Pondhead Conservation Trust

COPPICED WOODLAND

WHAT IS COPPICING?

The term “Coppicing” is derived from the French word couper (to cut). Coppicing involves cutting trees down to the ground leaving a “stool” (stump), which then naturally regenerates into a mass of straight branches. Coppiced areas within a woodland are known as “coupes” (or coups). When large enough the new branches are coppiced again, with different coupes being cut each year on a rotation basis. Each time coppicing takes place, it effectively resets the tree’s time clock and extends its life. Some of the oldest trees in British woods are coppice stools which may be more than 1,000 years old.

A coppiced wood generally has a mosaic of coupes at different stages of growth. Work traditionally takes place during the winter – October to the end of March. Coppice material cut in the winter works better and lasts longer than that cut when the sap levels are higher. The regrowth from the cut stools can be remarkably fast and it is quite normal for many species to reach two metres after their first year. New stems arise from dormant buds on the stool. Most shoots come from above ground, but in hazel they can emerge just below the surface. Coppiced trees are often referred to as “underwood”.

HISTORY

Coppicing is the oldest form of woodland management that has its origins in Neolithic times. Archaeologists have discovered an ancient causeway in the Somerset Levels that was built across boggy ground, almost entirely from coppiced wood and dating from around 3800 BC. Evidence of coppicing has also been found throughout Bronze, Roman and Saxon periods. At the time of the Domesday Book (1086), coppicing was widespread throughout lowland England.

By the thirteenth century, most of English woodlands were managed as either pure coppice (single species), mixed coppice (multiple species) or coppice with standards (where some trees, often oak, were left to grow on to maturity to produce larger sized timber). Most medieval woodlands are thought to have been largely coppice with standards. These coppiced woods provided a constant crop of manageably sized timber, which was easy to handle and transport by cart.

The sixteenth and seventeenth centuries brought about new markets for woodland produce, primarily charcoal to fuel the early iron industry which continued up until the late nineteenth century when cheap coal became available, replacing charcoal and wood as the main form of fuel.

TREE SPECIES THAT RESPOND TO COPPICING

Many deciduous trees can be coppiced and amongst those that coppice readily are alder, ash, birch, field maple, hazel, oak, willow, small-leaved lime and sweet chestnut. Hazel and chestnut are two of the most common species to be coppiced while other species, such as beech and hornbeam, can be coppiced, but are slow to respond. Historically, Kent and Sussex were mostly associated with sweet chestnut whereas most of the coppiced woodland in Hampshire contained hazel.

Most conifers do not coppice as they will not grow back after cutting, except for yew.

COPPICE CYCLES

This is the length of time the coupe is left before it is cut again and is dependent on tree species and the purpose for which the cut timber is required. Cycles can vary between 7 and 25 years – the longer it is left, the larger the diameter of the timber. Hazel was traditionally cut on 7/10-year cycles whereas sweet chestnut on 15 years. Nowadays, much will depend on the purpose for which coppiced timber is required.

TRADITIONAL COPPICE PRODUCTS

Traditionally, coppiced woods provided two main crops – poles (sometimes referred to as rods) cut from the coppiced trees while timber obtained from the standard trees, was usually used for structural building purposes. Uses for the coppiced timber included wattle and daub for construction of walls, thatching spars, hurdles, tool handles, charcoal, besom brooms and hop poles. Historically, coppiced woodland provided building materials over many centuries, long before the advent of Builders' Merchants.

ISSUES AFFECTING COPPICE QUALITY

The growth of deer populations and expansion of species ranges in recent decades has meant that deer are now present in most woodlands. Sources claim that Muntjac, Roe and Fallow are reaching epidemic proportions. The fraying (rubbing antlers on saplings), bark stripping and, more damagingly, browsing of hazel coppice re-growth by deer are a major factor in the decline in the quality of both in-cycle and restored hazel coppice.

Canopy cover from standard trees exacerbates the impact of browsing by deer and the combination of the two is the most likely cause for stool mortality and death of the coppiced tree. The accepted level of canopy cover for economically viable coppice is between 20% and 40%. Levels above this reduce light levels and although many coupes have canopy cover in excess of this, it has been shown that a significant shading effect from standard trees contributes to a decline in coppice quality.

WILDLIFE BENEFITS

It is widely acknowledged that coppicing significantly improves the biodiversity of a woodland. Many woodland plants can survive for decades as buried seed and are likely to respond well when neglected woods are re-coppiced.

Many woodland flowers, benefit as it gives rise to alternating periods of light and shade ensuring that they can flower periodically after periods of dormancy. These flowers flourish because of the increased sunlight reaching the woodland floor. The most dramatic response is often seen in the second, or occasionally the third year after cutting, when the flowering and vigour of many plants are at a peak.

As with plants, many species of butterfly have long benefited from coppicing. Most woodland butterflies have just one or a very small number of plants upon which their larvae (caterpillars) will feed and in the absence of the correct larval food plant they cannot breed. Most of their larvae feed on plants which occur along rides and in open sunny areas such as those created by coppicing. Adult butterflies do not generally have such specific food requirements as their larvae, but instead take nectar from the increased range of the flowers present following coppicing.

Birds respond well to coppicing, as they are highly mobile and can quickly take advantage of any suitable new habitats that become available. Many species benefit from the mosaic of habitats created at different stages of growth, As coppicing allows more flowering plants and grasses to grow, it provides food for insects which in turn provide food for other animals such as birds and bats.

DECLINE IN COPPICED WOODLANDS & ITS CONSEQUENCES

From the early Middle Ages until the late nineteen century most woods in lowland England were coppiced. By the late 1800s coppicing was on the wane as alternatives to coppiced products began to emerge. Coppicing was labour intensive. As traditional markets collapsed and prices for the product fell, wages came under pressure and new coppice workers could not be recruited against the competition of better paid and less arduous work that became available in the towns. Sadly, the use of plastics and mass production techniques meant that many coppiced woodlands became unviable, and hence the coppice cycle stopped, with the result that coppiced woods became 'derelict' and overgrown, with a permanent high canopy and low biodiversity value.

Demands for firewood and charcoal diminished as coke and coal became alternative fuels, and this led indirectly to an increasing preoccupation with coniferous plantation forestry. Between 1900 and 1970 there was at least a tenfold reduction in the area of actively coppiced woodland in England. Many woods last coppiced between 1920 and 1950 have been grubbed out or converted to conifer plantations. Others have simply been neglected and are often referred to as “overstood” in this state.

The decline in this long history of coppicing has profoundly influenced the plants and animals now found in many semi-natural woods. Many woods have become much poorer in their ground vegetation and in insect species following the decline in coppicing. Some butterflies require the open conditions of newly cleared woodland

which was once widespread that coppicing provided. Many of the woodland fritillary butterflies, such as the Pearl-bordered Fritillary, have become much rarer since the decline in coppicing – its population has declined by 80% since 1985.

The UK already has the lowest woodland cover in Europe and various surveys and studies this century have produced the following headline conclusions: -

- 1 in 6 woodland flower species is threatened with extinction
- There has been a 56% decrease in woodland butterflies
- The woodland bird indicator is at its lowest level since 1970
- UK woodlands are losing their diversity of plants

It is now recognised that there is an urgent need to bring more of the UK's woodlands back into active management to reverse these worrying trends. As a result of this and an uplift in demand for natural products, coppicing has experienced a modest revival in recent years. This renewed interest has been driven both by the conservation sector and coppice workers who are striving to make a living in the woods. The area of woodland owned or managed by conservation groups has grown in recent times.

THE FUTURE

All credible research on the subject strongly supports the argument for more actively coppiced woodland but putting this desire into practice is the difficult part of the equation. Much will depend on the funding available for woodland regeneration in the post Brexit era and the public turning more to natural and sustainable woodland products rather than cheaper, and often inferior substitutes, which are imported from all around the globe.

To quote from the National Coppice Federation, "*coppicing ticks many boxes in our modern world – wildlife benefits; sustainability; rural employment; carbon neutrality; amenity; local provenance and more."*