The countryside charity
CPRE Hertfordshire

Countryside Close to Home

Trees and shrubs

Hertfordshire has a reputation as a leafy county, although woodland covers only about 10% of its land area (about the same as the national average for England). There are trees everywhere, in parks and green spaces, along roads and residential streets, in gardens and in the countryside. Trees are very useful: giving shade and shelter, providing wood and timber, fixing carbon, supporting pollinating insects and providing habitats and food for many forms of wildlife.

Trees and shrubs, including woody climbers, are distinct from other types of vegetation because they grow permanent woody structures. Shrubs tend to be multi-stemmed, while trees grow a single trunk (although many are deliberately managed to be multi-stemmed).

Trees and shrubs from all around the world grow in Britain, following a long tradition of introductions for horticulture and timber production. Native species indigenous to Britain tend to support more species of wildlife than introduced trees and shrubs. This article features trees and shrubs in my garden, and the photographs have been taken by me unless otherwise indicated.

New beech leaves

Woodland is the natural vegetation for much of Britain, except in very wet places, on sheer cliffs and high mountaintops, or where the land is unstable. About 12,000 years ago the country was recovering from a very cold period when there were glaciers in some places and the rest of the land was tundra. As the climate warmed woody species began to grow again, spreading from further south in Europe. We know about this from deposits of pollen preserved in wet places like peat bogs and mud deposits in lakes.

As the glaciers retreated the sea level was rising and around 7,000 years ago the English Channel formed, isolating Britain from continental Europe. Only around 32 species of trees and a number of shrubs had arrived into what is now Great Britain by that time: these are the native species.

When we moved to our house in the Chilterns over 20 years ago, our garden then as now was partly surrounded by what look like old field hedges, containing field maple, elm, holly and elder. There was a line of overgrown beech hedging surrounding a sizable silver birch. Here and there were several multi-stemmed hazels and some mature fruit trees.

Field maple leaves

Apart from the fruit trees, all these species are native, and would have been familiar to the early inhabitants who first began clearing the wildwood to create grazing land and arable fields. They are all broadleaved species, sometimes called hardwoods, and apart from the holly are deciduous, dropping their leaves in winter.

Field maple flowers

Field maple is the country's only native member of the maple (Acer) family. With its small leaves it is often overlooked, but it is an important component of many ancient semi-natural woods in eastern England. Ancient woods are those known to have existed on a site since at least 1600 AD. 'Semi-natural' refers to woods which have been managed but which retain mostly native species.

Maple timber is prized for wood turning and carving, including for musical instruments. Its leaves turn a clear butter-coloured yellow in autumn, which is when the tree is most likely to be noticed.

In common with many trees, the field maple has flowers which are wind-pollinated and are small and yellowish green, typical of many that do not need to attract insect pollinators. After the flower is fertilized the winged seeds or keys develop, a characteristic of the maple family: these eventually help the seed to be spread in the wind.

It might be surprising to find living **elm** in a hedge, since most of the towering elms which were once a feature of the English landscape have disappeared, due to the Dutch elm disease outbreak of the 1960s and 1970s. The roots have often survived and regrowth from them can reach a height of 30 feet or so before succumbing to the disease again. Like many places in the country we still have small elm trees in our hedge – from time to time they die back and then regrow.

Elm leaves

The elm in this photo was photographed on Therfield Heath near Royston in 2012.

The leaf edges are toothed, and the leaf bases on either side of the central vein are uneven, two key recognition features for elms.

Holly is one of a handful of native trees and shrubs which are evergreen broadleaves. Its bright red berries and shiny, prickly leaves make it very distinctive. Often scattered in field hedges, it also sometimes forms pure holly stands in woods or is the dominant plant in the woodland understorey.

Holly leaves and flowers

In the past holly leaves were fed to livestock (surprisingly, given the prickles) due to their nutritious value. Holly trees were used to mark boundaries and to guide ploughmen.

Best known of all of course is holly's place in Christmas traditions, dating from pre-Christian times when evergreen foliage was a sign of the continuity of life in a season when other plants seemed lifeless.

Oliver Rackham's masterly study of woodlands in his book 'Ancient Woodland', first published in 1980, opened up a whole world of woodland archaeology, history and ecology. Of holly he wrote: 'The grandest stand of holly in Britain is in Staverton Park (Suffolk)', while 'in Sherrardspark Wood (Welwyn Garden City)...some of the hollies are almost as large as those of Staverton.'

Hollies are dioecious plants, meaning that male and female flowers are found on separate trees. The flowers look similar, except that on a 'male' tree they'll have only stamens (which include the pollen-producing anthers) and on a 'female' tree only styles with their stigmas (which receive the pollen). Later only the female trees bear berries.

There are **elder** bushes in my boundary hedges. Many people will be familiar with elder flowers which form large white heads or umbels in late May and June. These are edible and can be made into a muscat-flavoured cordial. They also pair well with gooseberries (try cooking them together when making a fool). Later in the year the dark purple berries can be made into wine.

Everywhere in the Chiltern hills there are woods of **common beech**, as well single beech trees in fields and hedgerows and on roadsides. Beech is only native in southern England, and is especially common on the chalk and limestone hills here; it has been widely planted elsewhere.

Beech develops into a tall tree and its bark is usually smooth and silvery-grey in colour. The trunks are often clean and straight, especially in woods where beech is managed to produce timber for furniture. It was often pollarded – the trunk cut higher than the reach of cattle or deer – to produce crops of wood for fuel and other uses, while animals grazed the pasture beneath.

A few beech trees form an overgrown hedge in my garden. The buds are encased in pale brown scales (see photo right), which are shed as the leaves emerge, then get blown by the wind and gather into heaps on the ground.

Beech buds and scales

The young leaves are bright pale green (see photo right) edged by fine white hairs, which will disappear as the leaves mature and turn a darker green.

Young beech leaves

Beech is monoecious, which means that separate male and female flowers are carried on the same tree. The flowers appear as the leaves emerge. The male flowers (second from left and far right in the photo left) comprise a yellowish ball of stamens which fall quickly. The female flowers (far left and second from right) develop into seeds, known as beech nuts, once prized as pig feed.

Beech flowers

The bark of **silver birch** (Betula pendula*)* is a distinctive silvery-white, with grey fissures developing as the tree ages. This is one of two native birches: the other is downy birch (B. pubescens), more common in the north and west of Britain and on wetter soils. Apart from oaks and willows, birch supports the largest number of invertebrate species (334) of any British native tree. These in turn become food for birds, other invertebrates and bats.

Invertebrates include insects and similar species.

Silver birch was often the first tree to colonise commons and heaths when grazing stopped. The tree's tiny seeds get blown a long way in the wind, which helps this process. Birches were also among the first trees to recolonize the land after the last ice in Britain disappeared.

Silver birch bark

Oaks often follow the pioneering birch trees as the woodland develops, sometimes with Scots pine as well. This is one of the classic woodland 'successions' recognised by ecologists.

Hazel has a long history of providing wood for all sorts of uses from thatching spars to hurdles to bean poles. After the last glaciers retreated hazel returned to Britain soon after the birches and is widespread in woods and hedges. For thousands of years hazel has been cut, or 'coppiced', on a regular rotation of seven to about 20 years to yield regular crops, then allowed to regrow. It normally forms a multi-stemmed shrub rather than a tree, even when it hasn't been coppiced.

Like beech hazel is also monoecious, with separate male and female flowers on the same tree.

The male flowers of hazel are the familiar catkins, often called 'lambs' tails', which appear long before the leaves, even in January if the weather is mild. The female flowers on the other hand are tiny brown oval structures from which bright red styles and stigmas appear a few days after the catkins on the same bush have shed all their pollen. This ensures that the fruits are cross-pollinated: avoiding in-breeding is important in plants as well as in animals.

Hazel catkins and flowers

In the photo above the female flower is just visible to the right of the catkins. After fertilization the seeds start to develop – they become the familiar nuts popular with people, dormice and squirrels.

Left
Young hazel nuts

Right
Hazel leaves are sometimes confused with elm, but have even leaf bases

Many gardens will have one or more **fruit trees**, especially apples, possibly pears, plums and cherries, and perhaps more exotic trees like apricots or peaches in very sheltered places. These all belong to the Rosaceae (Rose) family, which also includes other garden stalwarts like thorns (in the genus Crataegus), and rowans and other members of the genus Sorbus. Unlike the trees described above these fruit trees tend to have large showy flowers, a sign that they are pollinated by insects.

Apples, pears, plums and cherries all have related species which are native (sometimes doubtfully native): it used to be thought that our modern 'domesticated' fruit varieties are descended from these. More recent research has shown that our **apple** trees descend from a species found in central Asia, domesticated possibly as long as 10,000 years ago. The domesticated varieties would have arrived in Europe along the Silk Road and possibly interbred with our native apple *Malus sylvestris,* the crab apple.

Apple blossom

The fruits of the native crab apple are small and sour. Many ornamental and garden crab apples are Malus species from elsewhere in the world, or hybrids.

Often apple trees found growing in the countryside are not Malus sylvestris but a seedling grown from a pip of a domestic apple: these tend to have more edible fruits.

The European **pear**, Pyrus communis, is possibly not native to Britain, although it does occasionally grow in the wild. It is native elsewhere in Europe and in Asia, and our modern garden pear varieties are descended from this species. Pear blossom is always white, whereas apple blossom may be white or pink.

Tiny pears on my garden pear tree

A close relative of the domesticated **plum** is the native blackthorn (Prunus spinosa*)*, which has bright white blossom in late March and April and is a common plant in the countryside in hedges and on roadsides. Its fruit is the familiar and intensely sour sloe, sought-after for making into sloe gin.

The domestic plum Prunus domestica originated in Eastern Europe and the Caucasus mountains and probably has blackthorn as an ancestor. The plum trees in my garden flower early, often before pollinating bees and flies are on the wing, so I often get poor fruiting unless I remember to move the pollen between the flowers using a soft paintbrush.

Our modern cultivated **cherries** probably originated in Turkey, from two species, one of which is also native to Britain, the wild cherry or gean (Prunus avium*)*. There is another, lesser known native cherry, the bird cherry (P. padus*)*. Wild cherry is very common in Hertfordshire, as it favours clay soil over chalk which is widespread in the county, and it is common in woods. Its shiny reddish bark is distinctive, but it is most easily spotted in April when the still leafless trees are clothed in its white flowers.

The poet A E Housman immortalized the wild cherry in his poem A Shropshire Lad, set to music by George Butterworth*:*

> Loveliest of trees, the cherry now
> Is hung with bloom along the bough,
> And stands about the woodland ride
> Wearing white for Eastertide.

From my garden I can enjoy the flowering wild cherries on the edges of two nearby woods. In my garden soon after we moved here I (perhaps rashly) planted the double form of the wild cherry Prunus avium 'Plena'. It is becoming a sizable tree and may need to be pruned, but I love the spectacle of its white flowers, even though they only last a few weeks.

Prunus avium 'Plena'

Other garden highlights

Here are three wild flowers growing in my garden:

Red campion

In the wild this member of the genus Silene grows in hedgerows and woods. It has lots of garden relatives suitable for rockeries and borders, sometimes called catchfly.

Red campion is also known as cuckoo flower, as are other wild plant species which are flowering when the cuckoo's call is heard. Red campion will go on flowering all summer.

I planted this clump and it is gradually expanding. Sometimes its flowers get nipped off by a passing Muntjac deer.

The red campion is another plant which is dioecious (like holly described above): plants have either male or female flowers, hence the Latin name is Silene dioica. My clump is a single plant and all the flowers are female.

Garlic Mustard

Garlic mustard, also known as jack-by-the-hedge, is common in the shade of hedges and woods.

When the leaves are bruised they emit a garlic smell. They are edible and sometimes still used in salads and sauces. The plant can grow up to four feet tall and the basal leaves persist all winter. This plant seeds itself about the garden, which I tolerate where possible as it is the food plant for the orange-tip butterfly (see below).

Germander speedwell

A small clump of bluebells grows in my garden where there was once a large damson tree: possibly the site was formerly woodland or perhaps a previous owner of our house planted them. Growing alongside them, and flowering at the same time as they do, is another intensely blue-flowered plant, although it is more creeping in habit. This is germander speedwell, a member of the genus *Veronica* (this genus has numerous wild species as well as some popular garden plants).

This plant is sometimes confused with forget-me-not. The plant is often found by roadsides, and was once thought to speed travellers on their way.

Blackcap

Male birds sing to define their territories and attract a mate. (Female robins sing in the later part of the year, one of the few females of any bird species to do so.) Among the leaders of the bird 'orchestra' are the blackcaps, which often sing loudly from trees and other high perches for much of the day. They are quite difficult to photograph as they often sit just below the top of a tree among the leaves; this one chose to sit on a high rose shoot for long enough for me to find my camera.

Blackcaps are warblers and usually summer visitors, arriving in April and staying until early autumn. They are mostly grey; the males have black caps and the females' caps are brown. They are about the size of a robin, but more slender.

The males sing in long, sustained and melodic phrases, rivalling the blackbirds, and the species has become known as the 'northern nightingale'.

Britain's summer-visiting blackcaps migrate south in the winter, but during recent milder winters blackcaps from colder continental Europe, especially Germany, have started to visit Britain and like to feed on mistletoe berries. These birds may be the reason why mistletoe is spreading in some parts of the country, as they are especially good at wiping the seeds off their beaks as they eat the berries, leaving them on tree branches where they can flourish.

Broad-bodied chaser

On warm days in spring, the first pond-dwelling insects emerge and start to fly around my garden pond. The exact timing varies with the weather. In the very warm spring of 2020 dragonflies and damselflies appeared before the end of April. The following year, when April and May were unseasonably cold, they only appeared at the end of May.

This handsome dragonfly is a male broad-bodied chaser, distinguished by its blue body; the female is greenish-brown. They are typically 4 to 5 centimetres in length (1½ to 2 inches).

It flies fast around the garden pond to and from a favourite perch and will hunt in other parts of the garden as well, feeding on flies and other small insects. This species is usually the first dragonfly to appear in my garden. They are common in southern England around small lakes and ponds.

Damselflies hold their wings folded back along their bodies when they perch, whereas dragonflies keep their wings straight out at right angles to their body. Large red damselflies are usually the first to appear around my pond, at about the same time as the blue-bodied chaser.

Dragonfly and damselfly eggs are laid into water which hatch into larva, which in turn live in water and pass through a number of stages before emerging onto a plant stalk to change into an adult. The larval stages typically last one to two years.

Large red damselflies

Butterflies
Peacock, comma, small tortoiseshell and brimstone butterflies are usually the first to appear in spring as these species over-winter as adult butterflies. They hibernate in cool buildings, on tree trunks or under the cover of thick vegetation like ivy or hedges.

Orange-tip butterfly

Orange-tips usually emerge in April, although like all butterflies the exact date will depend on the weather. The species over-winters as a pupa (or chrysalis), the third stage in the life-cycle of a butterfly. The male is easily distinguished by its bright orange wing tips. The female has no orange colouring, just mottled grey wing tips, rather similar to small white butterflies which are a similar size. One of the food plants of the caterpillar (or larva) is garlic mustard (see above).

Orange tip butterfly, seen near Ivinghoe Beacon

This species produces one generation a year: the adults fly until early July, by which time the females will have laid their eggs on one of their preferred foodplants. The eggs hatch into caterpillars, which pass through several moults before transforming into a pupa to spend the winter on a plant stem. Orange tip numbers are thought to have declined due to excessive cutting of roadside verges. Leaving long grass (or other plant stems) over the winter helps butterflies like the orange-tip to survive. It is encouraging that local authorities are becoming increasingly aware of the value of careful verge management with such species in mind.

And finally….
How gardens are managed can impact on the wider countryside. In Hertfordshire this especially applies to water. Much of our water supply comes from the chalk aquifer which underlies most of the county. The same aquifer feeds our chalk streams, including the Gade, Ver, Beane, Mimram and Lea, which are rare and precious habitats. For years Hertfordshire‘s chalk streams have been afflicted by low flows which damage their wildlife, made worse as the county’s population has grown, and with it demand for water. Gardeners can help by collecting rainwater in water butts and tanks to use in their gardens, and by using as little tap water as possible. Hosepipes and sprinklers use lots of water, so it’s best not to water with them and instead water only those plants which really need it, using a watering can.

If your garden soil tends to be dry, using plants originally native to dry places should mean they will need less water. Mulches like home-made compost and chipped bark help to keep moisture in the soil. The inspirational gardener and writer, Beth Chatto, who died in 2018 aged 94, was a pioneer of gardening in dry places: she gardened in Essex, perhaps the driest and warmest part of England. Her book The Dry Garden is full of ideas for gardening with minimal water use and lists many plants which enjoy dry conditions.

Summer bedding grown in containers can be especially thirsty, but summer-flowering bulbs like lilies and agapanthus need much less water and will last in pots for several years, gradually increasing the number of bulbs in the pot. Houseleeks also look good in pots and troughs: they produce flowers on tall stems in the summer and need almost no water.

Lewisias (above) are hardy in most winters and produce purple, pink, orange or white flowers in late spring which last for many weeks. They also ‘clump up’ into new plants which can be used to increase your stock. They also need very little water.