

GLASS

ITS ORIGIN, HISTORY, CHRONOLOGY,
TECHNIC AND CLASSIFICATION
TO THE SIXTEENTH CENTURY

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PART XXI. VENETIAN AND OTHER LATE GLASS

VENETIAN GLASS

VENETIAN GLASS. The history of Venetian glass is entirely beyond the scope of this review, but it is being mentioned because two of its best types are frequently, even now, confounded with genuine antique glass. One of these types is the "star bead glass," the other is the trina or lace glass. The former is an offshoot of the antique mosaic glass, but with such modifications as to make it a new type. The other, the band or trina, is a perfected ancient glass, common in the time of Augustus.

Although the Venetian and the Murano glass have given rise to an extensive literature, little or nothing is known of their early industry. According to Carlo Marin (*Storia civile e politico del commercio*) the inhabitants of Aquileia and Padua fled from their respective cities in 420 A.D. at the approach of the Goths, and settled in the near-by lagoons, which in time came to be known as Venice and Murano. But as no glass from that period has been found which can be referred to Venice, it seems quite uncertain that any such glass industry existed there at such an early date. The earliest reference to Venice as a city possessed of innumerable sailing crafts, is found in Cassiodorus (468-560 A.D.), secretary to Theodoric the Goth, about 523 A.D. But no mention is made of glass, though it does not seem improbable that some was being made there at that time.

CHRONOLOGICAL REFERENCES

580 A.D. According to Cecchetti, glass mosaics for Santa Eufemia in Grado were probably made in Venice.

674. Venerable Bede recorded that the Abbot Benedict of Wernemouth ordered and had made by the Venetians a glass window for his church. This date is the earliest certain reference, and suggests that the Venetians also made glass mosaics for Italian churches, for instance those at Ravenna.

900. The monk Heraclius lived and wrote on glass at this time, but the earliest copy extant dates from 12th century.

1072. Venice imported "alume" for use in glass-making from Alexandria in Egypt.

1102. Venice acquired trading privileges in Sidon.

1123. Venice received trading privileges in Tyre.

1150. Theophilus, a monk and writer on glass, mentions Venetian glass.

1190. Peter Flavianus, mentioned as "philarius", or maker of glass vessels, in the time of the Doge Vitale Falieri.

1222. The Venetian fleet was stationed outside of the mouth of the river Belus, and it is suggested that the Venetians brought home the famous Belus sand.

1224. Mention is made that 24 *phiolari* (*friolari*) in Venice made "*fiolaria*" glass vessels. And about the same time were compiled "*mariezone*" or codices, governing the trade regulation of the glass-makers.

1268. The glass-workers of Venice and Murano incorporated and in their festive processions carried decanters and perfume bottles made of glass.

1277. Venetian glass is mentioned in a treaty between Bohemund IV, king of Jerusalem, and the Venetians, under the Doge Contarini.

1279. The glass-makers were permitted to make weights and measures of glass.

1289. The Council of Venice forbade the making of glass in any house not owned by the glass-maker.

1291. All glass furnaces were ordered extinguished in Venice and moved to Murano, which henceforth became the place of manufacture.

1295. Marco Polo, who had for forty years traveled in the Orient with his father and uncle, returned alone to Venice and encouraged the glass-makers to manufacture glass beads for trade with the Orient.

1317. Giovanni, the "*fioler*," invented great improvements in making colored glass. He possibly was also the inventor of "*star bead glass*."

1354. A special place is set aside in Vienna for the sale of Murano or Venetian glass.

1380. The discovery was made in Venice of the use of "*glaubersalt*" as "*flux*," or fusing element.

1440. The oldest datable glass vessel in Venice. A blue cup with enameled decorations.

1445. The glass-makers of Murano elect a chancellor to reside in Venice, there to represent their interests. Pure uncolored glass perfected between 1460 and 1463.

1468. Emperor Frederick III shows his contempt for glass objects by letting fall, and thereby breaking, a magnificent glass offered him during his visit to Venice.

1490. The Council of Ten superintends the glass industry of Murano.

1502. The "*Statuto*" of Murano, or code governing glass-makers.

1503. Andrea and Domenico de Anzolo del Gallo receive the privilege of manufacturing mirrors of glass—for twenty-five years—by a process until then unknown.

1528. Andrea Vidaore is appointed supervisor of the manufacture of enameled pearls of a type called "*supialume*" or flame-blown. Star bead glass in use.

1530. Christoforo Briani invents "*aventurine*" glass as well as colored glass for the imitation of precious stones.

1564. The "*spechiai*," or mirror manufacturers, form a trade syndicate.

1574. Henry III of France visits Murano and confers nobility on the principal glass-makers.

1604. February 11, Gerolamo Magagnati receives authorization to manufacture topaz and hyacinth-colored glass.

1666. The manufacture of colored glass for windows is at its height. Such glass is furnished for the Tomb of Abbas II.

1705. Laws are enacted against communicating technical secrets to those not native to Venice.

1717. Vincenzo Miotti, Danielo and sons receive the privilege of manufacturing "calcedony glass." Miotti re-establishes the manufacture of "aventurine" glass.

1736. Jacobus Busenello is given the privilege of manufacturing "Bohemian" glass in Venice.

1797. Murano sends workmen to France.

1806. The privileges as well as the corporations relative to glass are abolished in favor of the French industry, with the result that in 1836 the fifty establishments for the making of glass in Murano had dwindled to twelve.

At the close of the 15th century the Venetian glass industry suddenly leaped into a magnitude previously impossible, because of the wholesale export of beads to the Indians of America. Small quantities of star beads have been found in necklaces combined with native beads in Peruvian tombs; these varieties have never been equaled.

In the first half of the 19th century millefiori glass was perfected by the Salviati, but antique glass does not seem to have been imitated until the beginning of the 20th century.

The Venetians surpassed the ancients in technical processes of almost every kind. But their lack of color appreciation rendered their glass gaudy and vulgar, often extravagant, sometimes absurd. They never attempted the manufacture of stratified glass, and their mosaic glass lacks beauty. The purity of their ingredients, and the perfection of their technic overshadows somewhat the harmony and beauty found in antique glass; and in one type of glass they greatly surpassed the ancients even in beauty and attractiveness. That type is variously referred to as band, filigran and lace glass, but in this book as trina glass. In this type of glass the decoration consists of opaque bands and spiral threads in a transparent matrix. It was soon, however, brought to such a degree of decorative absurdity that it became contemptible, especially in the factories in parts of Europe outside of Venice.

STAR BEAD GLASS

The name "star bead glass" has been suggested by the author for a series of glass vessels and glass beads in which sections of star bead are embedded in a transparent matrix. The star beads derive their name from the units in their composition seen at their ends or on their sides, which for that reason have been ground down. The decoration lies thus in the matrix, and is only brought out when, through cutting, grinding or polishing, the interior is laid bare. This decoration is made up of plates placed at an angle towards each other in a ring. When cut off crosswise the ring has the appearance of a star. Sometimes plain and star rings alternate. The prevailing colors in old Venetian star beads are red and white star rings in blue,

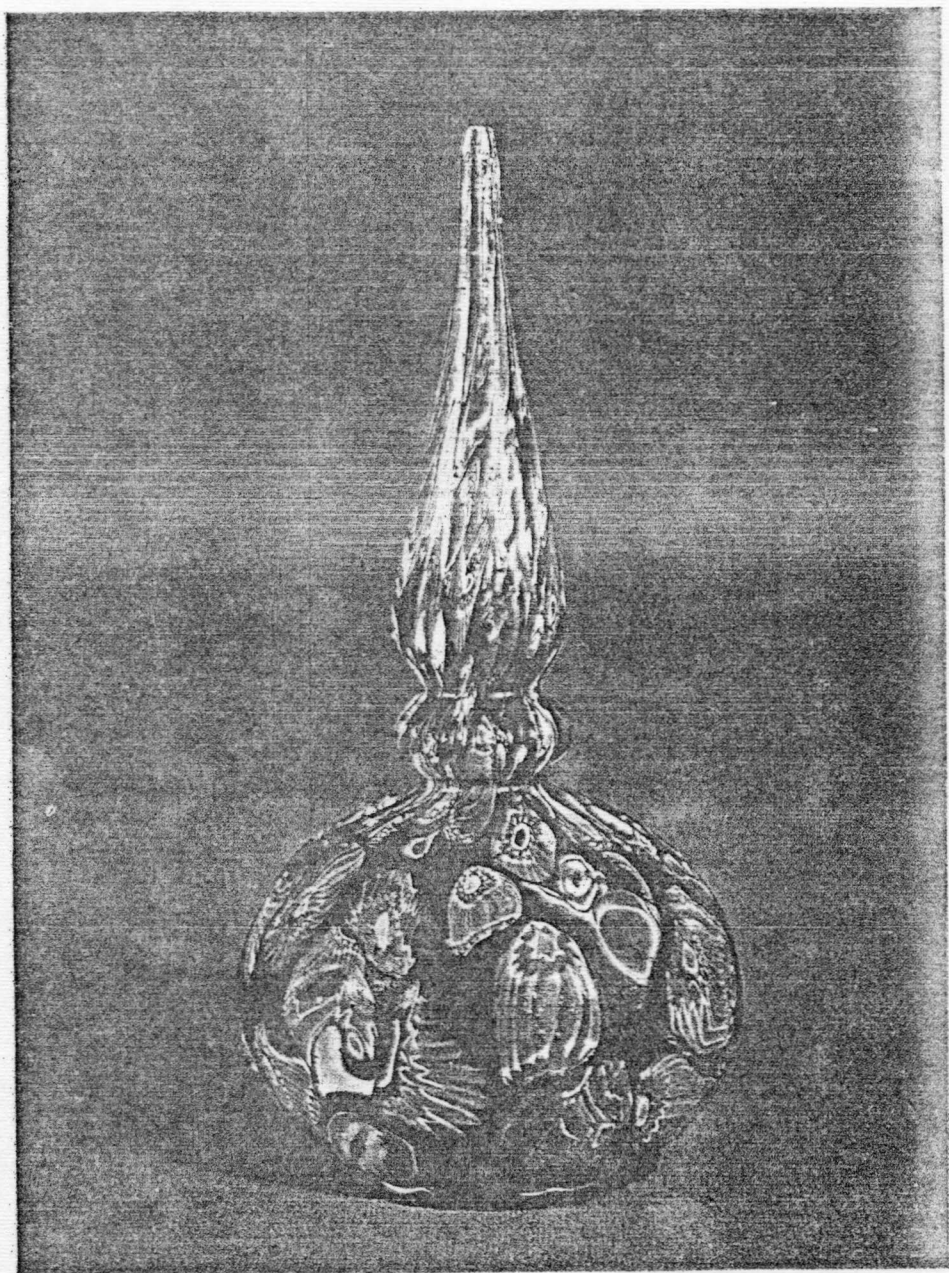


PLATE X. STAR BEAD GLASS VASE. VENETIAN. 15TH TO 16TH CENTURY A.D.
MRS. W. H. MOORE COLLECTION. FOUND IN SYRIA. SEE PAGE 733.

green or brown matrix. Among the star bead glass we must of a necessity distinguish between the old star bead glass of the 13th to 16th centuries, and the modern types of the 20th century. The former are artistic and valuable in any collection, while the modern composition is vulgar both in form and color and unworthy of consideration.

OLD STAR BEAD PATTERNS. The center is occupied by a large circular core, mostly brick-red, but also green, gray, violet, blackish and blue, surrounded by an opaque white narrow ring. Outside the ring is a black or green field, bordered by a wide red circular area. This again is bordered by a wide red field, in which are set the star points, plates of opaque white. The sides of the plate can appear on the sides of the beads as parallel bands. The oldest colors are soft and beautiful.

OLD STAR BEAD GLASS. Old star beads come to us from Syrian, Egyptian, Italian and Peruvian tombs, and in one instance a hoard of old beads of this type was found scattered over a small area of some few yards in diameter in northern Italy. This find gave the clue to the date of the beads, for this supply could only have been a peddler's stock in trade, thus dating the beads to some part of the 15th or 16th century. Entire vessels in which sections of such beads enter are however very rare, the author having had access to only three specimens. One of the best known specimens is a pitcher figured by Dillon, another is in Vienna, a third in Rome, and a fourth in New York. The date of these vessels can be assigned to the first half of the 16th century. Star beads as units were, however, made before, probably in the 13th to 14th century.

THE MODERN STAR BEAD GLASS. The older types of star bead and star bead glass were apparently discontinued after the 16th century, but the art was revived in the early 20th century and the Venetians are now flooding the market with small bottles, pitchers and jars in modernized types. In the old 16th century types the pattern was scattered irregularly in a finely tinted, translucent matrix. In the modern creations, presumably mostly from Venice, but probably also from Germany, the star bead sections are arranged in regular rows and continued bands. In these patterns the older beautiful translucent matrix has been replaced by a harsh, opaque white, and the older colors of the stars have been replaced by opaque pink, yellow, blue and red, without regard to harmony. The result is regrettable, to be paralleled by the colors and the designs of modern rugs as compared with those of the old oriental rugs, contemporary with the old star bead glass.

CHRONOLOGY OF THE STAR BEAD GLASS. One of the earliest to describe and figure a star bead was John Yonge Akerman (*Archæologia*, Vol. 34, London, 1852). He considered them to be Saxon. Nieuwenhuis (*International Archive für Ethnologie*, XVI, Pl. 19, p. 130) describes them as Egyptian. Brent (*Archæologia*, Vol. 45, p. 295, London, 1880) was the first to introduce the name "chevron" beads. The only investigator who has dated the beads correctly to the 14th century A.D. is Luigi Bailo (*Atti d. real Instituto Veneto delle Scienze*, LXII, Pl. 2, 1903). Our public museums have been slow to benefit by Bailo's work and still date such beads and such glass to the Romans and Egyptians, basing their reference upon Kisa (*Das*

Glas, p. 142, F. 31) who incorrectly considered a large star bead in the Bissing Collection as antique.

STAR BEAD FLASK OF THE SIXTEENTH CENTURY

Height 8"; diameter 3.5". Mrs. W. H. Moore Collection. 15th century A.D.—Color Plate X.

The form connects with the drop bottles of the Arabs of a century previous. The surface is somewhat fluted with ridges extending over the shoulders. The matrix is fine deep blue in transmitted light but nearly blackish in reflected light. The decorations consist of numerous star bead sections or flattened star beads, irregularly scattered. Some are sectioned lengthwise, others transversely. Their colors are cobalt-blue, grass-green, blue-green, violet, opaque white and brick red, similar to some beads found in Peruvian tombs but originally brought in with the Spaniards. The modern colors of pink and yellow are not found in this splendid old type.

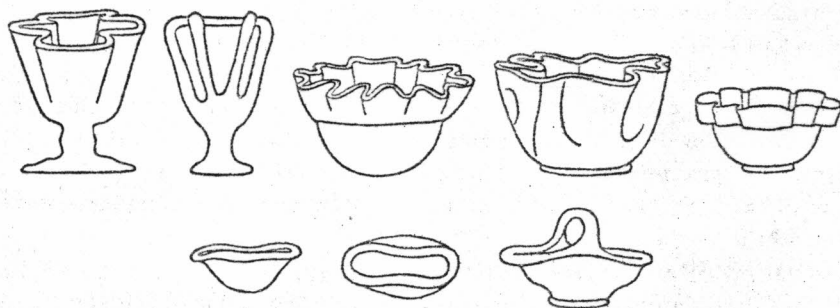


Fig. 283. Folded glasses of uncertain date.—Brooklyn Museum, *a*, *b*—after Kisa, 320, *c*—Metropolitan Museum, *d*—after Kisa, 425, *e*, 1st century A.D. to 17th A.D.; II, Kisa, 432, 433, *a*, *b*.—Syrian, *c*—Kisa dates them to 3d century A.D.—See page 736.

VENETIAN IMITATIONS OF ANTIQUE GLASS. It is incorrectly believed that the Venetians have been manufacturing imitations of antique glass for centuries with the purpose of deceiving. If this were true we should expect to find such specimens in old collections. On the contrary, they are here conspicuously missing. That the Venetians imitated antique glass patterns since the 15th century, is however, reasonably certain, for we may gather this from the assertions of the Venetians themselves or from writers on the subject of glass-making, who claim that the Venetian workers invented mosaic glass in the 15th century. This is but partially correct, because we have the evidence of mosaic beads, poorly made it is true, from antique tombs of all centuries since the early Roman empire. Hampel has figured such beads from Hungarian tombs, from early medieval to the 13th century, and as some of these beads seem to have come from Venice, we may conclude that the Venetians continued to practice the art of making mosaic beads and mosaic glass from the day they first engaged in the art of glass-blowing. None of the early Venetian glass was intended to be sold as antique, though antique glass may have fur-

PART XXII. GENERAL CHRONOLOGY OF THE ORIGIN AND PROGRESS OF GLASS MAKING

3000 B.C. Dull glaze in general use applied to pottery and stone figures, vessels and beads.

2500 B.C. Glass objects found in the Euphrates region of Syria believed by some to be contemporary with other objects of this date.

2000 B.C. Glazed as well as glass tube beads found in Egypt dated by Winlock to the XIth dynasty. Now in Metropolitan Museum.

1800 B.C. Earliest pad-glass amulets dated to XIIth dynasty of Egypt.

1500 B.C. XVIIIth dynasty core-wound ritual and toilet glass, craters, beakers, crater-amphorisks, columnar balsam tubes, small ampulla flasks. Glass beads numerous. Earliest stratified eyebead spots. Glass inlay in glass, pottery and metal. Dragged patterns of perfect technic. Fine but dull colors. All glass is opaque, with air bubbles. Lotus beads with narrow bore.

1400-1300 B.C. Glaze of intense blue color a favorite. Coffins said to have been made of glass in Egypt.

1200 B.C. Earliest perfectly formed glass beads from Italian tombs, probably imported from Syria. Beginning of a great degeneration of the art sets in.

800-700 B.C. Core-wound amphora with and without small handles, pitchers, alabastrons with dragged patterns or plain. Syria and Egypt, Italian tombs. Earliest transparent pure uncolored glass, Italian tombs. The Sargon pad-glass vase, from Nineveh (about 714). Pad-glass finished by grinding. Cylinder beads with dragged patterns.

700-600 B.C. Fibulae safety pins covered with glass. Beads with wave decorations common. Lotus and Melon beads with large bore. Dull blue, white and yellow favorites.

600-500 B.C. Glass beads large, brilliant colors. Dull yellow a favorite for beads. Eyespots common. Masks, caput masks, cuff-beads, pan, sheep heads, made by free hand.

500-400 B.C. Tubular beads with narrowed ends, large size. Italy and Africa. Beads and vessels degenerate. Pad-glass drinking cups are rare, first seen by the Athenian ambassadors in Persia, 444 B.C. Coffins said to have been made of glass.

400-300 B.C. Weights made of glass in Egypt, 380 B.C. (Petrie).

300-200 B.C. Ptolemaic period. Glass renaissance in Egypt. Core-wound amphora with large handles. Tube-glass.

200-100. Tube-blown glass. Stratified glass. Pad-glass cups. Earliest gold-glass (Meroe). Gold-glass layers in stratified glass.

100 B.C. to 1 A.D. Tube-blown stratified glass perfected. Gold-glass common for beads. Mosaic columnar and lamellated glass invented. During the second half of the century Sidonian bubble-blown glass in a mould. Intaglio and relief glass.

Cameo tube-glass. Opus interrasile technic, open work. The technic of diminishing a mosaic rod invented. Eye spots of rod sections invented. Moulded glass to imitate crystals and precious stones. Earliest painted enamel on glass. Ivory paste-glass of Sidonians. Ennion, Eirinaos, Meges, Nikais, etc., sign their names to their vases. Murrina is imitated. Checkerboard pattern. Alexandrian miniature designs in mosaic glass. Cinerary urns of glass invented. Superb Sidonian emerald-colored glass.

1 A.D.-100 A.D. Sidonian glass degenerates. Earliest Caput flasks in time of Claudius. Bubble-blown glass of large size; household vessels in time of Pliny, in Pompeii, Tripoli, Sardinia, Tunis, Carthage, Spain. Pompeian moulded beakers. Glass making in Italy, Gaul, Rhine valley. Ritual oil flasks, vial form. Moulded circus and victory beakers in Italy, Cyprus, Syria. The rim is nearly always simple, without collar and fold. Paper-thin glass at the end of the century. At first round handles, later flat handles. Prismatic flasks with four sides.

100 A.D.-200 A.D. Uncolored transparent bubble-blown glass perfected. Greek forms imitated, and modified. Sprinklers with diaphragm. Angularly bent handles, with prolonged tail, pinched decorations. Body with fins and scales. Applied decorations. Serpent threads, at the end of century. Mercury flasks.

200-300 A.D. Sprinklers with diaphragm. Pear-shaped flasks with low, narrow stem and cylinder neck. Applied shields, fishes, shells, insects. Out decorations, honeycomb pattern, ovals with parallel bars. Grape glasses, moulded patterns. Moulded deities, Pan, Tyche, monkey, fruits. Waveband with borders. Palace walls covered with sheets of glass. Frontinus vessels. At the end of century engraved glass. Painted glass. Diatreta glass. Drinking horns. Threads with approaching nodes and vales. Earth colors painted on glass glazed with balsam.

300-400 A.D. Constantinean period. Degeneration of the glass matrix and forms. Brown glass and dull green glass. At end of century black brown and violet glass. Christian, Jewish, Sassanian reliefs by means of stamps. Concaved designs mixed with reliefs. Amulet disks, amuletic designs of vessels. Gold-glass, graffiti and painted. Engraved glass with scenes. Reliquaries of altar form. Dragged patterns revived, red and white the favorites. Glass workers acquire the same privileges as other artists. Amulet vials and vases in necklaces. Mystic vases. Bizarre and extravagant handles.

400-700 A.D. Great degeneration of glass vessels, but a brilliant technic in glass beads, especially those of Lombard, Merovingian and British tombs. Dragged patterns of red and white predominate. Blue is poor and scarce. Superb glass mosaics and inlay, a new art of the highest importance.

700-900 A.D. Arabic glass. Perfected enameled glass in Rakka and, later, in Damascus, Syria, superior to the later enameled glass.

900-1500 A.D. Arabic and Venetian glass. Bohemian and other German and French glass. Glass made in Tyre by Jewish workers (12th century A.D.). Glazed tiles perfected (1200) but rapidly degenerates (1400). Pure uncolored glass with a ring is regarded as more desirable than artistic forms. Enameled glass at first naturalistic, in time becomes heraldic. Star bead decoration about 1500 A.D.