1. Core moulded aryballos from the Middle East, used for oils or cosmetics, c400 BC, height 80mm £400/500.

2. Unguentarium, together with bronze scapula to remove ointment from the vessel, which shows attractive bronze coloured iridescence, Roman, c2ndC AD, height 80mm, £60/70, spatula £80, because of excellent condition, and military connection.

*3. **Left to right**. Small scent bottle with much iridescence and attached handles, height 53mm, £75. Flask with aubergine trailed decoration, height 120mm, £140. Both Roman, 2nd/3rdC AD.*

Collecting survivors - 3500 years of Glass History

by Alexander Duncan and John Ainsley

7. Janus flask with the moulded faces of the god of entrances. Not quite where we got the expression 'Two faced' from. Rome 3rdC AD and rare, hence price, Height 65 mm. £350/400.

Glass is actually a naturally occurring material. Obsidian, a rock of volcanic origin was even worked by our Stone Age ancestors to fashion arrow heads, knives and axes. Fulgarite is another natural glass. It is made when lightning strikes loose sand or rock. Man-made glass would appear to have been discovered somewhere in the Eastern Mediterranean before 3,000BC i.e. over 5000 years ago. The only known story of its discovery is almost certainly legendary. According to Pliny the Roman Historian of the first century AD it was discovered quite accidentally at the mouth of the River Belus in Phoenicia which is now in Israel. He wrote "The story is that merchants put in there with a cargo of natron (crude soda), and when, scattered over the beach, they were preparing a meal and could find no stones of the right height to prop their pots, they supported them on lumps of soda which they fetched from the ship. When these were melted by the heat and mingled with the sand, transparent streams of a strange liquid were seen to flow, and thus glass was discovered." There are perhaps some truths in this story. Certainly glass is made from silica which is composed of sand, flints or crushed quartz with the addition of an alkali such as natural soda or plant ash plus a stabiliser such as limestone: and certainly the shores of the River Belus were famous throughout antiquity for its glass making sands. The most unlikely element of the story is that an ordinary camp fire was ever able to reach the temperature of 1200 or 1300 centigrade which is necessary to bring about the required chemical reaction.

6. Pale green jug with applied decoration and grooved body, height 95 mm. Roman. £200.

We can certainly place the first truly deliberate manufacture of glass to Ancient Egypt in about 3000 BC. It appears to have begun with glazing techniques used in the making of beads, scarabs and other grave goods. These were coated with vitreous coloured glazes, which, by about 2000 BC, were used as material to make objects in their own right, particularly the glass beads which became very valuable in themselves. Glass vessels came along later still in about 1500 BC. They were still quite small and fashioned on a core made from clay and straw, to the shape of the inside of the item to be made. This was placed on a metal rod and dipped into the molten glass several times until enough thickness had been obtained. Or threads of glass were wound around the core until the required thickness was achieved. The item was then marvered or smoothed out on a hard surface by being continually reheated after which neck rims and handles were added. After cooling the rod was withdrawn and the core had to be scraped or washed out to produce what were the first-ever glass containers. This was known as the sand core method. Photograph 1 illustrates this type of vessel. This method of glass vessel production survived until the invention of glass blowing in Syria in the first century BC.

Early core moulded specimens are quite rare. The most prolific type of ancient glass is Roman. This does not mean that it was actually made in Rome but rather in the Roman Empire, say between 100 BC and 400 AD. Production was mainly confined to the Near East in places such as Syria, Palestine and Egypt. The glass was then exported throughout the known world which was of course mainly the Empire. The invention of glass blowing was a watershed. It simplified the work, radically reduced the costs and brought glass vessels into the homes of at least well-to-do people. As the market for glass products spread, many small makers left the Near East and moved to the centre of the Empire and to the European provinces. Cologne becoming a particularly important centre. By the second century production had moved even as far as England. The methods of manufacture now covered both mould blown and free blown glass and it was now readily available for ordinary household use as well as the luxury market.

Towards the end of the Roman period of Empire when power was transferred from Rome to Constantinople, the Western Empire started to disintegrate and the period began in Europe which is known as the Dark Ages. Islamic glass came to the fore, still being made in the original areas encouraged by the Umayyad dynasty and later the Abassid dynasty until the thirteenth century AD, with its capital in Baghdad. Some glass was still being made in Europe during this period although most was imported from the East. Bede records that in 676 AD St Benet Biscop, founder of the Abbey of Wearmouth, sent to Gaul for craftsmen to glaze the windows of the abbey. They also apparently taught the English how to make glass including vessels for various uses. A glass-works of the ninth or tenth century has been excavated at Glastonbury in Somerset. A deed of 1226 refers to a grant of land near Chiddingfold in Surrey to a Laurence Vitrearius, a French immigrant. The Surrey Sussex weald was to become famous for its glass for the next three and a half centuries. Meanwhile in mainland Europe and by the late fifteenth century Venice and the island of Murano had become the centre for fine and decorative glass. Hence glass from Venice and glass in the style of Venice and made throughout Europe was dominant until the invention of lead crystal by George Ravenscroft in the late seventeenth century and which produced the most advanced phenomenon in the history of the subject, Georgian glass!

Condition, Price and Fakes.

Most ancient glass comes from the Middle East. Minor faults are welcome as they confirm authenticity and for the collector can enhance the appearance of the article. Faking is difficult even when re-cycled glass is used. The main faults are sandy accretions and iridescence, the latter caused by salts in the soil. Chips and cracks are generally unacceptable unless the item is extremely rare. Iridescence will be seen in some of the illustrations. Roman glass is extremely light and its colours muted, these facts helping us to differentiate from other ancient glass. Much ancient glass is still obtainable for under £100, particularly Roman glass which is in good supply.

Photographs courtesy of Rhian Colvin.

*4. Two bracelets, **left to right**, Mameluke, Egypt 14thC AD, diameter 104 mm, £200/250, high price because of condition and rarity plus being from the Medieval period. Blue bracelet, Roman 3rdC AD, diameter 95mm. £70.*

*5. **Left to right**. Platter with round foot, diameter 145mm. £80/90. Green flask with indented decoration on body, height 125mm. £100/120. Both Roman, 3rdC AD.*

8. Left to right, bulbous scent bottle with indented decoration, height 52mm. £50. Dark blue scent bottle with gold iridescence or gilding, early cut glass, height, 47mm. Value varies, if iridescence, £80, if gilded, £120. Abbasid dynasty, c900 AD, mould blown.