did not furnish beads. Egypt is boldfaced and the dotted line to Andulucia indicates a beadmaking technique transfer rather than shipment of beads.

The MARGARETOLOGIST is published twice a year with the most current information on bead research, primarily our own.

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Through the Eye of a Needle

I had not planned it this way, but this issue is very similar to the last one. They both discuss beads from single archaeological sites. The sites are a half a world away and quite different in age. Arikamedu, India was abandoned after 2000 years of occupation in the 17th century, while St. Catherines, Georgia (USA) was essentially occupied only during the 17th century.

How could two places be more different? In many ways, they were very dissimilar. Yet, they have one thing in common: they both have a great many beads. As with any place with many beads, an intensive study of them produces surprising results. The beads from Arikamedu illuminated much about the site, the history of South India, the role of South India in Southeast Asia, and the development of glass and stone beadmaking in the region.

St. Catherines' beads tell us about life at the site, especially the role played by the shell beads, which must have been socially significant for the natives. They also inform us about trading patterns. They open the study of glass beadmaking in Spain and France and allow us to revise the history of Bohemian beadmaking. It is a remarkable reach for such an obscure mission site.

This issue is only a preliminary study of some of the highlights of this extraordinary collection of beads. Along with the excavator, David Hurst Thomas, and his wife, Lori Pendleton, I am preparing a book-length contribution to the growing literature on St. Catherines. I am taking the opportunity to go beyond the beads from the site and discuss the world bead trade with special reference to the Americas through the 17th century. The summary here does not contain all the references needed to document every point made; that will be reserved for the book. The publication date for the book has not yet been announced.

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The Margret Carey "Gotcha" Award goes to the person who spots the most errors per issue. One point for a typo, two for an error of fact. The award has been extended to The Bead Site. (page/column/paragraph/line)

From Joan Eppen 11(2)

7/1/2/4 require for requite.

From Margret Carey 12(2)

4/2/3/14: Septuagint, not Septuagent

Several places: Pinder-Wilson, not Pindar-Wilson

11/1/1/2: Edisud, not Edisol

11/2/4/1: Pinder-Wilson, not Pinder-Wilso

11/2/9/1: Maud, not Maude

From Margret Carey 13(2)

Middle illustration on the left is not a barrel bead. It is a flat pendant.

Important Notice for Internet Users

When you change your internet address (your ISP disappears or you switch from AOL), please inform me. Everyone is entitled to the monthly bEad-Mail, but Members also get the occasional Mini-Marg. Both are informative.

Email me by going to TheBeadSite.com and clicking on "Contact Us." Indicate that you are a Member and this email address is new or that you had not given me your address before and wish to receive the newsletters.

Beads at St. Catherines

St. Catherines is one of the barrier islands off the coast of Georgia (USA), about 50 miles (80 km) south of Savannah. In size and shape, it is similar to Manhattan Island. It is forested and well watered and supports a large deer (and more recently imported lemur) population. It is owned by the St. Catherines Island Foundation, a non-profit organization that does not allow development.

This is especially fortunate for those interested in America's colonial past and in the role beads played in American history. For a century, the northernmost Spanish settlement along the Atlantic coast was the mission *Santa Catalina de Guale*. The Guale (pronounced "Wally") were the native people in the region.

After three centuries, the important mission was found again.

As interest in Spanish colonial Georgia grew through the 20th century, there was speculation on the location of the mission. Beginning in 1965, several archaeologists and teams explored the island for its traces. A decade later, a team from the American Museum of Natural History (AMNH) in New York, lead by David Hurst Thomas, began intense field exploration combined with a proton magnetometer survey. They succeeded in locating a well, a possible *coquina* (kitchen), and an *iglesia* (church). *Santa Catalina de Guale* had been rediscovered (Thomas 1987; 1988:17-30).

St. Catherines and Spanish Colonies

The vast Spanish Empire was divided into many provinces. St. Catherines was within *La Florida*, whose capital was at St. Augustine. This province was one of the

poorest in the Americas. While St. Catherines was the chief supplier of food to St. Augustine, this far-off outpost of Spain's poorest colony turns out to be incredibly rich: jewelry, bronze church bells, and beads – lots of beads – 62,000 by current count. There are beads from everywhere, gilded ones, fancy ones, expensive ones, and, of course, plain, cheap ones.

Why was it so rich? My guess is that the friars of the mission secretly sold a valuable commodity to ships riding the Gulf Stream to Europe. That would have been sassafras, then thought to be a cure for syphilis, and very expensive in Europe. The French used to stop at St. Catherines for the root herb, but after the mission was established, official mentions of the plant cease (Francis n.d.).

In any case, with a group of beads as large and varied as St. Catherines, there is a wealth of data to be extracted from it. I am currently working with David Hurst Thomas and his wife, Lori Pendleton, to produce a volume dedicated to the beads (Francis n.d.). This is a preliminary report on some of the highlights of my study of the beads from this site.

Shell Beads Made on the Site

Long before Europeans arrived, most Native Americans living along the Mississippi and eastward adopted shell beads as symbols of power, wealth, friendship, alliances, and other traits. So important were the beads that a stone tool technique ("microlithic" – tiny stone tools) was developed just to make them.

The forms of the beads were different among different groups. In the Northeast, it was a cylinder, which developed into wampum. In the Middle Atlantic, it was a disc bead, called roanoke. In the Southeast, it was a short barrel or cylinder.

We know the name of two of these beads because they became "monetized." Europe would not dispatch coins to be lost in the American wilderness, so the settlers used the shell beads as coinage. The natives did not regard these beads as money. They served at all public functions, as a store of power, and as burial goods. But the Dutch and then the English in the Northeast used wampum as coins, and the English in Virginia and Maryland used roanoke. After Europeans began making wampum in factories, it replaced roanoke where it had originally held sway.

Shell Beads

Northeast – cylindrical wampum

Mid-Atlantic – discoidal roanoke

Southeast – short cylinders; name unknown

However, it was different in Spanish territories, where was no lack of coins. The silver of Mexico and Bolivia was minted in Mexico City and Lima, Peru. The Spanish Milled dollar circulated around the globe (including Asia) and its physical division into halves, quarters and eighths gave rise to expressions like "pieces of eight" and "two bits" (American slang for a quarter of a dollar).

Thus, the Spanish did not have to monetize shell beads circulating among the natives in their territory. They paid them no attention. I have yet to find any reference to these beads; their name was never recorded.

Yet, there is every reason to believe that they served the same social roles as did wampum and roanoke – rich cultural symbols to the Guale and their neighbors. The Guale were a Muskogean-speaking group named by the Spaniards after the chiefdom located on Guale Island (St. Catherines). They had had a few contacts with Europeans beginning with the French in 1562. In 1597, the first anti-colonial revolt in North America took place against the Spanish in Guale territory; five Franciscans were

killed. In that year, *Santa Catalina de Guale* was established. It was abandoned in 1680 due to pressure from the English moving southward.

Shell beads are found all over the site. Those in prehistoric burial mounds were mostly large barrels, made from the columellae (central supporting pillars) of whelks or similar shells. Those of the contact period are small, short cylinders.

The Guale converts were buried under the Church. Among the beads they wore, 96 were shell, half of them in even pairs, suggesting the use of symmetry in their jewelry. These were the best quality of shell beads on the site. There were also eight undrilled beads, probably deposited with people who made them.

In a small building now regarded as a workshop there was another high concentration of shell beads: a total of 53. Over half of them were unfinished, fragmentary, or burned (we do not know why). Clearly, this was a beadmaking shop.

The Guale made their traditional beads in a workshop built by the Spanish.

This building was originally thought to be the kitchen of the complex. After reporting to Thomas that it was clearly the site of shell beadmaking, he told me that the building was divided into four rooms and church bells were repaired (or brass recycled) in another one. It is now thought of as the workshop.

Shell beads are scattered around the grounds of the site, but rarely; only eight being recovered in what were Guale settlement areas. Another concentration was in an area west of the church, with 68 beads (and two blanks). These differ from the others technically because their perforations are much larger. None of the prehistoric large beads are found here. There

may be several reasons why these beads are different than the others, but the most logical one is that this is the site of the immediate pre-Contact Guale village. The beads are otherwise similar to those made during the mission phase, but stone drills rather than Spanish-furnished metal tools (maybe just nails) were used.

Hence, the bead evidence has illuminated the function of two areas on the site. Moreover, the production of shell beads, with all of their cultural significance to the Guale and their neighbors, was sanctioned or at least tolerated by the missionaries. They may have recognized that the beads were important and used as gifts to other communities, thus bringing prestige to St. Catherines. But it is unlikely that they understood that the beads had deep-seated and ancient meanings to the people dealing with them, otherwise, they would probably have been regarded as Devil's Trinkets.

Under Our Noses: French Beads

The most common glass trade bead in North America from about 1560 to 1750 is a rather crude blue glass type, also found in West Africa at the time. All European powers traded with it; it is so common that many researchers get tired of seeing it.

The bead has been given at least seven names, the best known being "Early blue" in the Northeast and "Itchtucknee" in the Southeast. Neither is satisfying, nor are the other names. "Early blue" has priority among them (Heisey and Witmer 1962: 116-117), but there is an even earlier term and an excellent description of them by Watt and Merony (1937:63): "BUBBLE GLASS. SKY BLUE. The glass is full of air holes, is easily crushed and surface heavily striated. Color deep greenish blue when moistened, iridescence in various colors to a dull dirty when dry."

Hence, "bubble glass" beads. Not only does the term have priority, but it also reminds us of the most important fact about

them: the glass is full of bubbles. Sometimes the beads are called striated, but the striations result from the bubbles (called "seed" by glassmakers). The bubbles are an important clue to their origin. I cannot imagine a glassmaker producing such poor glass (poor in other ways, too, see Hancock *et al.* 1994) for two centuries in the technological glass capital of the world. They are not Venetian.

Kenneth Kidd (1979:29-31) and I (Francis 1988:47-50) suggested that given its leadership in the arts and science and its commercial policies, France was a likely trade bead maker. In 1551, Henry II invited Theseo Mutio to make glass, including *canons* (tubes). Beads "by the fire and the furnace" were made by a *Patenôtriers* (paternoster) guild in Nevers beginning in 1565 (Barrelet 1953:91-92, 178).

From the mid-sixteenth century, Spanish cargo lists of goods taken to America include *turqui*, a glass bead (Torre Revellos 1943:780). It becomes very important in later lists, said to be blue, black, green, clear, or golden, and in one case is stated to be from France (Kelly 1992:233). *Turqui* refers to a dark blue, the color of these beads before 1600 (Hancock *et al.* 1994).

In Spanish *turqui* does not mean turquoise, but something from Turkey (highly unlikely) or indigo blue.

At St. Catherines, there are thousands of these beads. Several facts point to them being French or at least not Venetian. Their color range (blue, black, clear, and white) is similar to that in the Spanish cargo lists. We have not seen the golden variety; green may be someone's interpretation of light blue (after 1600 these beads become noticeably lighter in color).

All of these beads are finished in the manner that the *Paternoster* guild of Venice finished beads. The influx of Italian

glassmakers to France and the establishment of a *Patenôtriers* guild there just when these beads shows up in the trade is likely to be more than coincidence.

The *Paternosteri* finished beads *a speo* (on the spit), putting several large tube segments on a tool with six tines mounted on a handle. This was held over a fire to round off the segments. Often, adjacent beads melted together making double beads or leaving "tails" or other imperfections.

The *Margaritari* finished beads *a ferrazza* (in the pan), by putting small segments in ash and stirring them with a paddle in a pan over heat. This is how seed beads were made.

We would expect this with the larger beads, but at St. Catherines we have many small beads (seed bead size), including faceted ones (charlotte-like) that were finished *a speo*. This would certainly not have been done in Venice, where the *Margariteri* would have made the seed beads and finished them *a ferrazza*.

Moreover, the bubble glass beads are decorated in ways that imitate popular Venetian beads of the time. These include three bands of white on red stripes and red and white "eye" beads. The mosaic chips used on the eye beads, however, are not as expertly made as those found on eye beads in the Northeast (presumably Venetian).

These bubble glass beads have long been assumed to be Venetian, but that was the assumption for most American trade beads for a long time. Over the past few decades we have learned that there were (and are) many more sources of beads of all materials than was initially thought. The evidence of these beads, particularly the technical features and the techniques used to make "seed beads," convinces me that these, the most common of trade beads, are not Venetian.

Nor are they Dutch; such glass is not found in Holland. Turkey is ruled out on historical grounds, and anyway all European powers would not be buying beads

from Turkey in large quantities for two centuries. Similarly, Spain is not a likely candidate, given its constant quarrels with other European colonial powers.

France is the best candidate. We can see that the beginning of drawn beadmaking there coincides with the appearance of the bubble glass beads in colonial sites and that their trade ends with a change in fashion away from Venetian-like glass and enormous disruptions in the French glass industry (Scoville 1959:113, 150, 160-70).

We also have the phenomenon of seed beads (even charlottes) being made by a *Paternostri*-like guild and only such beadworkers are recorded in France at this time. Finally, we have the testimony of Spanish cargo lists. Be aware that this identification is still tentative, but I believe it makes the best sense of the evidence we have.

Did Spain Make Glass Trade Beads?

The pioneer of bead research in Spanish colonies, John Goggon (n.d.:7), believed that, given Spain's mercantile outlook, most glass beads on colonial sites were made in Spain. No one really believes that any more. The cargo lists cited above show that goods shipped to America came from all over Spain, but also all over Europe, and farther away. Now we resurrect Goggon's idea. Not all glass trade beads in Spanish colonies were Spanish, but some of them at St. Catherines were.

An important group of beads at St. Catherines are decorated with gold or gilded. This may seem odd for an isolated mission, but a few considerations make it more easily understood. For one thing, the beads may have originally been on rosaries used by the friars. This contrasted with Franciscan austerity, but these were ecclesiastical items. As the gold wore off or the rosaries broke, the beads may have been handed down to the Guale. Secondly, gold was so abundant in Spain (and Portugal) at

this time that it was much cheaper in Iberia than in the rest of Europe.

There are about a dozen (some are fragments) small glass crosses elaborately made by lampwork and decorated with colors and some gilding. These have never been found elsewhere. It is safe to assume that they are Spanish, likely from one area.

In 1615 Christóbal Suárez de Figueroa translated Tommaso Garzoni's *La piazza universale* (Venice, 1595) into Spanish. He added this section:

These are the various colors from which are made threads to decorate the crystal glasses, forming also buttons, stones for rings, rosary beads, charms and a thousand other trinkets. At the present time in Murano and Barcelona, so precise is this work that everything imaginable may be done with glass and crystal. (Frothingham 1963:15)

Barcelona (and surrounding Cataluña) mostly followed Venetian (Murano) styles. The southern region of Andalusia was where glassmaking was concentrated during the Islamic period of Spain and continued after the Muslims were driven out. The third glassmaking center was Cadalso de los Vidrios near Toledo in Castile.

Most of the gilded beads were wound into oblates or ellipsoids from a translucent green ("bottle-green," that is, uncolored) glass and then coated with gold (exactly how is still being worked out).

There were also some that were more elaborate, decorated with incised longitudinal lines alternating with rows of dots, with some variations. Goggin (n.d.:32-33) called this bead "Seven Oaks Gilded Molded." He said it was "not completely clear" how it was made, but thought a reheated cane section was "clearly pressed in a mold to create the surface," although the bubbles suggested the bead was wound. This bead has been known by this name ever since.

It is common in archaeology to name a ceramic or stone tool for the site at which it was first described. This helps to compare later finds and such objects are usually limited in distribution. Goggin tried to do this with trade beads, but as Karlis Karikins has said to me, this is a mistake when talking about trade objects found all over the world. Probably the only name Goggin gave to a bead that will endure is "Nueva Cádiz." The others: "Florida Cut Crystal" (first reported in Virginia and found as far north as New York), Itchtuckee (discussed above; bubble glass beads), Peruvian Cornered Faceted (small Nueva Cádiz beads), and now Seven Oaks Gilded Molded, are, or will, pass by the wayside.

Seven Oaks Gilded Molded Beads are misnamed; only the gilded part is right.

Goggin did not cite Seven Oaks as the reference for the bead, though they are found there. More seriously, the beads are not molded. There is no seam. I meticulously traced every element of the design on these beads from St. Catherines and every single bead was different. No molds were used.

Interestingly, the incised rows of dots were made by some sort of "comb." Two combs were employed, distinguished by tiny misalignments in the depth or the orientation of the teeth. The more simple beads, with fewer lines and rows of dots were decorated with one comb, while the beads with more lines and rows were decorated with another.

This second comb was also used to make a few beads with dashes replacing the dots and for decorating double spacers that had been made on two wires and were further enhanced with other glass elements. There could be a chronological explanation (a beadmaker getting more skillful just as he changed combs), but that would pro-

duce at least some overlaps, and there are none. Rather, I believe we are seeing the work of a master and an apprentice, likely an offspring.

"Fingerprints" of 17th C. beadmakers

Small-scale, home-based glass bead-making was the basis of the Spanish glass industry in Cataluña, Andalucía, and Castile. This fits with what we know of Spanish crafts in general at the time and with the types of beads we have identified as Spanish.

The Middle Eastern Inheritance

The most remarkable discoveries at St. Catherines, however, at least for me, were glass segmented beads. These were made by rolling a hot tube of glass held on a wire over a stone grooved on one side to form bulges along the tube. The bulges were cut apart to form single or multiple beads. A variation was to coat a thin tube with gold and slip it into a wider tube before segmenting the whole: gold-glass beads.

Segmented beads are all over the Middle East, many parts of Africa, and all the way to the Far East. The gold-glass ones were especially important export items. The center of production was Egypt and the beads were made first at Alexandria and then at Fustat (Old Cairo) from about 300 B.C. to A.D. 1200. Production stopped after the Egyptians incinerated their own Fustat (a tent city; the name means "tent") ahead of the coming of the marauding Crusaders. 1500 years of bead production came to an abrupt halt [see *Margaretologist* 12(2), 1999].

At least that is what we thought. Now it is clear that some time before the burning of Fustat (or perhaps because of it), segmented beadmakers, perhaps a single family, left Egypt and went to Spain, most likely to the Andalucía region, to continue

their craft. They were still making segmented beads in the 17th century: translucent blue, green, and clear, opaque white, and even gold-glass beads.

Many of the clear ones were coated on the inside with cinnabar to appear red. Spain has long been an important source of cinnabar (a mercury ore). It was the major source for this ore in Roman times, and mining was revived in Arab times. Later it provided mercury for the extraction of gold and silver in the American colonies.

Segmented beads have been found on other Spanish colonial sites, but their importance had not been recognized. These hollow segmented beads can easily be distinguished from blown beads, whether made individually or in molds. We have some of the former at St. Catherines, but they are a different story.

The age of the segmented bead industry has been extended from 1500 to 2000 years

We do not know when the production of segmented beads stopped in Spain. However, St. Catherines has allowed us to recover a beadmaking technique that was assumed to have been halted in the 12th century and expand its life by 400 or more years.

Bohemian Bead History

As mentioned in *Margaretologist* 13(1), 2000, another find at St. Catherines forces us to rewrite the history of what is now the leading bead industry in the world. Two translucent "ruby red" molded beads found in a necklace on a burial under the Church floor extend the beginning of Bohemian beadmaking back to at least 1680 (the abandonment of St. Catherines), a full three decades earlier than had once been thought.

Three decades may not seem like much when compared to the 2000 years of segmented bead making, but the closer we come to our own time, the more accurate we can be about dates and the more important each year or decade becomes in history.

Confirmation of how the earliest Czech glass beads were molded

In addition to altering the dates of Bohemian bead production, the beads at St. Catherines also confirm how molding was done at the earliest stage of beadmaking. Neuwirth (1994:246) cited a report produced locally (apparently in Germany) by someone named Labau with the help of four leading glassmakers. The typescript is now in the Gablonzer Archiv und Museum in Neugablonz (Kaufbeuren, Germany), the settlement of German beadmakers after they were expelled from Bohemia following World War II. It discusses the earliest means of molding glass beads in Bohemia:

The production of hand-pierced beads required 2 people, a molder and a piercer, who sat opposite each other at the molding furnace. The molder guided the melting end of the glass rod, the 'Schmelz', into the mold and the piercer who had screwed the needle into a hand vice, knew exactly how long to wait for the precise moment when the presser pressed the mold together, to pierce with the needle at the same time. This cooperation demanded considerable skill of both workers. To make sure the needle pierced in the right place, a so-called 'snout' was attached to the mold. It is astonishing that it was possible to make up to 20 or 25 bundles, that is 24,000 to 30,000 single beads a day in this complicated manner.

The beads at St. Catherines must have been made this way. Clearly, the "piercer" had to fit the needle or pin between the two halves of the molds, guided by the "snout." This would result in a mold seam that runs from aperture to aperture, unlike most Czech beads, whose mold seams run around the equator because they have been molded in tong molds with either conical or straight piercing devices built into them. The beads I reported in *Margaretologist* 13(1), p. 6 as being in the Center's collection and suspected of being older varieties, do, in fact, have their mold seams running from aperture to aperture. An attempt was made (sometimes not too successfully) to grind the seams off.

The Origins of St. Catherines' Beads

We have already discussed the origin of some of the beads at St. Catherines, but what is most interesting is that tracing their origins take us on a long journey around the world.

Spain: Jet and Cut Crystal

Spain would naturally try to use as many products of its own industries in the trade with the Americas as possible. We have already discussed glass beads from Spain, but two other bead types also originated from there.

One that has been recognized for a long time is jet, a form of coal. Jet had very important associations for the Spanish. It is found in the northeastern province of Asturias. What was the larger Kingdom of Asturias was the only holdout against the invasion of the Muslims that began in the year 711. Around a century after this invasion, a monk is said to have found the uncorrupted body of the Apostle St. James (the "greater James," brother of John), who is said to have evangelized Spain.

The discovery electrified the Spanish, who rallied around his standard to begin what came to be called the "Reconquest."

The Muslims had carried an arm of Mohammed in their European conquests and now the Christians had an equally powerful relic. A magnificent cathedral was built over James' purported body at Santiago de Campestella and became a place of pilgrimage on par with Rome and Jerusalem. (Santiago is Sant Iago, the Spanish for St. James; San Diego is an incorrect division of the word.)

Powerful forces launched in the Reconquest drove the Conquest

The cathedral is unique in being surrounded by four plazas, one of which is *Plaza de la Azabacheria*, Plaza of the Jet Shops. The local jet was sold to tourists as souvenirs of their pilgrimages.

The year 1492 is not only the year in which Columbus sailed for Spain and stumbled upon the New World. It is also the year Ferdinand and Isabella finally defeated the Muslims at Granada (Columbus met them in their war tent), as well as the year the Jews were expelled from Spain.

The fervor of the Reconquest, which took many centuries to complete, carried over into the Conquest of the New World. There are many Santiagos, a few San Diegos, and several Matamoroses (Santiago Matamoros was the "killer of the Moors") in the Americas and the Philippines. Jet was a reminder of the glory of it all.

Certainly, the Franciscans of St. Catharines would have understood all of this. However, the jet was found buried with their Guale converts. Whether the Guale understood its cultural meaning or just took the Spaniards' words for it being a powerful amulet is lost to us now.

The other material I have identified as being Spanish is the rock crystal (quartz) used for faceted beads. These beads are found at several Spanish contact sites (but also elsewhere), though they are rather

rare. Several were also found on the Spanish galleon *Atocha*. The most important producer of cut crystal was Venice (the *Cristalleri* guild spawned the glass beadmaking guild). However, my guess is that the Venetians had access to the finest stones of the Alps. The beads at St. Catharines are of inferior stone with many flaws. The Spanish are known to have imported crystal cutters, and I believe these beads were among their products.

Beads from All Over Europe

In addition to Spain, France, Bohemia, and Venice, some beads came from other European countries. There were three fragments of chevrons, matching some found in Amsterdam and in Dutch sites in New York. They are most likely from the Netherlands.

There were also a few amber beads. Exactly where these might have been made is difficult to say, but the material almost certainly came from the Baltic Region, what is now Poland, the Baltic States, and Kaliningrad, Russia.

Beads from China

Several wound beads are so like beads made in China that they are no doubt from there. Some other wound beads, of whose origin I am not so certain, may also be Chinese.

One of these beads is a blue-green melon, very like an example in the Center's collection. It was probably made in or around the modern glass bead capital of China, Poshan.

A few beads are made of a dusky translucent red and paddled into hexagonal bicones. The color is unlike the red of the Bohemian beads, because it is not produced from gold, but from copper. The Chinese were the first people to make copper ruby red, at least by A.D. 1000. This highly desirable color was quite popular with importing countries.

How did Chinese beads get to St. Catherines? Through what is called the Galeon or Manila Trade. For 250 years, the Spanish sent galleons from Acapulco loaded with silver from Mexico and Bolivia to Manila. Silver was worth more against gold in Asia than in Europe, and ships from India to Korea, but above all from China, were in the bay waiting for the galleons to arrive. All the goods of the Orient were exchanged for the silver. The galleons loaded (most things were smuggled on or under-declared) and set off back to Nueva España (Mexico). The return trip was much slower than the outbound one and when the ships got to California, missionaries sent their charges out with much needed oranges and lemons to fight off the scurvy everyone had contracted.

Once at Acapulco, the goods were taken across the treacherous China Road to Mexico City, where they were divided up. The local gentry saved much for themselves, but other luxuries went to Veracruz and were loaded onto another galleon. This would rendezvous with galleons from Central and South America at Havana and sail across the Atlantic in an armada to protect themselves.

Neither the Spanish at Mexico City nor in Spain wanted glass beads, but the natives did. This is the source of Chinese heirloom beads in parts of Mexico, those in the American Southwest ("padre" beads), and occasionally on archeological sites. I was sent beads from the galleon *Nuestra Señora de la Concepción*, sunk off Saipan in 1636: there were carnelian and garnet beads, and two Chinese glass bead types. One was copper ruby red; the other cobalt blue with a heavy lead content.

Beads from India

Columbus brought carnelian beads with him (along with amber, chevrons, and some Spanish glass beads) on his first voyage to the Americas.

Four carnelian beads at St. Catherines have all the marks of being Indian. Three were crude discs, made from chips of stone, chip dimpled, drilled from both sides, and tumble polished. Beads like these are usually made in Jaipur these days. I was surprised to see the cheap style being so old. They are no doubt a product of the western Indian stone bead industry.

Dating a well-known stone bead

The other bead was a multifaceted oblate, a type well known from a number of places, and popular in Europe and the Middle East. Van der Sleen (1973:56) wrote that his great-grandmother wore these beads, suggesting a date in the mid 19th century. A portrait of Mme. Pan-chouke by Jean Auguste Dominique Ingres painted in 1811 in the Louvre shows her wearing a necklace and a four-stranded bracelet of these beads. The St. Catherines bead (the only one excavated thus far) dates to at least 1680, suggesting perhaps two centuries of popularity for the style.

This bead most likely came from southern India, where faceting stones was an important part of beadmaking. It was first polished by abrasion, and then chip dimpled and drilled from both sides. Polishing commonly precedes drilling in the South; the opposite is true in the western industry.

These beads could have reached St. Catherines through the same route taken by the Chinese beads. On the other hand, they could have come across the Atlantic after reaching Spain by land or sea. One article in the cargo lists from Spain to the Americas was "Mantas de la India" (Torre Revello 1943:779), that is, shawls (the famous Kashmire shawl?) or blankets of India.

The Origin of the Beads

The published cargo lists of goods that Spain sent America in the 16th century

(Torre Revello 1943; Kelly 1992) show that they came from many parts of Spain, many European countries, and further afield. The beads show the same thing. We in the 20th/21st centuries are used to being surrounded with many goods (even food) carrying "Made in" or "Product of" labels from around the globe. Had the Spanish colonial office mandated such tags in the 17th century, the people of St. Catherines would have seen the same thing on their beads.

Conclusion

One small archaeological site, once tucked into the backwaters of the Spanish colonial system. Why should anyone care? You care if you care about history, about how people interacted and about how we came to where we are now. It would seem that the Guale were probably treated well. They have chafed under the new dispensation, but they were certainly given many beads, most likely as gifts. They were also allowed to make beads, but whether the missionaries understood their significance is not known.

You also care if you are interested in beads. This group of beads has told us a lot about the global bead industries of the 17th C. It has opened our eyes to Spanish bead production and the several aspects of it, including the last remnant of the once crucial Egyptian industry. It has altered our thinking about the beginning of Bohemian beadmaking. It has opened the possibility of an important French glass bead industry. It has tied both China and India into the Spanish world system.

There is, of course, nothing wrong with caring for both history and beads. I certainly do, and I believe most CBR members do as well. The opportunity to work at a site as rich as St. Catherines was a true privilege. I always value working with real professionals on such a vital project.

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