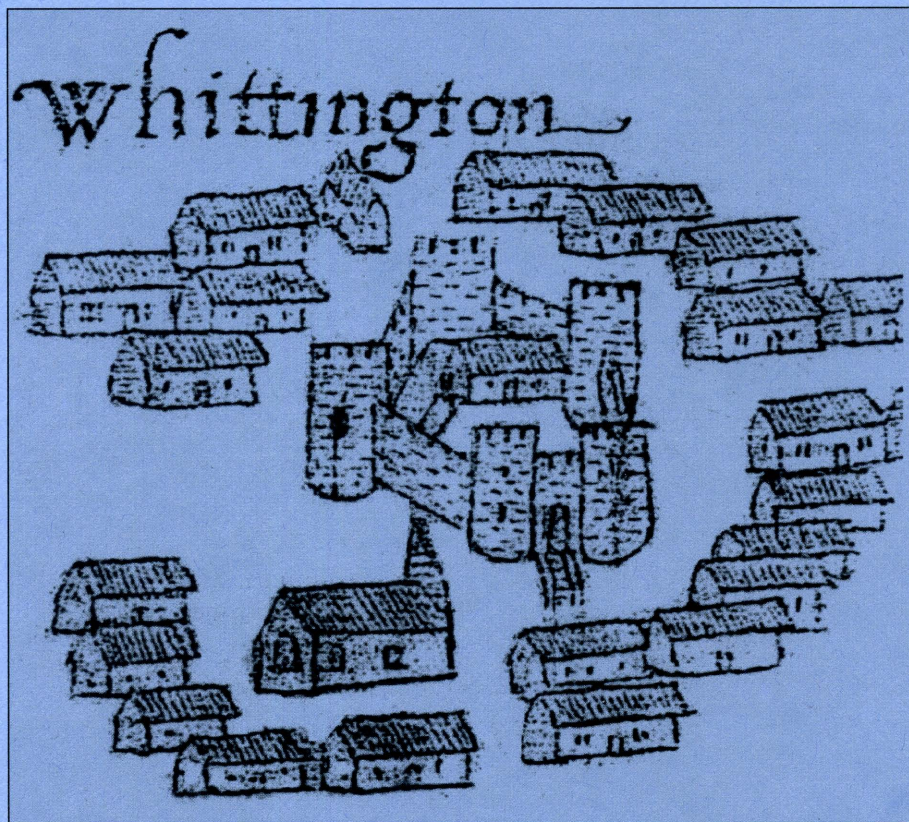


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A BRIEF INTRODUCTION TO THE SHROPSHIRE CLAY TOBACCO PIPE INDUSTRY

By DAVID A. HIGGINS

Introduction.

The smoking of tobacco was taken up in England during the second half of the sixteenth century and spread rapidly to all levels of society during the early seventeenth century. The demand for tobacco was largely met by the New World colonies, for whom the income provided by this annual cash crop was crucial. In addition, tobacco was also grown in this country during the seventeenth century. The western part of England, including Shropshire, was particularly associated with the cultivation of this new crop.

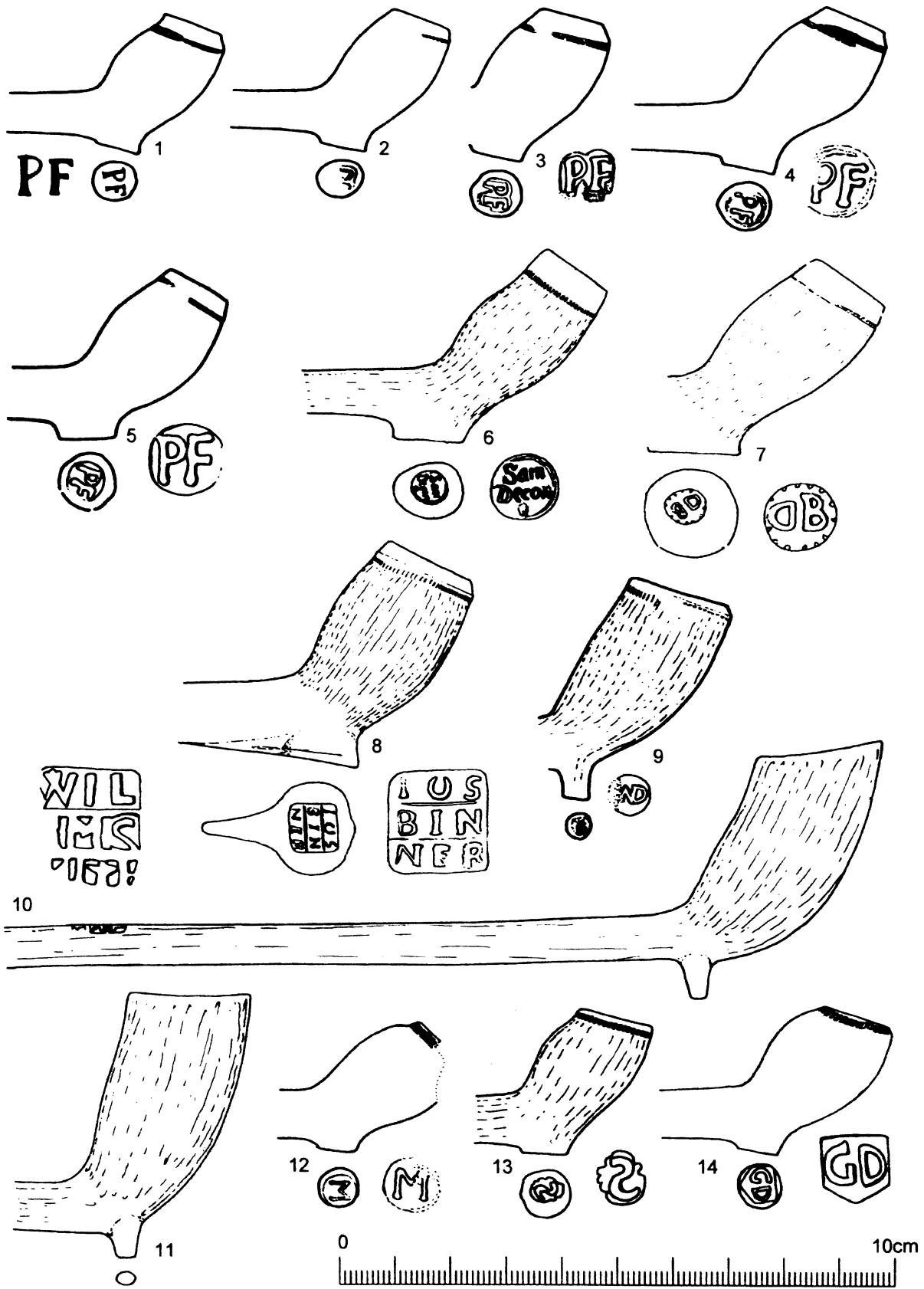
The rapid adoption of smoking generated a demand for pipes, a demand that had not hitherto existed. The earliest pipes appear to have been produced in the west-country ports, where tobacco was landed, and in London. As the habit spread to the provinces, pipemakers moved and set up workshops to exploit the rapidly expanding market. The earliest provincial makers brought London styles with them and these are the styles that characterise early seventeenth-century production all over the country. As local makers became established they developed distinctive regional styles and it is these regional variations that provide much of the interest in studying pipes.

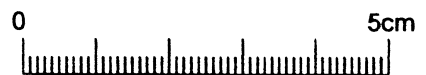
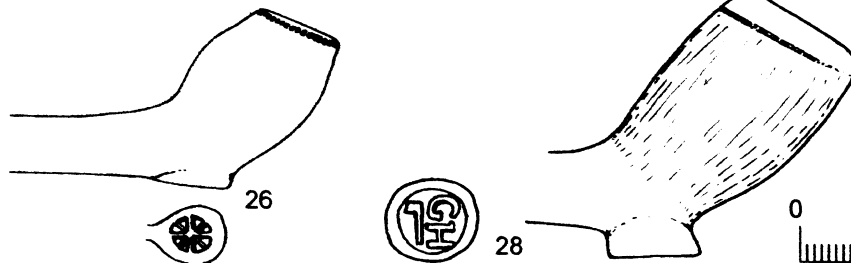
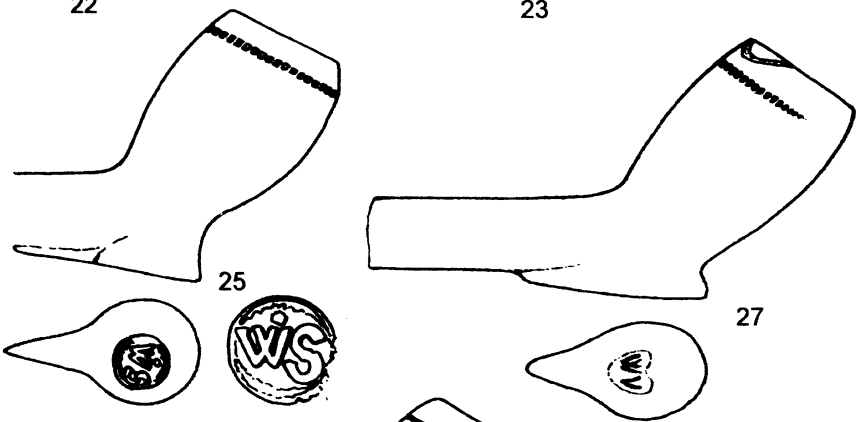
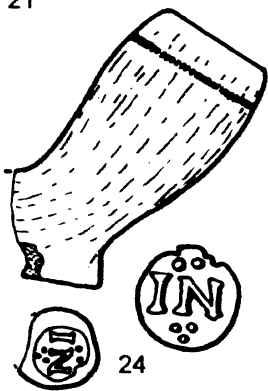
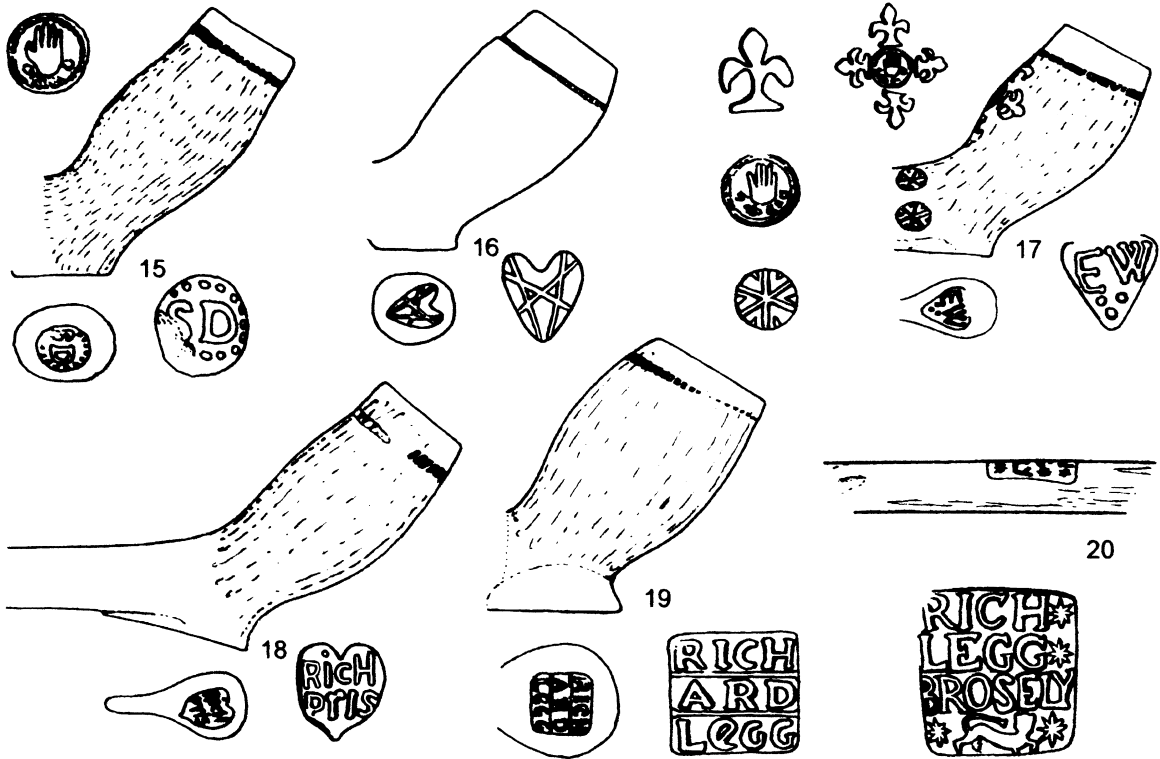
In general pipemakers were quite thinly spread across the countryside since they marketed their wares locally by packhorse or at regional markets. The pipemakers usually operated from small rural workshops or from the poorer quarters of the towns. In some instances more substantial numbers of pipemakers were able to operate in a favourable location. Good examples are the busy ports of London or Bristol where the export trade provided a market for the pipemakers' products. One of the few notable exceptions to this pattern is the Much Wenlock/Broseley area of Shropshire where large numbers of pipemakers are found without an immediately obvious market for their products. The author carried out a five-year study of pipemaking in this area for his doctoral thesis (Higgins 1987) and it is from this study that most of the details contained in this article have been drawn. This paper will provide, first, a brief introduction as to why the Much Wenlock/Broseley area became such an important pipe production centre. It will go on to provide an overview of the style and nature of the pipes that were made there before finally considering how these pipes influenced other areas of the county.

The Much Wenlock/Broseley Area.

The parishes of Broseley and Benthall are situated on the southern side of the Ironbridge Gorge in Shropshire, about 4 miles ENE of the market town of Much Wenlock. At this point the River Severn cuts a deep section through part of the Coalbrookdale Coalfield. As a result, various bands of white firing pipeclays, fire clays and coal are exposed in the sides of the Gorge. These bands had been well known and exploited since at least the medieval period and, in the early seventeenth century, must have proved attractive to any pipemakers trying to establish this new industry in the county. The coalfield deposits provided not only the raw material from which to make pipes but also good fireclays from which to build kiln structures and the coal with which to fire them.

A less obvious attribute of the area to modern eyes is the river itself. In the days before the easy transport networks afforded by canals, railways and improved roads it was difficult and expensive to haul goods long distances over land. Water transport was much more economical and so rivers and coastal navigation played an important part in trade. The River Severn was navigable by flat-bottomed trows as far upstream as Welshpool





and provided an inland navigation, the importance of which it is hard to imagine today. The river was extensively used to transport the coal, iron, bricks, tiles, pottery and other products that were manufactured in the Ironbridge Gorge area. This meant that the pipemakers could work in a location which not only provided all their raw materials but also a cheap and easily accessible transport system providing links with the whole of the western side of England, as well as to the Severn Estuary and South Wales.

A final important attribute of the area was the 'open' nature of the settlements and the demand for labour. Newcomers could readily come to the Broseley district and erect squatter housing on waste ground. The numerous industries of the coalfield district provided plenty of labouring work as well as a supply of cheap raw materials. The economic basis of the area was firmly rooted in manufacturing rather than agriculture. These conditions must have attracted many families who then became engaged in pipe production either as a sideline or as their primary occupation.

The evolution of bowl forms.

It is not known exactly when the first pipemakers came to the Much Wenlock/Broseley area although the artefactual evidence suggests that it was quite early in the seventeenth century. Finds excavated from The Wharfage in Ironbridge include small pipes made of variously coloured local clays, which range from dark brown to pale yellow in colour (Higgins 1985a). These are marked with four different varieties of mark, all of which contain the maker's initials PF. These initials represent an as yet unidentified local maker who must have been working close by, probably in what is now Ironbridge itself (Figs. 1–5). The PF maker soon seems to have identified the best seams from which to obtain clay and his later products are made of the typical white firing local clays. The earliest PF pipes date from around 1625–30 and are of typical London styles. By 1640 the first documentary reference to a pipemaker occurs, a George Deakin who was working at Lawley Cross, near Much Wenlock. If this is the same George Deacon, '*an old man*', who was buried at Much Wenlock in 1646, then he may already have been established in the area well before his first documented date. As the century progressed the number of makers grew rapidly until, by the second half of the century, both the town of Much Wenlock itself as well as the developing industrial areas of Broseley and Benthall had extensive and well established pipemaking workshops.

As the number of pipemakers increased they became less dependent on the London styles that had originally been copied and they started to develop their own local styles. The bowl forms became quite long and slender with the milling being placed unusually low around the rim (Fig. 6). The pipes were always heel types, spur types being unknown in the area until the late seventeenth century. The heels were round and, during the seventeenth century, they tended to increase in size (Fig. 7). During the last two or three decades of the seventeenth century a series of profound changes took place in the form of Much Wenlock/Broseley area pipes. First, the large round heel that had developed was extended back along the underside of the stem to give it a long tail (Fig. 8). This tailed form went on to become the hallmark of the local industry for the next half century. At the same time, spur types were introduced (Fig. 9). These had a similar bowl form to the pipes with tailed heels, and were produced alongside them until well into the eighteenth century.

Around 1730 the tailed heel form died out leaving the spur form to develop for the remainder of the eighteenth and nineteenth centuries. The bowls of these spur pipes became taller and thinner, some being produced with egg-shell like walls (Fig. 10). During this period pipemaking in Much Wenlock itself went into decline and the focus of production moved to Broseley and Benthall. This may have been partly due to the rapidly developing industrial nature of the Ironbridge area and partly due to a shift to the use of finer, imported clays. During the seventeenth century the local coalmeasure clays had been exclusively used but these were rather gritty in texture and fired to a slightly off-white colour. In the early eighteenth century finer clays from the South West began to be imported, perhaps initially for use by the stoneware potters at Jackfield, who started producing white salt-glazed stoneware at this time. This finer clay was soon adopted by the pipemakers, who may have found it uneconomic to cart overland to Much Wenlock, resulting in a shift in the focus of the industry to the Broseley area, where there was easy access to the riverside wharves.

By the end of the eighteenth century rather tall, more cylindrical forms were being produced and the finer imported fabrics had been universally adopted by the pipemakers (Fig. 11). It was probably during this period that the local pipemakers started to specialise in producing good quality long-stemmed pipes of the type that later became known as 'churchwardens'. During the nineteenth century the bowl forms became slightly squatter again but the local pipemakers largely resisted the introduction of moulded decoration, which became so common in most other areas. During the second half of the nineteenth century short-stemmed or cutty pipes were introduced with a limited range of moulded decoration, but it was the long-stemmed churchwarden pipes that continued to form an important element of the Broseley production. By the early nineteenth century Broseley had become famous for the quality of its long-stemmed pipes and they were exported all over the world.

Despite the generally rather conservative nature of pipe design in nineteenth-century Broseley there were a few notable exceptions. Edwin Southorn (1820–76), for example, produced some innovative designs, such as his patent Narghile pipe with a glass section in the stem, as well as introducing the use of transfer printed designs on his pipes. Likewise, a number of pipes made of red clay were produced during the late nineteenth century, although these only ever accounted for a very small percentage of the total output, which was said to have reached several million pipes per year during this period.

With the general decline in the demand for pipes the Broseley makers diversified into related areas, such as the production of clay cigar and cigarette holders or into completely new areas, such as the production of dolls' arms and legs. The commercial pipemaking industry continued until 1960 when the last works, in King Street, closed. The King Street works survived with its contents largely intact until the 1980s. It has since been refurbished as a pipe museum, which opened to the public in September 1996.

The evolution of stamp types.

One of the most consistent and interesting features of the industry that developed in the Much Wenlock/Broseley area was the use of stamped makers' marks on the pipes. These were introduced with the earliest pipes and were almost universally applied to pipes in the area until commercial production ceased some 350 years later. Some of the earliest pipes from the area, such as those found at excavations near Wroxeter, are stamped with single letter marks (Figs. 12–13). Single letter marks are characteristic of the earliest pipes, produced during the late sixteenth and early seventeenth centuries. As yet, it is not known whether these examples were actually produced in the Broseley area or whether they were imported from elsewhere, although the former seems more likely.

As mentioned above, the earliest known pipes that can certainly be attributed to local manufacture come from Ironbridge and are stamped PF (Figs. 1–5). One of these marks (Fig. 1) consists of incuse impressed initials but the remainder of the marks are in relief. This use of incuse lettering is very unusual for Shropshire, perhaps suggesting a south-western origin for this maker since such marks were common there. From this early date until the mid-nineteenth century almost every mark used in this area was in relief. The relief PF marks occur in a variety of styles, but the later examples, dating from around 1640–60 are of circular form (Figs. 4–5). The use of relief initials, usually in a circular frame, became the standard form of marking used in this area until around 1680.

As previously stated, the earliest documented maker in the area is George Deacon, and pipes that can be attributed to him have been found at Eccleshall Castle in Staffordshire (Fig. 14). He may well have been the first of the Deacons to make pipes in this area and the family went on to make some of the finest late seventeenth-century pipes to be produced in Shropshire. There appear to have been several Samuel Deacons making pipes in Much Wenlock during the late seventeenth and eighteenth centuries and they are well represented by marked pipes (for example, Fig. 6). In common with other makers in the area they were generally using circular initial marks until around 1680. This type of mark was usually applied to the heel of the pipe although in some cases the same or a different mark was also applied to the bowl (Fig. 15). Sometimes the mark was applied to the bowl alone. Symbol marks are also occasionally found during this period but these tend to be more common in the south and south-west of the county than in the Much Wenlock area (Fig. 16).

One final characteristic of the mid- to late-seventeenth-century industry is the occasional occurrence of bowls with decoration made up of multiple stamp impressions (Fig. 17). Usually these pipes have the normal maker's mark on the heel but, in addition, the bowl and/or stem is decorated with a range of different decorative or lettered stamps. This class of pipe was always rare but sufficient examples, made by different makers, have been found to show that they formed a small but distinctive part of the local industry.

The early- to mid-seventeenth-century initial marks were usually circular although occasionally other forms, such as heart shaped borders, were employed (Fig. 17). From around 1670 marks occur with an abbreviated form of the maker's name, for example, 'GRFE POVEL' for Griffith Powell or 'RicH Pris' for Richard Price (Fig. 18). These often employ a mixture of upper and lower case initials and were still usually placed in circular frames, although other forms such as heart shaped marks or rectangular frames, sometimes with a horizontal dividing bar between the rows of lettering, also occur. From around 1680 the name is usually more fully given and occurs principally in block capitals (Fig. 19). These marks are usually square or rectangular and they now often have dividing bars between the lines of lettering.

The square or rectangular full name mark became the predominant style in the Much Wenlock/Broseley area for the next century, the only substantive modification being a change in the position of the mark. From around 1680–1730 large round or tailed heels were in fashion and the mark was placed on these (Fig. 8). After about 1730 this style was entirely replaced by spur types and so the mark was placed across the stem a distance back from the bowl (Fig. 10). From about 1690–1730 there was a second style of mark that was also in use. This

comprised a very small circular or, occasionally, rectangular mark that was used on spur pipes (Fig. 9). The mark was placed on the base of the spur and measured only a few millimetres across.

From the late eighteenth century the square or rectangular mark began to evolve again with the place name sometimes being added after the maker's name (Fig. 20). Then, towards the end of the eighteenth century, the stamp orientation was changed. Instead of being placed across the stem it was now placed along it. The marks became longer, usually consisting of two lines, the top one being the maker's name and the lower one the place of manufacture (Fig. 21). These sometimes still had dividing bars between the lines of lettering although, increasingly, this was omitted (Fig. 22).

The final change of style occurred around the middle of the nineteenth century with a change back to incuse marks. Although the marks were now incuse, they still consisted of the maker's name and place of manufacture placed along the stem but they were without either borders or dividing bars between the lines of lettering (Fig. 23). Sometimes numbers were added after the place name. These numbers identified the individual worker producing each pipe within the factory and were not only used to monitor output (the workers were paid on piece rates) but also to check on the quality of production.

Trade and Influence.

Although it is Broseley that came to be particularly associated with the Shropshire pipe trade it was in Much Wenlock that many of the first Shropshire makers appear to have settled and built up the trade. Much Wenlock is a medieval market town a few miles from Broseley that, although lying just off the coalfield, would have had relatively easy access to the clays and coal found nearby. From at least 1640 until the middle of the eighteenth century numerous pipemakers lived and worked in the town. Documentary research has shown that several of the best known Shropshire makers, who were formerly assumed to have come from Broseley, did in fact work in Much Wenlock, for example, Michael Brown, Samuel Deacon, William Savage, Thomas Tucker and William Wilkinson.

The products of the Broseley and Much Wenlock makers are indistinguishable on stylistic grounds and, given the proximity of the two centres, they can be regarded as single source of pipes from mid-Shropshire. The reputation of this area rested on the distinctive style of its pipes and the good quality of the finish, which was always an integral part of production in both places. The Much Wenlock/Broseley pipes were typically well finished with burnished surfaces and, during the seventeenth and early eighteenth centuries, well milled rims. The dies used to stamp the pipes were usually well designed and professionally engraved resulting in a neatly produced, good quality product. It was the uniformity and high quality of the Broseley area products that are the principal characteristics that enable them to be distinguished from pipes produced elsewhere in the county, although details of die design and finishing techniques also help to set them apart.

The success of the Broseley area makers is clearly reflected in the distribution of their products. During the second half of the seventeenth century the trade in Broseley pipes grew rapidly to take in huge areas ranging from the Mersey in the north, across to the Midlands in the east and right down the Severn Valley to South Wales in the south. From *c.* 1650–1725 Much Wenlock may well have been the dominant production centre in this area. Pipes from Much Wenlock must have been traded in huge numbers since they are commonly found in places such as Stafford and Birmingham with occasional finds from as far as Warrington and even Jamaica in the Caribbean (Marx 1968, Fig. 29). One of the most important methods of disseminating the pipes was by boat and Much Wenlock/Broseley pipes are commonly found throughout the Severn Valley. So extensive was this river trade in pipes that up to 50% of the marked pipes from late seventeenth-century assemblages in South Wales were produced in mid-Shropshire.

During the eighteenth and nineteenth centuries improved transport facilities enabled an even wider marketing of mid-Shropshire pipes and it was during this period that the trade became particularly focussed on the parishes of Broseley and Benthall. Early nineteenth-century-products were in demand in London, and an example of one of Noah Roden's pipes has been found as far away as Dorking in Surrey (Higgins 1985b, Fig. 36). The Southorn family exhibited pipes in the Great Exhibition of 1851 and, during the second half of the century, their products were sold all over this country. In addition, an extensive overseas trade was built up and their pipes were shipped to many parts of the world from ports such as Liverpool, where the firm had agents.

The copying of Broseley styles is another means by which the success of this area can be gauged. The distinctive tailed heel, in vogue from about 1680 to 1730, was unlike anything developed elsewhere. By the end of the seventeenth century makers from as far afield as Buckley in Clwyd, Polesworth in Warwickshire and Carmarthen in Dyfed were copying this particular style and the characteristic form of mark that went with it. The same thing occurred in the nineteenth century and later when firms such as Joseph Holland & Sons of Manchester produced pipes with the distinctive Broseley style of stem twist (Joseph Holland & Sons catalogue, not dated).

Although there were individual makers working at other places in Shropshire, such as Wellington and Shrewsbury, the trade never seems to have taken off in these areas and they relied heavily on pipes imported from Much Wenlock and Broseley. This arrangement is particularly interesting in the case of Shrewsbury since there are few other county towns that did not have their own pipemakers to meet the local demand. There are, however, two other significant pipemaking areas of the county that are worthy of mention and these are discussed in the following sections.

The South Shropshire Industry.

The south Shropshire industry is particularly interesting and complex. Around the Clee Hills there are similar coalmeasure deposits to those found in Ironbridge and these too appear to have attracted early pipemakers. The Cleobury Mortimer industry has been little studied, but it is already clear that at least a dozen pipemakers operated in this area during the seventeenth and early eighteenth centuries. One kiln site has already been located by the author (Higgins 2001) and sufficient local pipes collected to show that their form and finish is noticeably different to that found in the Much Wenlock/Broseley area. The pipes from Cleobury are infrequently marked and they generally lack the burnished surfaces that were common in the Broseley area. They are also often of a slightly different form, as exemplified by a pipe produced by John Newall, who died in 1719 (Fig. 24). Even when Broseley bowl forms were copied the pipes look a little different, as can be seen from a pipe stamped WS in Bewdley Museum (Fig. 25), which can be attributed to William Sheffil of Cleobury Mortimer who died in 1699. Sheffil's pipe is not burnished and the circular mark, which is perhaps not as neatly executed as on a Broseley product, looks distinctly out of date when compared with the contemporary square full name marks which were being produced to the north.

The same is true of Ludlow, where large numbers of pipes have been recovered and where there was also a thriving pipemaking community. In many ways, these two adjacent centres mirror the situation in mid-Shropshire where Much Wenlock was the established market town and Broseley the neighbouring production centre with raw materials. Ludlow had long been an important and wealthy administrative centre and so it is not surprising that some of the earliest pipes from the county are found in the town. Local production appears to have been established by the early seventeenth century and distinctive local styles of bowl form and finish soon appeared, suggesting a thriving local industry (Fig. 26). The products of John Arthurs (stamped IA) and William Underwood (stamped WV; Fig. 27) were particularly common during the mid- to late seventeenth century. Their pipes show a mix of local and Broseley area characteristics but generally lack the burnished surface that was typical there (Fig. 27). As with Much Wenlock, the town was not on a coalfield area and pipemaking both here and in the Cleobury area appears to have died out during the eighteenth century.

The North Shropshire Industry.

The other part of Shropshire that appears to have had an important pipemaking industry was centred on Wem in the north of the county. As with both south- and mid-Shropshire there seems to have been a sudden growth of the local industry towards the end of the seventeenth century with far more pipemakers establishing themselves than would have been needed to supply the local market. At least a dozen makers are thought to have worked in the area during the 1680s and 1690s. They were based not only in Wem itself but also in small hamlets nearby, such as Burlton and Loppington. The author is not aware of any local sources of clay or fuel in this area, nor is there an obvious market for their products. It is thought that the Hatchet family worked in Burlton and that they produced not only full name marks in the Much Wenlock/Broseley style, but also initial marks (AH, GH and IH) above a representation of a little hatchet, for example, Fig. 28. Pipes attributed to this family have been found at Willaston and Chester in Cheshire and at Buckley in North Wales, suggesting that pipes from the Wem area were quite widely marketed. The pipes produced in north Shropshire are strongly influenced by Much Wenlock/Broseley styles and they are finished in a similar manner with nicely milled rims and burnished surfaces. In this respect, the Wem area production much more closely resembles the material from mid-Shropshire than that from the south of the county does. As with Much Wenlock, Cleobury Mortimer and Ludlow, there seems to have been a sudden collapse of the industry during the early eighteenth century, with no more references to pipemakers in the local parish registers, and individuals from the area seeking work as far away as Warwick (Melton 1997, 275).

Surviving evidence for the industry.

Despite the large number of pipemakers who are documented for the county there is very little surviving evidence for their workshops and kilns. One outstanding site has been identified at Cleobury Mortimer where the almost undisturbed earthworks of a seventeenth- to early eighteenth-century pipemaker's house and workshop have been identified (Higgins 2001). Apart from this, there is very little evidence from the areas of the county where the industry once flourished during this period and much more documentary research and fieldwork is needed to try and trace these production sites.

Even in the Broseley area, where the multitude of different marked pipes shows the scale of the former industry, there is comparatively little surviving documentary or structural evidence. There do not seem to be any surviving apprenticeship records or early lists of inhabitants of the area that give occupations. An additional complication is the fact that many of the local families shared common Christian names making it difficult to pin down a particular maker even when his full name is known from pipe marks. Between 1650 and 1750, for example, there were no fewer than 22 people baptised in Broseley and Benthall with the name of John Hartshorne. At least one of these John Hartshornes is known to have been a pipemaker from pipe stamps but it is quite impossible to determine which one, let alone identify exactly where and when he was working.

Likewise, despite the large number of kilns that must have operated in the area, there are few sites which can be located with any certainty today and even fewer remains of the above ground buildings. Despite these problems some useful information about the sites and production techniques can still be gathered. There is a 1673 inventory of Samuel Deacon's estate in Much Wenlock that includes 'one mill to grind tobacco pipe clay'. This shows that, from at least as early as the 1670s, the workshops were large enough to warrant installing specialist machinery and that considerable care was being taken to prepare the raw materials. The inventories of the pipemakers also contain some tantalising clues as to the equipment that they were using actually to manufacture the pipes. In 1723 the estate of Thomas Roden of Broseley included a 'curricomb screw' and a 'cheek screw'. These would have been the presses within which the pipes were moulded, but it is not known what these two forms looked like or why two different types were needed. Similarly, the inventory goes on to list several different styles of pipe mould, including 'peak heel' and 'broad heel', presumably the spur pipes and tailed heel pipes which were such a characteristic of the Broseley industry at this period.

Artefactual evidence for pipe production is surprisingly scarce and from the surviving evidence on its own it would be difficult to make a case for there ever having been a significant pipemaking industry in the Broseley area before the nineteenth century. At Benthall the author has excavated part of a seventeenth-century kiln dump, including a reasonable quantity of muffle fragments. A particular type of muffle-kiln had evolved for firing pipes, the muffle being a special chamber made of waste pipe stems and pipeclay within which the pipes were fired. Preliminary studies suggest regional variations in the evolution and form of these kilns, but further study is impossible until more examples have been excavated. This Benthall material derived from the kiln of Henry Bradley, a well known maker whose products were marketed over a wide area around 1670–1700.

An early eighteenth-century kiln group from an unidentified maker is also known from Benthall, but this did not produce any significant evidence for the kiln structure itself, and the only other structural evidence known is what appear to be the truncated remains of John Roberts's kiln from Much Wenlock, which was currently under excavation as this paper went to press (August 2006). John Roberts was also working in the early eighteenth century and, after this period, there is no other excavated production evidence until the late nineteenth century, when completely different technology employing saggars was in use. The late nineteenth-century kiln dumps contain fired clay strips that were used to seal the saggars and clay sheets which were used to protect the pipes from harmful gasses during firing. Broseley was distinctive in that although round saggars, as used for pottery production, were used for short-stemmed pipes the long stemmed pipes were fired in specially made rectangular hump-backed saggars, which appear to be unique to this production centre. The lack of artefactual evidence between the late seventeenth and late nineteenth centuries makes it impossible to examine the nature and evolution of the kilns and production techniques in any detail at present. The recovery of more production and structural evidence for the kilns and workshops is clearly a priority throughout the county.

Surviving building remains are equally elusive. There is a cottage in Broseley with a date stone reading 'Richard Legg built this 1764'. Numerous Richard Legg stem stamps have been found in the garden and so it seems reasonable to suppose that this was the house of the pipemaker. Various other properties that belonged to named pipemakers at the time of the nineteenth-century Tithe Survey survive, but these have not been systematically studied and it is not known if any trace of workshop structures or kilns survives. One of the main factory sites at this time was adjacent to the New Inn at Benthall, where the Rodens and Edwin Southorn worked. Some of the surviving structures on this site, now derelict, may have formed part of this factory complex. The main factory in Broseley was on Legges Hill where William Southorn & Co. had their factory from the 1820s onwards. Part of a unique type of kiln base was uncovered on this site during recent

redevelopment work but all the factory buildings have been demolished. The only surviving element at this site is Broseley Wood House, which provided the domestic accommodation for the Southorn family.

The most important surviving site is undoubtedly the King Street pipeworks in Broseley. This was established as the works of Roland Smitheman in 1881 and was used by that family until about 1920. In about 1935 it was taken over by W. Southorn & Co., who not only moved in their whole business and old stock of tools, but also residual material that had been purchased from Edwin Southorn's works in Benthall upon its closure. Production continued on the site until about 1960 and most of the buildings and fittings in use at that date survive, including the kiln, which is the only complete surviving example anywhere in England.

The King Street site is important not only because it is the most complete pipemaking complex to survive anywhere in this country but also because it contained an extensive paper archive of letters and documents relating to the business. Over the last few years the site has been restored by the Ironbridge Gorge Museum and it was opened as a pipe museum on 14 September 1996. Although the buildings and displays form an impressive memorial to the pipe industry of the area it is perhaps the paper archive that will provide the most valuable insights into the nature and organisation of the trade.

Summary.

This paper provides a brief introduction to the Shropshire pipemaking industry and its products. It has shown that pipemaking was established as a new industry early in the seventeenth century and that by the end of the century significant production centres had emerged in and around Ludlow, Cleobury Mortimer, Much Wenlock, Broseley, Benthall and Wem. Some of these production centres were based in historic market towns but others emerged in developing industrial areas, where they were able to exploit the clay and coal of the Shropshire coalfields. Distinctive local styles of bowl form, finishing and mark types were developed from the mid-seventeenth century onwards and these distinctive forms were not only widely traded but also influenced pipe styles and production in other centres across large parts of England and Wales. The early industry seems to have reached its peak around 1680–1720 after which production in many of these early centres appears to have suddenly collapsed. There was a fundamental shift from the use of local coalmeasure clays to finer clays imported from the West Country and production became concentrated in the parishes of Broseley and Benthall. The term 'Broseley' became synonymous with a quality long-stemmed pipe and many millions were exported from this production centre all over the world. The form and evolution of the early workshops and kilns is still poorly understood and remains a priority for future research. For the nineteenth century, however, Broseley boasts the only complete surviving pipe making complex anywhere in the country as well as an associated archive of tools and paperwork that remains to be studied in detail.

Illustrations. All the illustrations are at 1:1 with 2:1 details of the stamps in Figures 1, 3–8, 10, 12–20 and 22–25. The findspots of the illustrated pipes and the collections from which they have been drawn are as follows:-

- 1–5, 9 & 20–23; from excavations at 36/37 The Wharfage, Ironbridge (Ironbridge Gorge Museum Trust).
- 6–7 & 15; unprovenanced material from the Thursfield Collection, now part of the Bragge Collection (British Museum).
- 8 & 10; from excavations at St. Mary's Grove, Stafford (Stoke City Museum & Art Gallery).
- 11; Shrewsbury area (H. H. Judd Collection, Shrewsbury).
- 12–13; Excavations at Lower Brompton (J. Andrews Collection, Shrewsbury).
- 14; Eccleshall Castle Excavations (Stoke City Museum & Art Gallery).
- 16 & 25; Bewdley area (H. Porter Collection, Bewdley Museum).
- 17; 3 & 4 St. Mary's Lane, Much Wenlock (A. & G. Shields Collection, Much Wenlock).
- 18; Abbey Foregate, Shrewsbury (J. Andrews Collection, Shrewsbury).
- 19; from 'Zeba', Fish St, Shrewsbury (Private Collection, Shrewsbury).
- 24; found at John Newall's kiln site, Cleobury Mortimer (John Williams Collection).
- 26; found at Pipe Aston, near Ludlow (Ludlow Museum, Acc. No. 18/67).
- 27; from Ludlow (G. Berlyn Collection, Ludlow).
- 28; from fieldwalking near Willaston, Cheshire (National Clay Tobacco Pipe Archive).

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