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The MARGARETOLOGIST

The Venetian Bead Story, Part 1: History

(Part 2, describing the beads by century, will appear in the next issue)

A glass factory of the 16th century. Woodcut from Georgius Agricola 1556 *De Re Metalica.* Basle. Near the head of the man standing at the bottom is a mold similar to that (though less deep than) used for chevrons.

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Attention: an important note for all our subscribers. Some copies of the last issue (25) Vol. 11, No. 1, The Glass and Glass Analysis Issue, were sent out incorrectly printed, with the pages mixed up. I have contacted all U.S. members by post and all others I could reach by e-mail and am announcing here that if this happened to you I am sorry. Let me know and I shall be pleased to send you a corrected copy. pfjr@northnet.org

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Through the Eye of a Needle

In 1979, my first bead book, *The Story of Venetian Beads*, was printed in an edition of only 1000 copies because the bead world was then so small. Along with its companion on Czech beads, it went out of print in a few years. By 1988, there was enough new material to revise them and include other European beadmakers in *The Glass Trade Beads of Europe*. This edition was 1200 copies, but went out of print even faster.

There have been many calls to reprint these. I have been slow to do so because of the work involved in incorporating the new material that has appeared since.

The *Margaretologist* is increasingly recognized as an important vehicle for bead information. It is appropriate to present this material here as this journal does not go out of print and is easily accessible. However, a limitation in doing this is space.

The text of the 1988 work is substantially included here, with new research where appropriate. Only a few side arguments have been skipped. There was no room to include the section "The Identification of Venetian Beads" that was so popular in the 1988 book. It covered the beads themselves, using archaeological and historical data to date them. This data was lengthy and required a large bibliography. I could have severely abridged it here, but it would have been much less valuable. I have decided to make that section the basis of the next *Margaretologist*. Hence, this is Part 1 of Glass Beadmaking in Venice.

Important Notes

1. Call for Papers. The Center and Recursos are planning BEAD EXPO 2000 to be held in March. A call to those who wish to present a paper is being made. The subjects will include all types of beads as well as jewelry, wearable art and related topics. Please contact me if you wish to present a paper or have other ideas for the Expo.

2. Books. *The Asian Maritime Bead Trade* is coming along. I have been invited to do a book on the beads from Berenike, Egypt, to cover the Roman period and Roman trade with the East. I have also been asked to do one on the beads from St. Catherines GA, the northernmost Spanish mission on the Atlantic coast. This reveals Venetian, Spanish and other 17th century beads. I am in negotiations with two other publishers for *Beads Along the American Frontier* and a book on beads of the Islamic period.

3. If anyone would like to help with the illustrations of any of these books, please contact me.

4. Want to take a Bead Tour? Where? When? We will tailor tours for you and small groups. Contact me.

Don't forget to visit us at www.thebeadsite.com – go to Galleries to see the graphics related to this issue of the *Margaretologist*.

CALENDAR

- ⇒ **mid Jan. – mid May '99 Research, consulting in India, Sri Lanka**
- ⇒ **May – Toledo Glass Club**
- ⇒ **Late June – Great Britain**
- ⇒ **5-7 July – Conference, Leiden**
- ⇒ **September – Denver?**
- ⇒ **March 2000 – BEAD EXPO, Santa Fe**

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The Margret Carey "Gotcha" Award is given 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.

The Venetian Bead Story 1

One of the world's most exquisite cities, Venice consists of 117 islands in the Lagoon of Venice sheltered from the Adriatic Sea by the Lido, a long sand spit. Her wealth has always come from the sea.

Several theories of the origin of glassmaking at Venice exist, but none are proven. In the 7th and 8th centuries small furnaces on Torcello Island made tableware and tiles for the cathedral (Gasparetto 1967, Tabaczyńska 1968). Tradition says that in 811 people of the Lido fled the Huns to Rivo Alto (Rialto), the "high bank," thus founding Venice, but radiocarbon dates beneath San Lorenzo are from the late 6th and early 7th centuries and beneath San Marco from the 7th or 8th (Ammerman et al. 1995). In 823, St. Mark's bones were brought from Alexandria and Venice began to eclipse Torcello.

Documents from 982, 1082 and 1090 refer to *philolarii* or bottle makers attached to Benedictine monasteries; they also made mosaic tiles to decorate San Marco cathedral (Gasparetto 1960:37). In 1072, alum was imported from Alexandria to make glass; this was forbidden in 1330 as it resulted in an inferior product (Perrot 1958:11). In 1224, 29 members of the *Ars Fiolaria*, the glassmaker's guild, were fined for various rule infractions (Nesbitt 1879:652), the first mention of the guild.

In those days of state control of industry, many laws were passed governing glassmaking. A 1275 edict barred the export of sand, potash or broken glass and restricted Germans from taking more glass than they could carry on their backs or ten Venetian lira worth. An edict of 1286 by the Grand Council set down minimum working conditions and ordered the furnaces shut when the weather was hot. In the next year, the wood for fuel was put under the direction of the senior judges to ensure its availability (Perrot 1958 10-11).

On 8 November 1291 the Senate decreed that glassmaking must move from Rialto to the island complex of Murano (ancient Amurianas or Amurianum). The official reason was to shield the wooden buildings of Venice from fire, but it also helped to control the industry and prevent glassmakers from leaving. The law was not always obeyed; two similar laws were passed in the next 30 years and there was still a glassmaker in Rialto in the late 14th century (Hazlitt 1915:705).

Murano was a draw. By 1350 at least 60 glassmakers from the Dalmatian Coast and Italy went there, many apparently from the Diaspora (Kurinsky 1991:382-3). Venice favored glassmakers. An immigrant could become a citizen in 25 years (ibid.). A 1376 law allowed the heirs of a glassmaker's daughter and a nobleman to inherit his title and in 1490 the guild was placed under the Council of Ten, enhancing its lobbying power (Perrot 1958:21). Glassmakers could even buy a title, as the Morellis did in 1686 for 100,000 ducats (Gasparetto 1958:189).

Venice attempted to prevent an exodus of glassmakers, for a while under penalty of death. This did not stop many from leaving, however, and the penalty was applied only twice (Kidd 1979:22). Many European powers encouraged glassmakers and beadmakers, foremost among them France (Scoville 1950:82-3).

As early as 1486, Venetians set up a bead factory in Bohemia (Jackson 1927). In the 16th century, Venetian glassmakers went to France (Morazzoni 1953:41), England (Winbolt 1933:511; Thorpe 1935: 120) and Holland (Baart 1988:67). In the next century, workers were smuggled out to Amsterdam and Zuan Antonio Miotti

managed a bead factory in Middleburg, Holland (Zecchin 1971:78, van der Sleen 1967:108; Karklins 1974:54-5; Baart 1988:67-9). Italian beadmakers were even sent to Jamestown, Virginia (Harrington n.d.:9; Kidd 1979:50, 78).

The trickle became a flood in the mid 18th century, largely due to Dominico Vistosi, said to have been associated with beadmakers in Florence, Bologna, Naples, Rome, Loreto, Torino, Mantova and Pisa (all in Italy), Innsbruck and Graz, Marseilles, Amsterdam and Portugal. The failure of the Austrian adventures brought a sigh of relief in Venice. A book was produced to bring beadmaking to Spain (Morazzoni 1953:41-8).

Beadmaking Guilds in Venice

Venice had long drilled pearls (Morison 1963:273-4) and made bone, ivory, wood (Morazzoni 1953:9) and rock crystal beads (Alcouffe 1984:274). Martino de Canale first noted glass beads worn by a glassmaker (who probably made them) at the installation of Lorenzo Tiepolo as Doge in 1268 (Gasparetto 1958:182). In 1296, the first firm reference to Venetian glass beads indicated their use in embroidery (Morazzoni 1953:20). Their first official mention was in 1308 when the State Inquisition organized the beadmakers into the guild *Arte de 'Margariteri* (ibid.:8-9).

This new guild threatened the stone beadmakers, the *Arte Minuta* branch of the *Cristalleri* guild, organized in 1284 (Alcouffe 1984:274). Over the next two centuries, the stone cutters fought the glassmakers. As early as 1301, they lost their monopoly on lens making (Perocco 1984:30). Their rules (*marigola*) and laws of the Senate and the Inquisition sought to ban false gem making (Gasparetto 1958:184; Morazzoni 1953:22).

It was a losing battle. On 17 February 1510 the *Capitolo dell'Arte*, the governing board of all guilds, announced their support of glass beadmakers and stopped the export of canes to Bohemia for further working. The *Margariteri* and the *Paternostri* (organized in 1486) nominally remained part of the *Cristalleri* until 1604, but so firm was this decision that Gasparetto wrote, "Rock crystal was dead and glass beads born." (1958:185-6).

The ordinance and the *Paternosteri* rules speak of a recent innovation. The law says, "Newly discovered twenty years ago... an invention made by our glassmakers of Murano of pure canes of common *cristallo* and colors of diverse sorts...." The rules read, "*paternosteri de rosetta*" (chevrons), "*oldoni*," "canes, and other sorts of work newly discovered." (ibid.:184; Morazzoni 1953:21).

What was discovered between 1480 and 1490? Morazzoni thought it was Bernardo de Pin's polishing machine, but this marvel was a figment of an earlier historian's imagination (Zecchin 1955). It was not clear *cristallo* nor colored glass; both had been around much longer.

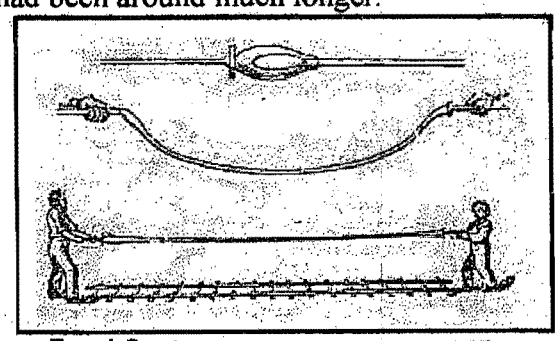

Fig. 1 Schematic representation of drawing a tube from Pellatt 1849:107.

The invention must have been tube drawing. Tubes had been drawn around the Mediterranean for centuries, but they seem to have been short. A long, thin tube (cane) could be cut into segments which would then be processed into beads. When Venetians taught Bohemians to make beads in 1486 they used furnace-winding, not tube drawing (Jackson 1927: A113).

To draw a glass tube, a master prepares a hollow glass gather by blowing into or manipulating it. By 1869 a device (*borsetta*) was inserted into the glass and opened up inside, making the hollow (Zanetti 1869:38). The master held the glass on his pipe and a boy with a rod (*pontil*, punty) with a piece of glass at the end joined this to the gather and ran away from it. Seed bead tubes were as long as 100 m (yards), made in galleries built for the purpose. A man with a leather fan cooled the tube, which was rested on crossbeams on the floor. The tube was cut into meter lengths and sent elsewhere to be processed.

If any one person was likely responsible for the invention of drawing it would be Angelo Barovier (1405-60), who invented clear *cristallo*, milky *lattimo*, an agate glass and possibly chevrons (Mentasti 1980:xlvi; Jargstorf 1995:46).

A distinction between beadmakers and their beads was the finishing process. Before the introduction of a tumbling drum in the 19th century, beads were finished either *a ferrazza* (in a pan) or *a speo* (on a spit). There is disagreement on which was first and who first used them. By 1600 the pan method was used by the *Margaritari* for seed beads and the *a speo* method by the *Paternostri* for larger beads, though the sizes could and did overlap (Gasparetto 1958: 186; Karklins 1993a; Jargstorf 1995:52-3).

In the pan method, beads were packed in a refractory powder, put on a pan heated underneath and stirred with a paddle. The drum was introduced in 1817 by Luigi Pusinich and improved in 1864 by Antonio Frigio (Morazzoni 1953:53 Gasparetto 1958:198). The beads were also packed in powder, and the rotating drum replaced the stirring paddle.

In the one *a speo* operation documented (Karklins 1993a), beads were put on six tines arranged in a circle mounted on a handle. Each held three large beads. The spit was placed in the fire and rotated until the beads were rounded. Often beads melted together or were misshapen; these were still sold.

A third beadmaking method, lampwinding, developed more slowly. The *Arte de'Perleri e de' Supialume* (*supialume* refers to blowing into a lamp to increase the heat of the fire) was made a guild in 1528. It did not share the status of the other two guilds until 1647, when they had a school (begun in 1615), the rules and a patron saint (S. Antonio) in common, but kept separate banks and councils (Morazzoni 1953:25-6; Gasparetto 1958:188). *Paternostri* feared competition from *Supialume*, who, indeed, eventually supplanted them.

Lamp-winding grew slowly. Wound beads don't appear in the trade until about 1700 and aren't important until about 1750. By 1731, 800 pounds (364 kg) of oil were used daily (Kidd 1979:67). Andrea and Pietro Bertolini improved the process soon thereafter (Morazzoni 1953: 37-8). Dominico Bussolin patented a gas lamp in 1843 and credited Giovan Battista Franchini for persuading his colleagues that it was better than tallow, yet as late as 1869 two leading beadmakers, Salviati and Giovanni still advertised beads made "by candle and by gas" (Zanetti 1869:170; Gasparetto 1958:195; Hollister 1983:203).

Venetian Glass

Special glasses are the hallmark of Venetian production. Venice was famed for its tableware and other glass products, as well as beads. Some of the glass improvements were used immediately for beads, while others took a long time for beadmakers to adopt.

We have already noted that Angelo Barovier (d. 1460) was the leading glassmaker of his day. His *cristallo*, an excellent, if slightly gray, clear glass, was made with purified alkalies, special ingredients and decolorized with manganese (see 1994-7[1]:5). It was later combined with his *latticino* to make the famous goose-

berry bead (ibid.). He may not have invented chevrons, but he was the first to make molded canes for mosaic or millefiori work. Though described as early as the late 15th century, the word *millefiori* (thousand flowers) was only introduced in 1827 (Hollister 1983:202).

Glassmaking and beadmaking everywhere was advanced by a Florentine priest with a love for chemistry, Ludivico Neri (1576-1614). Though he did not work in Venice, his book *L'arte vetraria*, published shortly before his death, became the standard textbook on glass for centuries. Not right away, however. It languished in obscurity, being reprinted only in 1661. The next year Christopher Merrett (Meritt; 1614-95) published an English translation that was an instant best seller. It was translated into Latin in 1668 and went through three printings and three editions. In 1679 Johann Kunckel, the director of the glassworks in Potsdam, added material and translated it into German, which went through four editions. It was reprinted in Venice in the original Italian in 1663 and 1678. Altogether, there were dozens of editions in a half dozen languages (including Spanish and French) down to 1826, with many books excepting from it, often giving no credit to Neri (Turner 1963; Mentasti 1980:lix-lxv).

A spectacular Venetian glass is aventurine, probably so-named because it was risky (*avventura*) to make. Tiny copper flakes suspended in glass make it shimmer like gold, giving it the synonym goldstone. It was invented by Vicenso Miotti (1644-1729) who was given exclusive rights to it in 1677. He passed it to his son, Daniel, in a "Book of Secrets" in 1669. Pietro and Giovanni Andrea Bertolini made an inferior version in 1731. By 1807, Lorenzo Bigaglia had made it and it was improved upon in 1859 by Giuseppe Zecchin, working for the heirs of his firm. Antonio Saviati made it soon thereafter. In the meantime, the Miotti family had closed shop in 1791 and a widow revealed the formula to Beneditto Barbaria in 1811 (Morazzoni 1953:36-7, 56-8; Zecchin 1971:78, 82). In addition to Venetians, other nationalities took out patents and it has been made in several countries, but for the last century, the Dalla Venezia family of Venice has been the principal supplier (Revi 1967:110-2).

FIG. 2. WOMAN MAKING LAMP-WOUND BEADS FROM NERI 1612: PL. IX.

Gold ruby (translucent red) glass is a favorite, rich color. The Venetian Giovanni Darduin (1595-1654) may have first used it (Mentasti 1980:lix), but the German Andreas Cassius (ca. 1640-73) first described a colloid suspension of gold in stannic (tin) acid to color glass ("Purple of Cassius") in *De Auro* in 1685. Kunckel developed it commercially as a thin coat (casing) and the Bohemians mastered it around 1715. Later improvements were by Venetians, especially Giuseppe Zecchin around 1859 (Weyl 1959:380-1).

The 19th century, especially the second and third quarters, saw many new and improved glasses, some to combat the rising Bohemian (Czech) beadmakers. Giobatti Franchini made a coral glass in 1826 and

a pink nacre (mother-of-pearl) in 1827. Giovanni Giacomuzzi was celebrated for his golden nacre in 1867; 5000 lbs. (2272 kg) adorned a Trevesto theater. He also created silver, red, green, blue and carnelian shades. Lorenzo Radi imitated agate, chalcedony and lapis lazuli (Morazzoni 1953:54-9; Gasparetto 1958:194).

Innovations in Beadmaking

Glass beadmaking begins with glass [see 1998-11(1)]. For drawn beads, the production of the tube follows (see top box, page 5). These operations requite several specialized skills: furnace making, preparing ingredients, making glass and drawing tubes. A division of labor was already at work. After the tubes were drawn, more steps were necessary, performed by different people, sometimes in main factories and sometimes at home.

There are several descriptions of these processes, but only two are by observers connected to the industry. The first is by Dominico (Dominique) Bussolin, the promoter of gas for lamp-winding (see above): *The Celebrated Glassworks of Venice and Murano...*(Karklins and Adams 1990). The other is by Abbot Vincenzo Zanetti (1824-83), a historian who wrote 30 books on Venetian glass and glassmakers and. founded the glass museum at Murano in 1861. I use his *Small Guide to Murano* of 1869 (pp. 44-52). Both writers list discrete steps in the beadmaking process, Bussolen six and Zanetti seven.

Molds were introduced in the 1860s by Lorenzo Graziati, J. Bassano and Giuseppe Zecchin for canes with hexagonal, channeled, lobed and other sections (Carroll 1917:20; Neuwirth1994:108-9).[1]

1. **Sorting tube diameters,** done by women (*cernitrici*; sorters) by hand.

2. **Cutting the tubes,** done by men (*tagliatori*) sitting on a chair holding a small bench (*zocco*) between the legs, with about 3" (7.5 cm) of blade mounted in it. Behind the blade is a regulator (*scontro*) against which the ends of the tubes are placed as they lay on the blade. The worker takes a handful of tubes, lays them on the blade and pushes them toward the *scontro*. With a blade of the same length in his other hand, he chops the ends of the tubes into segments.

In 1822, Captain Longo invented a machine to automate cutting by mounting the chopping blades onto a cylinder. Two men ran it. It was not precise enough and in Bussolin's day was not much used. Carlo Romiti improved it in 1867 and by Zanetti's day it was apparently common (Morazzoni 1953:53-4; Gasparetto 1958: 198, n. 48).

3. **Rounding the segments** by men called *tubanti* (see box, p. 5). Zanetti puts another step of eliminating broken beads before this step; Bussolin incorporates it into step 2. It is done by the *schizzadori*, who use a screen to separate broken pieces. Zanetti said the process was simple and executed with "half weariness."

4. **Separating beads by size** done by the *governadori*, who use a series of screens to sort the beads. Then a handful of beads are put on a flat plate that is inclined and gently shaken so rounded beads are separated from misshapen ones.

In 1867 Guiseppe Zecchin and Augusto Ceresa built a mechanical sorter consisting of sieves with progressively smaller holes mounted above each other and rocked back and forth (Gasparetto 1958:198).

[1] Carroll asserts the primacy of Graziati in 1860 and said that the tubes were subjected to "enough pressure to give them facets." Neuwirth pictures Austrian patents of molds by the other two, dated 1864 and 1867 respectively.

5. **Polishing the beads,** done by the *lustradore*. The beads are put into a sack and shaken very hard to remove dust and to buff them. Bussolin said two sacks were used, one with sand and the other with bran. Zanetti noted only one with fermented bran and noted that this was an "operation opportune for a machine."

Other finishes were also used; several were discussed in the Seed Bead Issue [1997 10(2)]. Isacco Bassano built an eight-horsepower machine in 1838 to give beads a high polish (Morazzani 1953:59). Matte finishing was first done with hydrofluoric acid, then the French developed a grinding process involving emery, sawdust or other materials; it was especially popular in America (Carroll 1917:11-2).

6. **Stringing the beads,** done by women called *infilatrici*. Neither Bussolin nor Zanetti describe this step, but Irene Ninni did in *L'Impiraressa* (1893), recently reprinted and translated (Ninni and Segatti 1991). In short, the beads are placed in a scoop that measures them and women hold a "fan" of 40 to 60 long (ca. 18 cm or 7") needles threaded with flax which they pass through the beads, picking them up and stringing them *en mass*.

Up to 20% of the beads was not properly perforated and the women rejected them, dubbing them with several names. In 1894, Cav. Salvatore Arbib invented the *tamburo*, a machine that picked up beads by their holes with wires, built by Meyer and Sons of Birmingham, England. In the same year, Arbib and Meyer made a machine that strung beads on wire to sell to French beadmakers for making beaded flowers (Carroll 1917: 11-2). Some beads were sold by bulk and not strung.

AN INDIAN CONNECTION?[2]

We don't know how far back these processes were used in Venice. However, they have an eerie similarity to the way beads are made today at Papanaidupet, India (e.g. Francis 1991). Indian crafts are very conservative and the archaeological evidence suggests that most of the steps used for beadmaking today were used over 2000 years ago.

The Venetians did not learn tube drawing from the Indians. Their methods are totally unlike (though the Danner Machine, invented in the US, works on the same principle as Indian tube drawing).

Indians sit on the ground to cut tubes on a flanged blade in the earth. Venetians prefer to sit on a chair and the *zocco* and *scontro* could be modifications. Rounding, sorting, polishing (the Indians use rice husk) and stringing (longer and fewer needles; the beads in a winnowing basket) are all very similar.

There are many recorded cases of independent inventions and perhaps these methods are as efficient as possible. On the other hand, when Venice was developing her seed bead industry India was far wealthier and more technologically advanced than Europe. Papanaidupet does not hide its work from curious outsiders and a European, an Italian, even a Venetian could have visited what was then a place notable for a large guest house for pilgrims visiting the important temple at nearby Tirupati. We may never know, but I believe this hypothesis deserves testing.

THE FORTUNES OF THE INDUSTRY

There are currently at least two scholars combing the archives of Venice. When they publish their findings, we may have more data about the size of the industry. In the meantime, I shall rely on that gathered for Francis 1988. It is spotty, but does reveal some trends. Only two figures are available for the 17th century. We are on slightly better grounds for the following centuries, but the data are hardly complete and not strictly comparable.

[2] Or, "There Goes Francis Again"

Table 1 compares the number of masters, furnaces and workers in the bead industry as reported for various years.

TABLE 1 COMPARATIVE SIZE OF VENETIAN GLASS BEAD INDUSTRY (SELECTED YEARS)

	Masters	Furnaces	Workers
1606	251, 14H		
1674	11H		
1736		30	
1744		19	
1754		46	
1755		52	
1761	108	30	
1752	200	15	
1764		22	
1766	100	26	
1790s			600-1000 L
1867		ca. 40	
1869		20	15000
1883			15000
1889			1000 TD
1890			6000
1898		22	
1900			ca. 9000
1917			ca. 3000
1955			500 L

Legend: H = head master; L = Lamp-workers; TD = Tube drawers
Sources: Carroll 1917:18; Gasparetto 1958:201-2; *Harper's* 1889:262; Morazzoni 1953:29-33,; Nesbitt 1879:652; Pasquato 1953:77; *Pottery Gazette* 1890; *Scientific American* 1883, 1900; Zanetti 1869:32.

Clearly, the growth of the industry did not follow a straight line. The decline between 1736 and 1744 and resurgence in the next decade, as well as the decline from 1867 to 1869 were recorded in the same two contemporary documents. The figure for furnaces for 1766 are for furnace owners.

Yet, the numbers are instructive. Furnaces ranged from 15 to 52, with a median of 29 and a median of 26. After the initial rush, the number of masters fluctuated around 100. The early figures do not account for the many *supialume* members.

The number of workers is harder to determine, and they weren't even counted for several centuries. These are probably the least accurate figures, but a decline between 1869 and 1917 is evident. 1900 and 1917 were calculated from the number of "men" and "families," respectively.

Historical events can explain some of the variations, especially steep drops. These include the 1718 Peace of Passarowitz, when Venice lost much of its empire, Napoleon's 1797 Peace of Campoformino, when she lost the rest, and the rise of Czech beads in the 1860s.

Another way to judge the size of the industry is by its output. Again, the following figures come from various sources. Where there are a range of years, the output is an annual average.

TABLE 2 PRODUCTION (EXPORT) OF VENETIAN GLASS BEADS IN QUINTALS (100 KG = 220 LBS.).

Years	Quintals
1764	10,400
1860-1905	23,500
1867	33,182
1868	36,621
1861-1871	33,182
1870	<20,000
1879-1883	25,000
1880	27,273
1885	<20,000
1890	<20,000
1938	7,680
1949	9,159
1954	7619

Sources: *Encyclopædia Britannica* 1873:460; Italian Institute for Foreign Trade n.d.:161; Kidd 1979:67-8; Morazzoni 1953:63; *Scientific American* 1883.

Again, historical events – the growth of Bohemian beadmaking in the 1860s, a drop in demand for beaded dresses (*Scientific American* 1883) and World War II – hurt the industry.

Table 3 confirms the effects of the Second World War and shows how trading patterns changed during the first half of the 20th century.

TABLE 3: EXPORT OF VENETIAN BEADS 1938-1954 IN HUNDREDS OF KILOGRAMS

Importer	1938	1949	1954	Rank '38	Rank '54
India	2821	829	413	1	5
Pakistan	with India	127	4		16
India/Pakistan Total	2821	956	417	1	5
South Africa	1186	2251	1648	2	2
Angola/Mozambique	1053	509	973	3	4
France	1005	550	253	4	7
Eritrea	638	39	12	5	15
British West Africa	301	1641	1137	6	3
Egypt	172	538	207	7	9
British East Africa	133	1277	312	8	6
Turkey	103	340	193	9	10
United States	93	197	1668	10	1
Somalia	52	6	1	11	17
United Kingdom	46	183	247	12	8
Libya	34	--	17	13	13
Belgium	25	32	135	14	12
Belgium Congo	11	548	155	15	11
Australia	6	83	122	16	13
Canada	1	9	122	17	13
TOTALS	7680	9159	7619		

SOURCE: ITALIAN INSTITUTE FOR FOREIGN TRADE N.D.: 161

The figures for 1839 and 1954 are remarkably close; the bulge in 1949 might represent pent-up post-war demand. However, the export patterns are quite different. India, by far the largest importer in 1938 saw more than an 85% drop by 1954, probably because of the rise of her (and Pakistan's) own beadmaking industries. Libya, Somalia and especially Eritrea dropped considerably as they were no longer Italian colonies. The USA became the biggest importer, growing 18 times in 16 years, while the U.K., Belgium, Australia the Congo and Canada all bought more beads, Canada 122 times more. South Africa and Portuguese South Africa (Angola and Mozambique) remained steady customers.

Despite a drop around 1866, the year the railroad reached Jablonec, the heart of Czech beadmaking, Venice recovered and the competition was actually good for her.

The mid to late 19th century saw new beadmaking firms, more inventions (see above) and new glasses. At least some of these improvements were due to Bohemian competitive pressure.

One leader in this renaissance was Antonio Salviati (1816-90), lawyer turned glass entrepreneur. Lorenzo Radi, his partner, also had his own company. The Giacomuzzis, especially Giovani, were famed for their glasses. Giovan Battista was honored for improved lamp-work. He and his father Jacobo were known for fine mosaic work, ca. 1845-65 (DeCarlo 1987:46). Jacobo died in an asylum in 1863, said to have been driven mad by the exactness of his craft (Carroll 1917:16)

Despite the revival, the next century proved to be hard. It was anticipated by the merger of 17 beadmakers in June 1898 into Società' Veneziana per la Industria della Conterie. Its name was twice altered, but it was always "the Conterie" for short. It dominated Venetian beads and was the only seed bead maker. Czech and Japanese competition forced its closure in 1992 (Karklins 1993b).

Early in the century hope abounded and the industry expanded internationally. Venetian beadmakers set up around Lyon, France to made beads for France and her colonies. During WWI, the Conterie offices were moved to Pisa and beads were shipped from Oporto, Portugal. A signifi-

cant acquisition in 1920 was a large German and Bohemian concern, A. Sachse & Co. (Pasquato 1953:78-90). Around the 1920s the Conterie bought tube-drawing machines from the Libby Glass Co. of Toledo, Ohio, improving their seed beads [see 1997-10(2):9].

However, the Great Depression, being on the losing side of WWII, the rising popularity of plastic beads, intense competition from other beadmakers and the attention newly independent African and Asian nations now directed toward problems of construction all took their toll. Venetian beads are not dead, but the Mother of Modern Beads is having an increasingly hard time making a living as a beadmaker.

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BEAD FRAUD ALERT

Oh! The Romance of Beads! For $25 you can buy 1300 beads (a 35 mm film canister full) from the bloody "Harvey Massacre" of 23 July 1839, when the Seminoles attacked a trading post, killing thirteen soldiers and three others.

How? From Stanford Prichard of Middlebury VT, in turn from John Durham, "one of Florida's most successful Treasure Hunters," who digs them up near Fort Myers at a place he calls "Fort Bead."

Are they genuine? A Curator of Anthropology sent those she had bought for a Bead Identification Certificate. *They are not.* Prichard's current cover letter says, "A Canadian expert (guess who? Hint: he's not really a Canadian)...believes they came from Czechoslovakia in the period 1920-30...." But then explains, "They appear to be identical to beads found on the supply ship Arabia on the St. Louis River in the mid-nineteenth century; Florida's state archaeologist was very impressed...." The literature on Durham and the "Harvey Massacre" are included.

From the Certificate: "An initial look suggested a date much later than 1839. Many of the seed beads are of bright colors, particularly opaque red, yellow and two orange shades. Importantly, the colors were quite consistent, dating the assemblage to after the 1860s.

"Closer examination revealed the presence of lustered beads and lined beads with square holes. Lustering is first mentioned only in 1856, but beads did not become common until ca. 1873. The square holed bead must have been made some time after 1886.

"Under an ultraviolet light, many of the beads fluoresced, indicating the use of modern colorants. Notably, the red was colored with selenium, not introduced into glass until 1891. The oranges are colored with uranium, which I believe was developed in the 1930s.

"**Conclusion:** If all the beads came from the same place and are of the same date, they cannot have been involved in any historical event in the year 1839. They are probably a century or so more recent."

This is not only another case of *caveat emptor.* It is one of several that have come to my attention lately offering "excavated" (i.e. looted) beads that are really fake antiquities. Another reason to "Just Say No" to offers of ancient or otherwise "excavated" beads.