

Chapter 15

Tanneries and Treescapes: the Influence of the Tanning Industry on Woodland Management

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Abstract

The relationship between supply and demand for wood, timber and bark in different markets, geographical areas, and times is complex, but there are common themes. These relationships have influenced the form, structure and management of woodlands; and their legacies can be seen today. Using examples from the UK and the USA, these common themes are considered and some complexities arising from responses to local economic conditions highlighted. Bark is sometimes described as a waste by-product of other wood and timber industries. However, it is clear that with the high economic value of the tanning industry as a whole, and the central role of leather goods in society for centuries, the impact on woodlands to ensure a ready supply of tree-bark for tanning varied but could be immense.

Introduction

From an early twenty-first century, Western perspective, it is difficult to appreciate the central role that leather and woodland products once had. Furthermore, even the memories of past, traditional uses have often been lost (see for example, Rotherham, 2007; Rotherham et al., 2008). They were fundamental to everyday lives and their economic influence shaped the way societies developed. Problems of supply of tree-bark, rich in tannins, to meet the demand for leather were eventually solved by finding alternative reliable sources of tanning agents. However, this did not start to have a significant impact until later in the nineteenth century; until then the woodland resource had to be used. Varying around the world, but in Britain by the late 1800s and early 1900s, concerns were being expressed about the collapse and loss of traditional rural industries and crafts. FitzRandolph & Hay (1926) and Jones (1927) for example, provide detailed accounts of the rural industries including ‘Oak-Bark Tanneries’ in England, and ‘Tannery and its subsidiary industries’ in

Wales. These accounts provide in-depth insights into the processes, the products, the craftsmen, and the markets. We consider these in detail in a later paper. Interestingly however, some writers do not seem to recognise tanning as a rural craft (e.g. Green, undated, late 1800s).

Earlier writers have not considered how bark was exploited in different circumstances, and the way this has affected the present woodland resource. However, we begin to address these issues in outline below.

Leather Goods

Before the widespread use of rubber and plastics, leather supplied the material for making a vast range of goods. These ranged from the everyday water buckets, boots and shoes, belts and harnesses, saddles, aprons, gauntlets, gloves and bellows to military and ceremonial costumes, luxury items and belts for driving industrial machinery. Many of the products needed different types of leather. These were produced using different animal hides and tanning techniques. The variation in the techniques included using different tanning agents in different concentrations for variable amounts of time. In England, this eventually led to the development of tanning industries in different parts of the country specialising in making specific types of leather. For example, glove making was important in Wiltshire, boot and shoe making in Northamptonshire, and ‘heavy’ harnesses and saddles in Walsall in the West Midlands. The Sheffield area was also noted for producing “... the best sort of thick or Bend Leather” (Farey, 1817) which was used for the soles of boots and shoes. Farey (1817) goes on to say that the bark was not crushed or ground but chopped “in pieces about an inch square, the slow spending of which among the Hides was supposed to convey to this Bend Leather, much of its valuable properties ...”

During the Ottoman Empire, a specialised leather industry grew up producing fine highly decorated leathers known as ‘Moroccan leather’, which was exported across

Europe. This led to the growth of a large tanning industry in Istanbul building on the older industries in Anatolia. A range of plant-based tanning agents were used which included oak (acorns and oak galls) but also included alder, maple, chestnut leaf and pomegranate husks. These gave the leather distinctive colours in contrast to the darker colours, which resulted from oak-bark tanning.

As well as specialist producers and regions, there were still domestic-scale tanners and fellmongers who would cater for local markets. They would exist in most large villages and towns in the UK and elsewhere, converting hides from locally slaughtered horses, cattle, sheep, goats etc. into leather, working alongside the butchers and tallow manufacturers. The tanners would need a convenient source of tanbark. The fellmongers produced 'light leathers' which had not been through the heavy tanning process but used agents such as a mixture of alum, sodium chloride and egg yolks to preserve the hides. These light leathers were similar to the 'Moroccan leather' already mentioned.

The Tanning Industry

The tanning industry, the process of preserving animal hides and skins by turning them into leather, is an ancient one. Originally starting with small-scale production as a way of preserving hides from animals slaughtered domestically, the industry grew eventually into small, medium and large-scale commercial businesses. The methods used follow a similar pattern as in earlier times, although the ingredients in the preparation and preservation of the hides and skins may differ across countries and have changed over the centuries. The hides and skins first have to be cleaned and prepared before they can be turned into leather. Then they are dried and finished before being turned into leather goods. The stages in the tanning process are illustrated in the photographs taken at Claytons of Chesterfield, one of the few remaining large tanneries in England (Photograph 1). Although tree-bark tannins to turn the hides into leather are no longer used at the Chesterfield site, the series of tanpits has been reused. The hides are passed through the sequence of tanpits, which have increasing concentrations of tannins in them until the hides are fully cured. A process that used to take up to two years using bark now takes around six months.

The chemical used as the preservative can come from mineral or plant sources. Until the late nineteenth century, most of the industry used tannins from plants. Tannin occurs in high concentrations especially in the bark of some tree species, for example, oak, mimosa, tanoak and hemlock. This gave rise to the widespread practice of harvesting and processing tree bark for use in the tanning industry. Whilst mineral sources have been derived from chromium and alum salts for thousands of years, it is only in the last 150 years, as the technology changed, that these have become the most commonly used agents.

Tanneries also make use of wood and timber in a variety of other ways. For example, the tanpits are lined



Photograph 1: The Tanning Process at Claytons of Chesterfield in 2006. (a) Liming pit, (b) The hide preparation frame, (c) Tanning pit, (d) Drying room (Collection of C. Handley / I.D. Rotherham).

with wooden planks, the hides are suspended from wooden poles into the pits, and the drying rooms and frames are constructed from wood. This is evidenced by early records as for example, Mead (1989) noted, in 1881 a local tanner bought 100 tan-poles for 6d from the Ashburnham estate in Sussex. Where bark was crushed in a mill before being mixed with water to make the tanning liquid, the cogged grinding wheels were also made of wood. Whilst not needing the equivalent quantity of wood and timber as bark, these uses illustrate the additional need for woodland products in tanning activities.

The processes involved in tanning and the length of time that it took to turn hides into leather meant that capital costs were high for tanners and tanyards could be extensive. Tanners were sometimes wealthy businessmen with interests in livestock farming and also owning woodlands. For example, the Birks family from the Sheffield area who owned the main tannery in the Woodhouse district during the nineteenth century were also livestock farmers. They had farmed in Woodhouse since the early seventeenth century and had rights to pasture their cattle on Woodhouse Common. They were allocated land under the parish Enclosure Act in 1805; some was wood pasture and other fields are shown as woodland plantations in a land survey of the mid-nineteenth century. The Birks' connection with the tannery industry in other parts of Sheffield and Rotherham stretches back to the seventeenth century and included intermarriage with one of the other major tannery families in the Sheffield area, the Rawsons (Frost, 1995). The village of Woodhouse was a local centre for the tannery industry from at least the seventeenth century to the mid-nineteenth century with three separate tanneries at the edge of the village. Records from bark sales in nearby 'Oaken Cliff Wood', in 1710, show that Lyonel Keyworth, a tanner in Woodhouse paid 10 guineas for 62 qts of bark, which had been peeled and dried in the wood (Jones, 2009). The main market for the leather in Woodhouse at this time appears to be for boot and shoe manufacture; there were 10 shoemakers in the village out of a total population of around 200 at the 1841



Photograph 2: Workers at P.P. Birks Tannery, Woodhouse (Sheffield, UK) with the bark-stack in the background (1905) (Collection of C. Handley / I.D. Rotherham).

census. By the late nineteenth century, the Birks' tannery was the only one remaining but the business was still expanding (Photograph 2). Woodhouse was also growing rapidly because of the coalmining industry and the tannery, which had once been on the edge of the village, was now in the commercial centre. A consequence of the changed context was that it could not expand further and develop in response to new markets. The result was that the Birks' tannery closed in 1906; one of the reasons being that the pollution from the tannery processes regularly overloaded the new parish sewage system. This caused huge problems for the village and surrounding area and the cost of remediating this fell to the tannery. This example of a small to medium size business appears to be typical of the tanneries that were common across England up to the late nineteenth century. For example, the Batners Tannery in Lingfield, Surrey, owned by the Kelsey family in the nineteenth century (Bateson, 2006) followed a similar pattern. In the 1841 census, the owner was described as a 'farmer and tanner' and employed four tanners; and there were sixteen shoemakers and two saddlers and harness makers in the parish. By 1881, the number of tanners had risen to seventeen but by 1891, the number had fallen to nine. According to Bateson, it continued to supply boot-makers, shoemakers and saddlers until it closed in 1897.

Larger tanneries such as the Ormerod business in Shropshire had to source their bark supplies from a wide area. In the mid to late nineteenth century, they were buying 250 to 300 tons of bark annually and sourcing it over a twenty-mile radius. This would traditionally be Oak (*Quercus robur* and *Q. petraea*) in the UK but by the nineteenth and early twentieth centuries other trees such as Sweet Chestnut (*Castanea sativa*) were sometimes used as tanneries began to experiment with other sources of tannin. Ormerod's continued to use bark until the first world war when the increased demand for leather meant that they needed to find a quicker method of production. Using oak bark took between 15-18 months but this could be cut to 6-12 months using other non-vegetable tanning agents.

Economics

The overlying trends in the rise and fall of bark prices in the UK from the late seventeenth to the early nineteenth centuries has been well documented and discussed by Clarkson (1965; 1966) and Rackham (2006) amongst others. They also discuss the difficulty in arriving at an average price because of the multitude of ways that the bark was harvested and sold in different areas of the UK. Prices for bark fluctuated annually, sometimes influenced by speculative harvesting and stockpiling versus a stable supply and steady income. Prices were also influenced by whether the bark was seen as a by-product of harvesting wood and timber for other purposes e.g. charcoal production for metalworking or house and shipbuilding or as the prime commodity. In some woods, most of the income for the owners came from charcoal production, others the balance between income from wood and bark was more even. In some cases, bark production was the prime focus. The balance between incomes from different woodland products also changes over time as shown by Tittensor and others in their work on the economic value of Scottish coppice woods. Around Loch Lomond and Knapdale, industrial coppice woodlands first developed in response to Lancashire iron-founders moving into the area in the seventeenth century to exploit the woods for charcoal as supply in Lancashire could not keep pace with the demand for iron. A further market developed in the later eighteenth century for the coppice woods supplying tanbark to large tanneries in the Glasgow area. Charcoal production decreased as the techniques in smelting iron changed but the need for coppice wood continued with increased demand from the tanneries. It was only when other tanning agents became common in the later nineteenth century when demand for the oak coppice wood dwindled and coppice management was abandoned.

Tanners needed a ready supply of hides, water, lime and bark. This would preferably be a guaranteed supply chain or at least one, which they had some control over. They may enter into long-term contracts, have favoured suppliers or keep stocks in reserve. From the perspective of the tanners, there were four main scenarios for the procurement of tanbark, all of which would influence the price paid. Firstly, tanners purchased the peeled bark from the woodland owners or their agents who let the process of peeling on an annual basis or at each fall to groups of 'peelers'. The bark could be 'rough' i.e. unprocessed, part-processed or fully processed (cleaned, dried and chopped in pieces and put into sacks). Secondly, tanners negotiated contracts with the woodland owners or their agents and were themselves responsible for getting the bark peeled, dried and taken away. Thirdly, woodland owners organised or let the areas of woodland separately to peelers/ barkers and timber merchants who then sold the product to tanners. Lastly, the timber and wood merchants had the contracts with woodland owners and they organised all work in the woodland to harvest the range of products and sell the bark to tanners.

The Woodlands

In the UK the best source of plant-based tannin, was from the bark of the oak tree. Indeed, in medieval England oak was the only legal source of bark for tanning (Muir, 2005) and in 1603 an Act of Parliament set out detailed regulations for cutting, peeling and selling bark (Rotherham, 2013). This was in response to local entrepreneurs stockpiling quantities of bark creating artificial shortages leading to higher prices. The Act was not repealed until 1808 by which time market conditions had already changed considerably and bark was being imported and exported abroad as well as across regions.

Peeling the bark is a destructive process for the tree so it commonly took place when the tree was being harvested for its wood or timber. This was not always the case and in some parts of the UK, trees were peeled and then left standing to be harvested later. This seemed to be the common practice in parts of Derbyshire and the West Riding of Yorkshire where a shortage of labour was given as the reason. However, it also occurred in Sussex where timber merchants left peeled trees standing in the belief that it speeded up the ‘seasoning’ process so that “allowing it to stand in that state three years, to season before felling it, has the same effect ... as allowing the tree to stand with the bark on it for 25 years longer..” (Young, 1813). The concentration of tannin in the bark also varies with the age of the tree and the timing of peeling. It was found that bark from trees that were between 18 and 32 years old gave the best yield, the exact age varied because of the growth conditions of the tree. Therefore, in the west of Scotland the optimum age for the tree was older than in southern England.

The rise of the ‘oak coppice with standards’ woodland in the medieval period where multi-stemmed oak trees were cut on a cyclical basis and standard timber trees harvested on a longer cycle also served the needs of the tanning industry. If the tanners had access to bark harvested at the right age, (when the coppice was cut), they were able to extract the maximum amount of tannin from the minimum amount of harvested bark. ‘Coppice-with-standards’ became the preferred model for industrial woodland production until the end of the nineteenth century in many parts of the UK; it served the need for wood, charcoal and timber as well as bark (Photograph 3). In these woodlands oak was favoured above other species such as Birch, Aspen, Hazel, Alder and Willow. In Scotland, these were known as ‘barren timber’ and were selectively removed to be replaced by planted oaks imported from England (Tittensor, 1974). This practice also occurred in other areas where oak was the most economically valuable tree for the woodland owner. In some of the arable areas of the UK different tree species were used as standards and coppice stools, for example oak or beech as standards and hazel as coppice, in the local woodlands. These species also reflected the uses made of them in support of agriculture or local industries. As Farey says in the survey of Agriculture in Derbyshire (1817), hazel was removed from local



Photograph 3: Outgrown Oak Coppice Woodland in South Yorkshire (Collection of C. Handley / I.D. Rotherham).

woodlands although it occurred in hedgerows because “... [it was] an unprofitable Underwood ... owing to it having no particular Application or Use in this County, as it has to the crates of the potter and glass-maker in Staffordshire, to the coal corves in Durham ... to small Cask Hoops, wattled Hurdles, &c. in other places.” He also comments that woodland owners in Derbyshire were not following the general trend of removing coppice woodland from areas with good soils and converting the land to agriculture something of which he approved. And goes on to say, “... that the want of value in the Roots and Fire-wood, and the high price of labour, would occasion an expense of 20l . to 25l. per acre to clear the Wood lands fit for cultivation ...” The owners felt this was not worthwhile when they still had a good market for their coppice products.

In some areas such as the southern West Riding of Yorkshire, the Sussex and Kent Weald, the West Midlands, Wyre Forest and the Forest of Dean in the Wye valley, these industries developed side-by-side both needing woodland products and an abundant supply of water. Their underlying geology provided ironstone and the soil conditions, which favoured the growth of oak. The agricultural system was more pastoral than arable and there was a local industrial economy based on dual occupations. This was geared towards a system of small entrepreneurs, manufacturers and labourers who were also farmers and had other seasonal occupations.

In areas such as the Vale of York, with a different geology from the Sheffield study area, and where in medieval times, many of the coppice woodlands were owned by the Church, it was firewood for York, not charcoal, that was the main commodity. There were occasional sales of bark and underwood recorded in the accounts but this was a small proportion of the whole. The area, originally fenland, became good agricultural land after it was drained, and there was increasing pressure on the woodlands themselves as the population grew and York expanded. After the mid-sixteenth century with the

religious upheaval and appropriation of Church lands, pressure on the woodlands increased (Kaner, 1997). The market was principally still for underwood and timber to supply faggots for fires and building projects to keep pace with the growth of York and the area around it. As Kaner (1997) points out this was not always sustainable and furthermore the woods' survival depended on whether the income generated from exploiting the woodland outweighed the income that could be generated from converting to other uses. She points out that unlike other areas in North Yorkshire there was no local metalworking industry, which needed constant supplies of charcoal and the proportion of woodland declined drastically. In common with most other large towns there was a tanning industry in York but it does not appear to have been sufficiently large enough to exert an obvious influence on local woodland management.

Larger coppice woods were sub-divided into compartments so that they could be managed on rotation to provide a steady supply of woodland products and regular income for the owner. This was a long-term commitment as the interval between coppice harvesting could be at least 15 years and often more, and for timber trees, may be anything from 40- 50 years. The woodland would need to be managed and protected at least in the first years after the coppice was cut to make sure the new shoots were growing well. When the trees were ready for harvesting, the woodland owner could have several different avenues open to him to ensure that he got the maximum return on his investment. For example, he may use his own estate workers to harvest the trees and sell the constituent parts to charcoal makers, tanners, millwrights, carpenters etc. Alternatively, more usually, his agent would negotiate with the peelers/barkers, timber merchants, charcoal makers and woodland craftsmen etc. to allow them to harvest and use the relevant parts of the trees for their trades.

If bark was part of the harvest, the peelers and barkers would be the first people in the wood starting work in the spring as this was the season when the sap was rising, the bark was easiest to peel and had the highest concentration of tannin. Whole coppice stools and standard trees (which were to be felled in that cycle) would first have a section of bark removed to allow the coppice poles and trees to be cut down without damaging the bark (Photograph 4). Once cut down, the remaining bark would be removed from the coppice poles, tree trunks and branches straightaway before it dried out and became difficult to peel (Photograph 5). Smaller branches and twigs were also peeled so that nothing was wasted. Women and children often undertook this latter work, whilst men carried out peeling of the larger branches and trunks. Once peeled the bark then needed to be picked clean of moss and lichens and set out to dry on frames. When it was sufficiently dry it would be gathered into large piles which would be covered with rushes or straw (thatch) and stored until transported to the tanneries. In the English Lake District, the bark was stored in stone built barns (Photograph 6).



Photograph 4: Felling the Tree to Peel the Bark, North Kent (UK) in the 1930s (Collection of C. Handley / I.D. Rotherham).



Photograph 5: Peeling the Bark, North Kent (UK) in the 1930s (Collection of C. Handley / I.D. Rotherham).

Harvesting the bark was seasonal work and in some parts of England would be carried out by families working in groups who would travel from woodland to woodland harvesting the bark. In Sussex and the Weald, these were known as 'flawing gangs' who worked on circuits travelling north as the bark harvest progressed (Mead, 1989). The timing of the bark-peeling harvest was critical if it was to be done at the easiest time for peeling and if they were to get the highest yield of tannin. The season varied across the UK, starting earlier in the



Photograph 6: Bark Barn in Roudsea Wood, Cumbria, UK (Collection of C. Handley / I.D. Rotherham).

south of England (early April) and later in the west of Scotland (May) but usually lasted about 8 weeks and was dependent on the start of the sap rising through the tree. Albert Link, a bark-peeler from the Wyre Forest, described how he would cut a slit in the bark on the east side of the tree to see if the sap had started to rise. According to Albert, the east side of the tree was usually the one, which gets the most sunshine and where the sap would start to rise first. If the bark came away easily, it was time to start harvesting the bark.

In other areas of the UK, such as the southern West Riding of Yorkshire and North Derbyshire, which also had ‘coppice-with-standards’ oak woodland, the coppice stools and timber trees were peeled at the same time but the timber trees were left standing to be felled later. This may have been driven by the demand for tanbark, the lack of demand for timber, the lack of labour to fell and process the timber or the understanding that the timber would not become unusable if left standing for a few months. ‘Coppice-with-standards’ woodlands developed in England as multi-purpose economic units which could cater flexibly for different demands, changing as markets developed. They were a response to pressures on land use where food production was of primary importance and there was still a huge need to provide domestic sources for wood and timber.

Moving away from the traditional ‘coppice-with-standards’ woodlands style of management, the harvesting of bark can be seen as a more straightforward economic process. Lindsay, Tittensor and others have described how the ‘coppice with standards’ system was imported from England to western Scotland to cater for the increased demand for charcoal and bark. Some of these woodlands were already being harvested for bark, wood and timber but not in a controlled economically sustainable way. It was only when the increased investment needed to set up and manage ‘coppice-with-standards’ woodlands became worthwhile with expanding markets, long-term planning, and significant economic

returns, that this system developed in Scotland from the late seventeenth century. By the middle of the nineteenth century, it was already in decline because of changing economic conditions. During the two hundred years or so that the woodlands were managed using the coppice system the species composition also changed with oak planted in preference to other species. As the demand for oak coppice decreased new local industries, such as pyroligneous chemical manufacture were developed and species such as Birch and Alder were favoured again. Some coppice woodland was converted into high forest for timber production, whilst other areas were allowed to revert to pasture woodland. This was either deliberately, as owners focussed on sheep, or through neglect as the coppice compartment boundaries were not maintained. The result was that the type of woodland common and thought typical in Scotland was more extensive and varied than the heavily managed coppice woods of southern England. Many of the English woods were also converted to high forest later in the nineteenth century and into the twentieth century as markets for the coppice produce changed and declined. However this was not uniform and even into the late twentieth century some woods were managed using a coppice system where there was still a market for products such as ‘pit props’ for coal mines and fence posts. In a few of these woods, for example the Wyre Forest in the West Midlands there was also still a market for bark supplying the few small tanneries which continued to use oak bark in the tanning process. However, by the middle of the twentieth century almost all of the remaining tanneries in the UK used other tanning agents, which were easier to handle, and tanned the hides more quickly. The Downton tannery in Wiltshire closed in 1998 by which time it was using extracts of mimosa imported from South Africa as its source of tannin.

The changes and impact on woodland is particularly evident in the development of the tanning industry across the USA. In the Northeast and Mid-west, the tree with the highest tannin content in its bark is Western Hemlock (*Tsuga heterophylla*) rather than oak. It gave a rich reddish-brown colour to the leather in contrast to leather from the Southern USA, which was tanned using oak, and had a lighter yellowish colour (Canham, 2011). Further west, in California the Tanoak (*Lithocarpus densiflorus*), an evergreen hardwood, was harvested. The tannins from the bark of this tree also contain acetic and gallic acid which is particularly suitable for producing heavy leather such as saddles and harnesses (Tappeiner, McDonald and Roy, 1990). Both species of tree can form pure stands on mountainsides in humid situations but also grow mixed with pines and other species. The old-growth forest and woodland was exploited across the country to support the tanning industry with large areas of trees harvested solely for their bark and timber often left to rot in situ.

In the 1880s, in the Rib Lake area of Wisconsin, the peeled hemlock trees were left standing but by the 1890s the timber was being used to make cheap coffins which could be covered in cloth (Rusch, 1981). The quantity

of Hemlock available coupled with the rapid growth of the tanning industry which was linked to the rise in cattle ranching did not lend itself to the establishment of a coppice system modelled on that of countries such as England. Instead, bark was harvested intensively on an industrial scale until the supply was exhausted in a local area and then the workers and industry moved to a new area. Until the expansion of the railway network in the late nineteenth century, which improved transport, links it was better financially in the Eastern states to site the tanneries nearer to the source of the bark because of the difficulties of moving the large quantities of bark needed by road. In the early twentieth century, the tannery industry in the San Francisco area of California received their bark supplies by ship. The bark was brought from the peeling camps initially by pack mule to collection points and then transferred to ports at the coast. Most of the supplies were shipped as pieces of bark but there was also a processing plant at Greenwood where the tannin was extracted from the bark in heated vats and the tanning liquid shipped in containers to the tanneries in San Francisco (Moungovan, 1906).

Canham (2011) describes how the tanning industry first moved into the foothills of the Catskills where hemlock was abundant. Whole towns developed around the tanneries, some such as Tannersville and Prattsville survive today. At Prattsville, the tannery operated for just twenty years (1825-1845) but in that time it used “100,000 cords of hemlock bark from an estimated 400,000 trees”. When the supply of bark was exhausted from the local area the tanneries closed and moved further inland (and into the mountains) to new areas where hemlock was abundant and new tanneries were opened. These tanneries operated at a large industrial scale employing hundreds of people directly and indirectly. The pollution from the tanneries and the waste from leaving the timber to rot exacerbated the problems for the regeneration of the hemlock forests.

The Rib Lake, Wisconsin tanneries did not open until the 1890s as European immigrants and farming moved west. These tanneries were one of the main centres, which again developed close to hemlock forests. Rusch (1981) says that in the early 1900s there was so much hemlock bark being harvested that “a steam hauler was used to bring the bark from outlying lumber camps”. As well as the commercial companies harvesting bark, local farmers were also involved. Around 1900, farmers were paid about 6US\$ per cord delivered to the tannery. As Rusch remarks, “by the economic barometer of the time, [this] was good money and farmers could peel many cords in a season”. The farmers used horse-drawn sleds at the beginning of winter to transport the bulky dried bark, as this was the easiest form of transport.

The same tools and terms were used which would have been familiar to the barkers and peelers and ‘flawing’ gangs in the English countryside. This is not surprising as the workforce was drawn from European immigrant labour nevertheless the accounts of the work give interesting insights into how the work was organised. Moungovan



Photograph 7: A barking iron or ‘spud’ from South Yorkshire, England used to peel bark from trees. Courtesy of Joan Jones, 2012 (Collection of C. Handley / I.D. Rotherham).



Photograph 8: Old Tanning Vat, Santa Cruz, California (Collection of C. Handley / I.D. Rotherham).

(1906) writing about the work of the lumberjacks in Mendocino County, California also describes the work of the barkers and peelers. Although he says that the tanbark camps and logging camps were separate operations, he describes how, “when the logs were cut into saw logs, the barkers started to peel the logs, one barker or peeler to a log.” He also describes the implement that was used to peel the bark, “the peeler bar was a steel bar from four to five feet in length ...with a wide bit of the finest tool steel which was welded onto the bar...” Rusch (1981) describes a similar implement in use in Wisconsin and calls it a ‘spud’(Photograph 7), a term for the implement as well as the implement itself, which would also be familiar to the English peelers.

Warren Ormsby, who worked in the bark peeling camps in the coastal forests of California at the beginning of the twentieth century, gives a similar picture to Moungovan but says that two men worked as a team peeling the bark and “two men who could peel four cords a day were considered to be good woodsmen”. Their day was from six in the morning to six at night, with half an hour for lunch. Mendocino County where Warren worked was the centre of the tanoak bark industry. Here the peelers felled trees, which were between 18inches and 3 feet in diameter, opening up areas so that the lumberjacks could

move in and fell the Redwoods and Douglas Firs that remained. He also goes on to describe that over the years that he worked in the industry the camps had to move into more remote areas and the job became more difficult as the stands of tanoak were depleted.

Tanning also took place on a domestic scale on individual ranches and in small settlements across the USA as elsewhere. The illustration in Photograph 8 shows a tanning ‘vat’ in California carved from the trunk of a single tree which was probably used in domestic small-scale production. It gives a further example of the uses of wood and timber in the tanning industry over and above the harvesting of bark.

The Legacy in Today’s Woodlands

Rackham (2006) makes the point about the importance of the tanning industry at the peak of production in shaping today’s woodland legacy in parts of England, “There were thousands of acres of oak coppice in which timber production was deliberately sacrificed for an increased yield of bark; their remains are still one of the most widespread British woodland types.” Timber production could be sacrificed because there were alternative sources of timber trees from abroad, unless supply lines were disrupted because of conflicts. Much of the coppice also fuelled the metalworking trades as well as the tanning industry and for woodland owners represented a quicker and more repeatable return on their investments than timber production. These relict oak coppice woodlands with their carpets of spring woodland ground flora are quintessentially seen as ‘typical’ Ancient Woodland with all the values that the name imparts. These Ancient Woodlands in Britain are now afforded some protection for nature conservation reasons. Examples of these woods and the relicts of the industrial past can be found in woodlands across South Yorkshire, the Sussex and Kent Weald, the Wyre Forest, the Wye valley and the Southern Lake District to name just a few areas.

In parts of England like Bishopwood (the largest in medieval wood in the Vale of York), where bark and charcoal were not the main commodities, the type of woodland evident today “is now a complete patchwork ... of deciduous wood, oak and ash with an understorey of hazel and ancient woodland indicators mixed with patches of conifers.” (Kaner, 1997). She goes on to say that in other parts of the Vale, for example at the Forest of Galtres around Easingwold, the main woodland resource by the early seventeenth century was pollarded oaks and heathy areas with poor soil. These woodlands, where they still exist, may be less obvious than the typical Ancient Woodland but may be able to demonstrate just as long a continuity as woodland.

The woodlands in the western highlands of Scotland had an industrial coppice tradition, which started later and was short-lived in comparison to England. The legacy and impact of this tradition is less obvious today. As demand for coppice products declined, landowners



Photograph 9: A shadow wood in upland England (Collection of C. Handley / I.D. Rotherham).

turned to alternative sources of income, largely either grazing or forestry (timber production), and the coppice woods were allowed to deteriorate. Extensive unregulated grazing and lack of protection of the coppice stools is shown today in the upland ‘shadow woods’ (Photograph 9) and wood-pasture type of landscape. The growth of commercial forestry, which obscured and changed some of the coppice woods, also occurred elsewhere in the UK. These woods and forestry plantations, which may retain some of the ancient woodland ground flora, have been identified under Planted Ancient Woodland Sites (PAWS) as areas, which could be restored to mixed broad-leaf woodland after felling operations.

In the USA, Canham (2011) states how “early writers saw denuded hillsides with rotting hemlock trees stripped of their bark and bitterly lamented the destruction of majestic hemlock forests which had stood for hundreds of years.” and that at the beginning of the twentieth century the popular view was that these forests were gone forever. Observation showed that the clear-felled hemlock forests did not easily regenerate compounded by problems of silted streams and eroded soils and in some cases “piles of hemlock bark left rotting in the woods.” However, by the beginning of the twenty-first century some of the hemlock forests have recovered and stands form part of the mix in the hardwood forests of New England, New York state and Pennsylvania. The timber is now harvested for wood pulp. There is a similar picture in California where there are sufficient quantities of tanoak that it is a designated commercial species also used for wood pulp and here, for fuel.

These different examples show the effects of the tannery industry on woodlands varied depending on the longevity and intensity of the industry at particular points in time. They also show that the legacy of the industry has helped to shape today’s woodlands, their species composition and their impact on the landscape. The relationships of this industry and craft to its communities, its landscapes and to other activities are complex and

clearly merit further work. FitzRandolph & Hay (1926) and Jones (1927) document the disappearance of small, rural tanneries and bark merchants across England and Wales. They also attribute this in part to changing demand in various markets. So the reduction of reliance on horsepower in the early twentieth century and hence a decline in the market for small-scale tanneries and saddlers, with moves for both towards large, more industrial-scale providers. These are interesting interactions related to wider issues of woodland management and local economic history, and will repay further studies in more detail.

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