

## A Passion for the Past

Dick Brockway ('57) always wanted to be an archaeologist, but when he came to Willamette in the early 1950s, he pursued a degree in science instead.

Dick had always been good at math and science and had been convinced by his high school teachers that the country needed good engineers. Willamette didn't offer an engineering degree, so after 3 years in Oregon and a B.A. degree from Willamette, he transferred to Stanford University in California, where he earned his B.S. and M.S. degrees in electrical engineering.

Still, the lure of history and archaeology never left him, and in the early 1960s, he and his friend and college classmate Jim Mercer ('57) spent 6 months traveling around Europe, where they visited every museum and cathedral they could find. When their money ran out, Dick returned to California to work as an engineer for GTE.

During the 1960s and 70s, Dick's work as an engineer took him to Europe, the Middle East, and Asia. He served as a project engineer for GTE in Italy, Iran, Japan, Alaska, and England, where he was able to fuel his growing passion for ancient art. In addition, he earned a certificate from the Harvard Business School in management to add to his already impressive list of academic credentials.

It was while he was on assignment overseas that he began to assemble his marvelous collection of antiquities, which includes ceramics, sculpture, mosaics, coins, glass, and lamps from Egypt, Greece, Rome, India, China, and Japan. His ancient glass collection, in particular, is one of the finest private collections of its kind in the country.

In the early 1990s, after nearly 30 years with GTE, Dick negotiated an early retirement so that he could devote his time to ancient art. He moved from Massachusetts to Florida and started an antiquities business, *Ancient Art International*, which he operates from an office in his home. In the late 1990s he returned to Willamette and toured the Hallie Ford Museum of Art, where he was deeply impressed with its collections, exhibitions, and facility.

In 2000, Dick made his first gift of artwork to the Hallie Ford Museum of Art, a number of pieces of South Italian pottery. Over the next few years, he donated two Gnathian skyphoi to the permanent collection and in 2006, a Roman glass pitcher dated to the 1st to 3rd century CE. These pieces have added immeasurably to our small, but growing collection of ancient art.

Although Dick Brockway never became an archaeologist, he has spent nearly 45 years pursuing his passion for history and archaeology, and through his ongoing gifts to the Hallie Ford Museum of Art, will clearly inspire future generations of students to pursue their passion for the past.



### Large, Single-handled Pitcher

Roman, 1st–3rd Century CE, glass, free-blown (mouth and neck), pattern blown (body), applied neck coil and handle, collection of the Hallie Ford Museum of Art, Willamette University, Salem, Oregon, gift of Richard Brockway

A pitcher is a vessel or container with a handle and a spout for pouring. In Roman times, pitchers were used for pouring liquids, such as water or wine, while smaller pitchers might be used for pouring perfumes or cosmetic oils.

## Some Glassmaking Terms and Techniques

### Applied dots

A decorative technique made by applying chips of colored glass to the surface of a vessel.

### Blowpipe

A hollow tube usually made of metal and used to blow glass.

### Coils

A thick thread of glass applied to a vessel as a handle, a base, or as a decoration.

### Core-formed glass

A vessel made by trailing molten glass around a core of clay, mud, sand, or organic material made in the shape of the desired vessel.

### Faience

A glazed, non-clay ceramic substance used for amulets, jewelry, and small sculptures in ancient Egypt.

### Free-blown glass

A vessel made by blowing air through a blowpipe into the center of a gob.

### Furnace

The closed, horizontal heating chamber into which the glassblower enters the blowpipe and heats the glass.

### Glass

A material made by melting together sand, soda, and lime at temperatures of at least 1150 degrees Fahrenheit to transform the raw material into a molten state.

### Gob

A mass of molten glass picked up on the end of a blowpipe.

### Mandrel

A solid iron rod with a rounded or pointed tip used to support molten glass as it is formed into a bead.

### Marver

A smooth, flat surface, on which the glassworker rolls the glass to shape, decorate and cool it.

### Mold-blown glass

A vessel formed by being blown into a shape or mold, not free-formed.

### Mold-cast glass

A vessel or object made by pouring molten glass into a mold.

### Pattern-blown glass

A vessel formed by being blown into a mold that imparts only a surface pattern.

### Pincers

A glassworker's tool used for decorating objects by pinching the glass while it is still hot.

### Pontil rod

A solid iron rod used to hold the molten glass while it is shaped and decorated.

### Rod-formed glass

An object fashioned on the end of a mandrel.

### Trails

A strand of glass applied to the surface of a vessel as a rim, handle, or base, and often as surface decoration.



## Ancient Glass

SELECTIONS FROM THE RICHARD BROCKWAY COLLECTION

*Ancient Glass: Selections from the Richard Brockway Collection* was presented at the Hallie Ford Museum of Art at Willamette University in Salem, Oregon from March 10—May 20, 2007.

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# Ancient Glass

BY JOHN OLBRANTZ

*There is a story that once a ship belonging to traders in natural soda put in here (at the mouth of the Belus River, which flows from Mt. Carmel to the Mediterranean Sea near the ancient border between Phoenicia and Judea) and that they scattered along the shore to prepare a meal. Since, however, no stones suitable for supporting their cauldrons were forthcoming, they rested them on lumps of soda from their cargo. When these became heated and were completely mingled with the sand on the beach a strange translucent liquid flowed forth in streams; and this, it is said, was the origin of glass.*

—Pliny the Elder, *Natural History*, XXXVI, Chapter 65

Natural glass has existed since the beginning of time, formed when certain types of rocks melt as a result of volcanic eruptions, lightning strikes, or the impact of meteorites, and subsequently cool and solidify. Early man is believed to have used cutting tools made of obsidian (a natural glass) to make various primitive tools and weapons. According to the Roman historian Pliny the Elder (23–79 CE), Phoenician merchants were thought to have discovered glass on the Levantine Coast.

Little is known about man's first efforts to make glass, although it is widely believed that glassmaking was discovered in Mesopotamia. By the third millennium BCE, the basic raw materials of glass were being used to produce glazes on ceramic pots and vessels, and by 2,500 BCE, solid glass beads and amulets were being made. The oldest fragments of hollow glass vessels, however, appeared in the 16th and 15th centuries BCE in Egypt and Mesopotamia.

At the beginning of the 18th Dynasty (c. 1539–1292 BCE), Egyptian glassmakers are thought to have developed a method for producing hollow glass vessels by making a core mold of compacted clay and dung and winding molten glass around it. While still soft, the glass-covered mold could be rolled on a slab of stone in order to smooth and decorate it. Next, the glassmaker



**Ushabti**  
Egyptian, New Kingdom, 18th Dynasty, c. 1539–1292 BCE, faience, mold-cast

An ushabti is a small mummy-shaped figure placed in tombs to do the work of the deceased in the afterlife. When translated, the name means "to answer." A complete collection of ushabtis would consist of 401: one for each day of the year, plus 36 foremen.



## Head

Phoenician, 6th–5th Century BCE, glass, rod-formed

Phoenician bead-shaped pendants were made in a variety of shapes: male heads, female heads, demonic masks, ram's heads, birds, and grapes. These types of pendants were probably made to ward off evil, although their exact meaning is unclear.



## Alabastron

Greek, Hellenistic Period, 4th–1st Century BCE, glass, core-formed, applied rim and handles

An alabastron is a small vessel or flask with a cylindrical body, narrow neck, flattened rim, and two small handles and used to hold perfume or cosmetic oil.



## Iridescent Candlestick Unguentarium

Roman, 1st–3rd Century CE, glass, free-blown

Unguentariums are small, general-purpose bottles, most often without handles. The Romans used them for perfumes, oils, medicines, pigments, and other personal cosmetics.



## Light Blue Cinerary Urn

Roman, 1st–3rd Century CE, glass, free-blown

A cinerary urn is a lidded burial jar used to hold cremated ashes. The body of these vessels is usually bulbous and they often have a single or M-shaped handle.



## Olive-Green Beaker

Roman, 4th–5th Century CE, glass, free-blown, applied dots

Beakers are open-shaped vessels that are taller than they are wide. They were usually, but not always, used as a drinking vessel. While blue dots were a popular form of surface decoration in the East and the West in the 4th and 5th centuries CE, vessels with dots in other colors appear to have been made only in Gaul and Germany.



## Large Iridescent Bowl

Roman, 1st–3rd Century CE, glass, free-blown

Bowls are open-shaped vessels that are wider than they are tall. In Roman times, they were used for serving food and occasionally, for drinking.

## Jar with Zigzag at Rim

Roman, 4th–5th Century CE, glass, free-blown, applied trails

Jars are typically vessels with a wide rim but without a neck, although in the Eastern Mediterranean, they can have a funnel neck that is actually a flaring mouth. The body is usually bulbous, they can have functional or decorative handles, and they often have a zigzag decoration at the rim. Jars were probably used for serving solid foods.



## Large Janus-headed Sprinkler Flask

Roman, 3rd–4th Century CE, glass, free-blown (mouth and neck), mold-blown (body)

A sprinkler is any vessel with an internal diaphragm at the base of the neck. Two-headed (Janus-headed) sprinklers were a popular throughout the Roman period, although their purpose is not completely understood. Janus was the Roman god of gates, doorways, and passages, depicted with two faces in opposite directions.



There is little evidence of further evolution until the 9th century BCE, when glassmaking revived in Egypt and the Near East. Over the next millennium, glass production centered in Alexandria in Egypt and near Sidon on the Levantine Coast, from where it is thought to have eventually spread to Italy. During this period of experimentation and innovation, glassmakers perfected and/or explored a number of different techniques, including core forming, rod forming, and mold casting. Clay tablets unearthed from the extensive library of the Assyrian king Ashurbanipal (685–627 BCE) include the first written instructions on how to make glass and how to construct a glass furnace.

A major breakthrough in glassmaking occurred with the invention of the blowpipe. Attributed to Syrian glassmakers in the 1st century BCE, the blowpipe allowed the glassmaker to inflate molten glass with his breath and create a host of new shapes and forms. By order of the Emperor Augustus (63 BCE–14 CE), who wanted to concentrate the production of various crafts on the Italian mainland, glassmakers from Syria and Egypt were imported as slaves, and by the 1st century CE, the glassmaker's craft had been transformed into an industry. It was about this time that glassmakers began blowing glass inside molds, greatly increasing the variety of shapes possible for hollow cast items.

The Romans did much to spread glassmaking technology. With their conquests, elaborate network of roads, trade relations, and strong political and economic infrastructure, the Romans created the conditions for the flourishing of glassmaking across Western Europe and the Mediterranean. During the reign of Augustus, for example, glass vessels began to appear throughout Italy, Gaul, Germany, and Spain. Roman glass has even been found as far a field as China, shipped along the silk routes. The popularity of Roman glass rested not only on its usefulness and reasonable price but also on its transparency and the beauty of its forms and colors.

During the 1st through the 3rd centuries CE, the major centers of glass production centered in Egypt, Syria, Palestine, and in the Rhine Valley in Germany. A host of different shapes emerged, including cosmetic and perfume containers, drinking and eating vessels, flasks, and other shapes and forms meant to imitate ceramics and metal. By the 5th century CE, however, the use of glass declined and many previously known techniques disappeared. It was not until the 7th century CE that glassmaking reemerged as a prominent art form in Europe and the Middle East, where it has continued to be a viable and functional art form to this day.

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