

## ANCIENT ROMAN GLASS

West  
Room

The University Museum is fortunate in possessing a very good collection of ancient Roman glass. The term "Roman" is here used vaguely to cover glass made in the Mediterranean during the period of Roman ascendancy. Not all the glass included in the collection was made by Romans. Some of it goes back at least to the fifth century B. C., and very little of it was found in Italy. But the epithet "Roman" is conventional and is less general than "ancient" alone.

The ancients employed glass for many purposes, notably for jewelry. Glass beads, especially of the "eye" variety (case VII, No. 22) were in high favor, and pendants in the form of seals (case XIV, No. 65), imitations of scarabs and intaglios (case XIII, No. 16) and also bracelets of glass (case XV, No. 141) are found frequently. Bracelets of glass are worn by peasants in Egypt even today. But the use of glass for personal adornment is only one of many uses. Of glass were made containers of toilet preparations, also tableware and ornamental vases. In this latter capacity glass was sometimes manipulated so as to look like precious stone—*e. g.*, the Portland vase in the British Museum. Sometimes, too, it was used to make toy vases (case XIV, No. 54). Glass was popular for many reasons. It could, on the one hand, be made to sell very cheap, and the low cost probably accounts for our finding in tombs such quantities of small glass objects. It could, on the other hand, by complication of process, be made so as to vie in value with gold. Individual specimens of one variety of Roman glass, *Vasa Murrina*, were known to fetch at sale the equivalent of \$1,000. Indeed, the story goes that Petronius, the *arbiter elegantiarum* of Nero's day, the hero of Sienkiewicz' novel *Quo Vadis*, paid a sum equal to \$10,000 for a vase of glass which he afterward deliberately shattered in order to prevent its passing into the possession of the covetous emperor. Pliny, who tells this story, adds the interesting statement that Nero had the fragments gathered up and preserved—an indication that the Romans, as well as modern collectors, frequently had to be satisfied with broken bits of valuable glass.

To us Roman glass has a charm unknown to its makers, added fortuitously to the vases in the lapse of ages by the chemical action

of the earth in which it has lain buried. That charm is its iridescence. Not all ancient glass shows this characteristic, the color of which the Venetians and modern glass makers, notably Tiffany, have sought to imitate. Specimens that have been found in Egypt (case XIV, No. 22, or in the cases in the Egyptian Section) will be seen to be transparent, artificially colored—amber, pale blue, or green—and, except for a slight local discoloration or cloudiness, are practically as they were when first in use. This perfection of preservation is due to the exceptional dryness of the sands of Egypt, which preserve intact all things buried in them, except the most perishable. On the other hand, such specimens of Roman glass as have been recovered from Palestine after being buried in a damp soil, have often been covered with a brittle coat, *e. g.*, No. 94 in case XII, which flakes off, revealing below a surface of brilliant iridescence. This phenomenon is due to decomposition of the glass, induced by chemical agents in the earth. The Romans could never have seen glass glorified by these shifting, fiery colors. The colors are modified in brilliance by the intensity of the light to which the glass is exposed. Iridescence shows on transparent glass of all colors, and varies in degree from a creamy white (case XI, No. 99) or a pearly pink (case XIV, No. 56) or pale opal tones (case XIII, No. 19) to a fiery (case XII, No. 75) or peacock iridescence (case XII, No. 69, or XI, No. 73). Particularly beautiful are those glasses which have a lavender (case XI, No. 92, or XII, No. 78) or mulberry (case XIII, No. 13) or amber basis (case XII, No. 87).

The first experiments in glass making were due to the efforts not of the Phœnicians, as Pliny says, but of the Egyptians. As early as the fourth millennium B. C., the Egyptians were using a vitreous glaze on beads and other objects, but no glass worked by itself, without a base of pottery or stone can be dated earlier than 1600 B. C. Later the early glass was molded. The industry later was expanded beyond the borders of Egypt. Sidon in Phœnicia had world renowned factories, and the industry spread through Syria and Judea. We shall have occasion later to speak of Jewish glass, a peculiar local fabric of the fourth century A. D. But the perfection of the art of glass making was attained by the Romans, who, in the second or first century B. C., invented the blowing tube, which revolutionized the industry. After that invention shapes are more delicate in construction and not only are the vases blown, but sometimes they are blown in a mold, and so have the additional charm of formal pattern decoration.

Development in technique is, however, the sole contribution of the Romans to the industry. The racial lack of creative artistic sense was a great handicap to the production of beautiful forms. On the whole, the shapes found in Roman glass are not pleasing, especially when the vases have handles. In almost every instance handles are heavy (case XIV, No. 6) and awkward, joined to the vase in a crude fashion that bespeaks no architectonic sense. By the addition of handles many otherwise beautiful shapes are marred (case XIII, No. 6). On the other hand, real beauty of line and proportion may be found in some bowls and goblets without plastic additions, except superimposed threads (case XIII, No. 13 or No. 48), and in many long necked flasks (case XII, No. 87).

Most of the glass in the Mediterranean Section has come from tombs in Palestine; a few pieces are from Egypt; and many fragments come from Italy. The shapes are such as would be suitable for depositing with the dead—toilet jars and flasks, beads, bracelets, pendants, cups and goblets set out with food for the satisfaction of the dead. Perhaps the commonest shape is a slender tubular flask, generally double, sometimes single or even quadruple, with or without carrying handles, and ordinarily ornamented with threads wound round and round the body. These are sometimes erroneously called "tear bottles," from the fanciful idea that they were used to catch and store the tears of the mourners for the deceased. They are generally termed *balsamaria*, and were used to hold perfumes and fragrant oils. They seem to date generally from the fourth century of the Christian era.

It is difficult to set the glass within the limits of a definite chronology. Some of the pieces are obviously early, because they are primitive in technique. Some are late, and are datable by certain peculiarities. But the bulk of the vases cannot be assigned to any definite period.

In making glass vases three methods were successively followed: modeling over a core, molding and blowing. The oldest specimens are the so-called "primitives." These were made by modeling the glass on a core, which afterward was carefully removed. The desired shape was decorated with threads of glass of various colors, laid over the vase while it was still hot, and then the whole was rolled on a stone until the threads were pressed into the wall of the glass and all made smooth. Before the vase was rolled, the threads could be dragged with a comb-like instrument, so as to make wave patterns. A number of specimens of this archaic technique will be found in

West case XVI, Nos. 142-145, and two more in case XIV, No. 38. Vases  
Room of this sort seem first to have been made in Egypt.

Of molded glass the Museum possesses several varieties.

(1) Sidonian jugs. These are a product of Phoenicia, beginning in the Hellenistic Age. They were made variously of opaque or transparent glass and are quite small. Frequently they are hexagonal in body, each face constituting a panel, and being covered with some outstanding design of fruits, birds, flowers, wine jars and other Dionysiac symbols (case XIII, No. 10).

(2) Jewish glass. This was made in Palestine in the fourth century A. D. It takes most commonly the form of a jug with a neck almost as long as the height of the body, and a broad spreading lip. The body is hexagonal, and decorated with such mystic symbols as palm branches, the "temple door," etc. (case XI, No. 82).

(3) So-called Medusa flasks, with or without handles, having a body in the form of double or Janiform human head (case XIII, No. 8).

(4) Fruitiform bottles, shaped and colored like dates (case XV, No. 134) or clusters of grapes (case XVI, No. 146).

(5) Conventional shapes, of which perhaps the handsomest is the violet colored hexagonal bottle (case XII, No. 78).

When the blowing tube came into use, the mold was not wholly abandoned, but its use was modified. Originally the mold was in two pieces. The glass set in each half was taken out while it was still warm, and its edges were fastened together. Sometimes the joint is still visible (case XIII, No. 32). But later the blowing tube was used to force the glass into a complete mold, which was later removed in sections (case XIII, No. 41). Plastic effects were sometimes obtained without the use of a mold by pinching the warm glass so as to give a spiked appearance (case XII, No. 95), or by holding a wooden tool against the sides of the bubble to make grooves in them (case XIII, No. 2, or XVI, No. 147).

Mosaic glass, which was very precious to the Romans, is represented in the Museum Collection only by fragments, almost all of which seem to have been collected in Italy. For the most part they are displayed in case IX, but one remarkable piece is in case XII, No. 90. This is the finest piece of mosaic glass in the Museum, and is fully described in the *Museum Journal*, IV, 1913, pp. 137-8, and Fig. 124. Vases of this technique are elaborate in construction. Threads of glass of many colors are combined in many ways so that cross-sections of the threads will produce a variety of patterns,



AN ATTIC GRAVE STELE  
IV CENTURY B. C.

which could be further modified by the angle of the cutting or by dragging, or, again, the fused threads could be cut in longitudinal sections. In any event, the sections, whether horizontal or longitudinal, were placed in a mold in such a way as to form a desired pattern, and they were joined together by heat (case IX, No. 103) or by a bubble of colorless glass blown inside the mold and over the thread sections (case IX, No. 100). A third way of fusing the sections would be by heating a mass of superimposed threads and blowing the whole into a desired shape. Thus were made the onyx vases (case IX, No. 101; case XII, No. 96).

Many of the blown vases are remarkable for lines of grace and for beauty of color, apart from the iridescence (case XIV, No. 5). Some of them combine two colors, a pale tone in the body and a darker one on handles and rim (case XVI, No. 173; case XV, No. 140). Many blown vases are decorated with threads of glass applied plastically, a form of decoration inspired by a desire to imitate the cords about the neck of a flask to fasten the sealing. When this sort of decoration is confined to long necked flasks (case XIII, No. 7) it is quite effective, but it is not always so successful (case XIII, No. 55).