

Evolution of clay tobacco pipes in England

Clay tobacco pipes were made in England shortly after the introduction of tobacco from North America, in about 1558. The earliest written description of smoking was in 1573 and probably described a pipe derived from native North American types.

By 1580 the pipe bowl had become barrel-shaped with a flat heel and around $\frac{1}{4}$ " (6mm) inside diameter. The bowl and rim were inclined at an obtuse angle to the stem. Stems were 4 – 6" (100 – 150mm) in length with a hole of approximately $\frac{8}{64}$ " (3mm) bore down their length.

By 1640 the bowl inside diameter had increased to about $\frac{3}{8}$ " (9.5mm) as tobacco prices continued to fall, although stem lengths remained basically the same. After this date the bowl grew larger and the stem increased to 10 – 14" (250 – 350mm). A pointed spur replaced the flat heel (see Photo 1 below) and this design became the standard for the next 60 years. Milled or plain rings (see Photo 2 below) round the rim and occasionally a maker's mark appeared, although generally 17th C pipes were plain.



Photo 1. Photograph showing the difference between the flat heel on the left and the pointed spur on the right.



Photo 2. Photograph showing the milling marks just below the rim of the bowl.

By 1700 the bowl had become more elongated with an inside diameter of about $\frac{1}{2}$ " (13mm) and the stem had a bore of from $\frac{3}{32}$ " – $\frac{1}{8}$ " (2.4 – 3mm). The comparison in

Photo 3 below shows the difference in size between typical 1610 and 1710 pipe bowls.



Photo 3. Photograph contrasting the size of a typical 1610 period pipe on the left with the 1710 period pipe on the right.

Shortly after 1700, pipes changed in quality, being more accurately made, with a smoother finish and with thinner walls and slender stems. The top of the rim was now trimmed parallel to the stem, as shown in Photo 4. This also shows the maker's letter W on the side of the heel.



Photo 4. Post-1700 pipe with the bowl rim trimmed parallel to the pipe stem. Note the letter W on the heel, this denotes the maker's surname began with W. On the left hand side of the heel is the letter I (often used in place of J) representing the Christian name.

Early 18th C pipes often had flat-bottomed (pedestal) spurs or no spurs at all. By the mid-18th C very long pipes were introduced – called alderman or straws – which were 18 – 24” (450 – 600mm) long and with a bore diameter averaging $\frac{3}{32}$ ” (2.4mm). They were made for leisure smoking (see Figure 1 below).



Figure 1. Detail from a painting showing an elderly gentleman smoking an alderman pipe

Some London pipe makers produced rare decorated bowls incorporating heraldic art at this time and leaf or barley patterns were commonly used to cover seams on the bowl, as shown in Photo 5 below.



Photo 5. Leaf or branch design on pipe bowl seam to cover up any misalignment in the mould halves.

By 1750 pipes with masonic arms, public house symbols and military regimental badges were all being made, examples are shown in Photos 6 and 7 below.



Photo 6. Pipe probably advertising a pub called The Anchor.



Photo 7. Pipe with 27th Inniskilling Regiment insignia and Derry Castle as their garrison town

After 1850 the “yard of clay”, or churchwarden, pipes up to 36” (900mm) in length first appeared. The working man, however, still preferred a short stem pipe (called cuttys or nose warmers and shown in Photo 8) that could be gripped between the teeth while they carried on working. The results (shown below in Photo 9) are obvious!



Photo 8. A cutty or short pipe used by workers. It has a cream wash to mimic the appearance of a meerschaum pipe.



Photo 9. The effect of gripping a cutty pipe between the teeth for long periods while working. (Taken from the Smithsonian Museum website)

Decorated pipes greatly increased in number and were often used for advertising purposes. They were called “fancy clays” or “fancies” and bore size had fallen to a low of $\frac{4}{64}$ (1.6mm). This was the high point in clay pipe variety and design, when use was at its highest.



Photo 10. Square pipe representing a man resting by a milestone with the legend “Whittington Stone, Highgate Hill IV Miles to London” and “John Palme(r)” on the stem.



Photo 11. Other side of the square pipe with the legend “R. Whittington, Thrice Lord Mayor of London, Born 1350” and “Proprietor” on the stem.

Photos 10 and 11 show an unusual square pipe used to commemorate Dick Whittington, probably during the 1880's revival of his legend in London. John Palmer was the proprietor of The Whittington pub in London in this period and so this was probably a pipe sold at his premises. Other examples of this pipe are known with Thompson as the name on the stem, presumably from another pub with a Dick Whittington association.

Some other novelty types are shown in Photos 12 and 13.



Photo 12. A popular “claw holding an egg” type, a variant has a human hand instead of the claw.



Photo 13. An example of a thorn pipe, representing a briar pipe where the prickles are shown on the bowl.

Another novelty type is the “cadger” design, which featured a large bowl capable of holding much more tobacco than a normal pipe. An example is shown in Photo 14, in the form of a St. Nicholas head. The name reputedly comes from the story that, when people offered you a fill of tobacco, you took out the cadger rather than the normal size pipe and so gained an extra supply.



Photo 14. An example of a cadger pipe in the form of St Nicholas' head

How popular you were afterwards is not documented!!

However clay pipes came under increasing pressure during the late 19th C from cigarettes, cigars and the more robust meerschaum and briar pipes. By 1914 the industry had largely disappeared at the local level and only a few large manufacturers continued much beyond this time (Charles Crop of London closed in 1924, Southorns of Broseley closed in the 1960's while Pollocks of Manchester closed as recently as 1992). Many of the original moulds are still in existence and replica pipes made using Pollock and Broseley moulds are freely available.

Cambridgeshire produced pipes

Pipes found in Cambridgeshire generally follow the Oswald typology (1975) for London, although some mid-17th C pipes were more bulbous than those shown there.

Flood (1976) lists some 40 clay pipe producers in Cambridge itself and a further 45 in the general Cambridgeshire area while a recent estimate (Cessford 2001) puts the overall total at closer to 180.

Maker's marks are more unusual in Cambridgeshire and East Anglia than in most other areas. The Wilkinson, Pawson and Cleever families are known to have made decorated stems and more decorated bowls.

Dating pipes

There are a number of techniques suggested:

Adrian Oswald, 1951 – a typology based on the progression in bowl shape.

J C Harrington, 1954 – based on the pipe stem bore diameter decrease with time, only clear up to 1800.

Atkinson and Oswald, 1960's – based on known maker's marks.

Lewis Binford, 1961 – acknowledged errors in Harrington method and produced a regression equation reputedly more accurate over the long term.

- **Oswald typology**

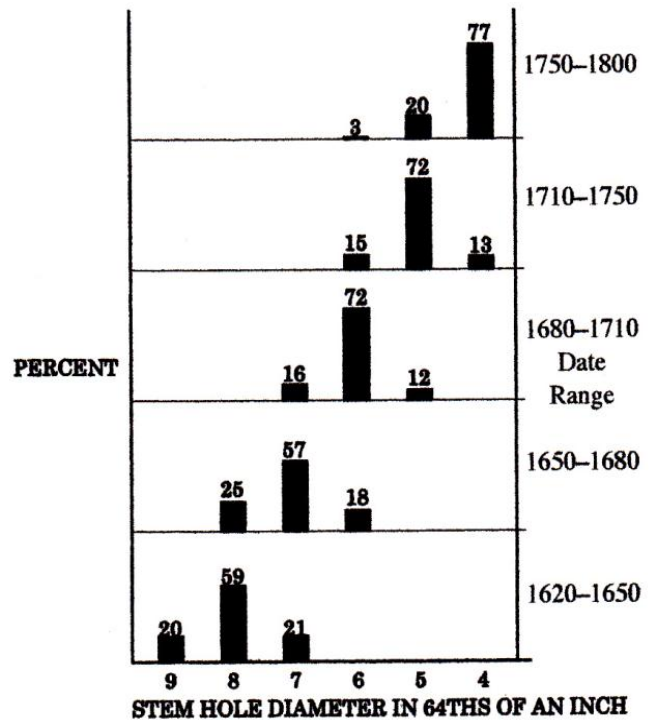
Oswald based his work on pipes found in London but this has general utility, especially in the early period when London had a monopoly on clay pipe manufacture. His typology will be covered in a future document.

- Harrington diagrams

Harrington worked with the fact that, as time passed by, the bore of the hole in the pipe stem appeared to get smaller. He produced a correlation chart showing how the bore size varied over time, as shown here. With experience it was realised that the relationship broke down after 1800, as later pipes could have small or large bores. Flood (1976) claimed that in Cambridgeshire there is far more overlap than is shown in the chart and it is therefore impossible to date individual pipes but may work with large numbers of samples.

Stem bore size in 64ths	Date range
9/64	1590-1620
8/64	1620-1650
7/64	1650-1680
6/64	1680-1720
5/64	1720-1750
4/64	1750-1800

Harrington also drew up various distribution diagrams for sites in the USA to demonstrate the spread of bore sizes expected at any period site.



- Binford modification

Lewis Binford found errors when using the Harrington method and used statistics to produce a formula which would cover all dates.

$Y = 1931.85 - 38.26X$ where Y is the projected date, 1931.85 is the theoretical date at which the bore size would equal zero and X is the arithmetic mean bore diameter for the whole sample.

Even this was found to produce errors and Hanson modified it further by producing a series of regression statistics to refine the method.

$$Y = 1891.64 - 39.09X, \text{ for } 1620-1680$$

$$Y = 1880.92 - 30.70X, \text{ for } 1620-1710$$

$$Y = 1869.31 - 28.88X, \text{ for } 1650-1710$$

$$Y = 1887.99 - 31.66X, \text{ for } 1620-1750$$

$$Y = 1888.06 - 31.67X, \text{ for } 1650-1750$$

$$Y = 1894.88 - 32.98X, \text{ for } 1680-1750$$

$$Y = 1919.10 - 36.06X, \text{ for } 1620-1800$$

$$Y = 1930.24 - 38.23X, \text{ for } 1650-1800$$

$$Y = 1959.66 - 44.32X, \text{ for } 1680-1800$$

$$Y = 2026.12 - 58.97X, \text{ for } 1710-1800$$

This is a complicated business and it is still being debated!

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