

# Travelling through time

**The hidden lime woods of the  
Lake District**

**Luke Barley**

A giant multi-stemmed lime slowly collapses to create new thickets of growth on one of Coniston's gills. (Edward Parker)

This article is provided by the Ancient Tree Forum, which champions the biological, cultural and heritage value of Britain's ancient and veteran trees, and gives advice on their management at [www.ancienttreeforum.co.uk](http://www.ancienttreeforum.co.uk).

**It shouldn't be news to anyone reading this that Britain's treescape has been heavily shaped by man. Our best and oldest woods usually exist where heavy industry kept them alive through its demands for a constant supply of fuel and other wood products.**

The ancient woodlands of Coniston, in the Lake District, are typical examples of working woods; they are dominated by oak that was used to make charcoal for iron smelting, and the bark of which was used for tanning leather. But in amongst the oak, there is another tree species hanging on that connects us to the prehistoric landscape and gives us a true taste of the wild in our tame land: small leaved lime.

Pollen records show that small leaved lime *Tilia cordata* (along with the related large leaved lime *Tilia platyphyllos*) was a major component of Britain's tree cover in the Mesolithic era, before humans started to influence our landscape, but today it is an uncommon tree across most of the country. It is thought that lime would have been a component of many mixed



A sprawling, multi-stemmed lime on a gill in Coniston. (Luke Barley)



One of Coniston's unusual field limes. The stem that has failed is still well attached and many of the branches have set roots, leading to a huge thicket of new growth. (Luke Barley)

woods until about 300 years ago; the inner bark of coppiced lime was used to make twine and rope, including that on Viking longboats. The increased use of alternative materials for cordage made lime redundant, however, and coincided with intensification of the management of many coppice woods. Tree species that were less useful were grubbed out and the most valuable species – like oak and hazel – preferred. The rough ground and rocky crags next to steep mountain streams in the Coniston woods made cutting all the lime down impractical, and small, linear remnant populations were left along these 'gills'.

The species had faced another threat since long before this: when lime colonised what is now the north of England, temperatures were warmer and the species could reproduce sexually. Since then, temperatures have fluctuated and for the last few hundred years temperatures have been too cold at this latitude for lime to set much viable seed – the tiny proportion that is viable and grows into seedlings is grazed before having a chance to establish. Fortunately the species has a trick up its sleeve in that it is incredibly effective at vegetative reproduction. When branches droop down and touch the ground, or when whole trees root-heave, lime readily sets new roots from dormant buds under the bark that is in contact with the ground, so thickets of new growth appear. Lime trees that have been allowed to do this over many generations are sometimes known as 'walking trees'; they stride slowly through their landscapes, and as they start to fail they set down young growth, ready to take over when the mature parts of the tree die. The remnant trees in Coniston's gills have

been doing just this, meandering up and down the gills despite the best efforts of men to tame the rest of the woods.

What is even more incredible is that with the young growth being genetically identical to its parent tree, each one is an ancient organism that could be thousands of years old, unchanged in terms of its DNA (apart from natural mutation) since the last time the species was able to set seed, but transforming and regenerating itself to adapt to age and decay. Oliver Rackham called lime 'a living link with the Mesolithic wildwood', and amongst the atmospheric, bowed specimens of Coniston's gills, with their limbs cast asunder across the streams, it is easy to feel a connection with a time before humans, when aurochs browsed the delicate, heart-shaped leaves and wolves might have laid up in their shade.

There is one last twist to the tale. Apart from the remnant population in the steep valleys of the gills that seems to have simply escaped human influence over generations, there are occasional small leaved lime to be found elsewhere in the local woods and the wider landscape. Some of these are huge, overstood coppice stools that can be up to 10 metres around their base, while others are towering, single-stemmed landscape trees. Nobody is really sure how these trees escaped the cull of 'useless' species that rid most of the country of the species. They may be remnants of ancient woods that predate the clearance for grazing, or it might be that as local landowners started to design picturesque landscapes they decided to use local native lime instead of importing common lime; it does make



**New growth from branches that have set root. (Luke Barley)**

a spectacular landscape tree with its drooping, graceful form and profusion of pale yellow bracts in summer. There may also be folkloric reasons for retaining it that we have since lost. Lime was important to Germanic cultures as a tree of peace and reconciliation, and was often found at boundaries and meeting places; these traditions persist in much of northern Europe today, where lime is still a culturally important tree. Could it be that our recent ancestors retained lime on boundaries in Coniston because of its symbolic significance, and that we have lost this meaning even in the last couple of hundred years?

Whatever the reason for the existence of the trees in the wider countryside, the lime population in Coniston is a remarkable remnant of an ancient landscape that takes us back through medieval woodsmen to Norse settlers winding rope and beyond, to the last time Britain was a truly wild place.

## Identifying small leaved lime

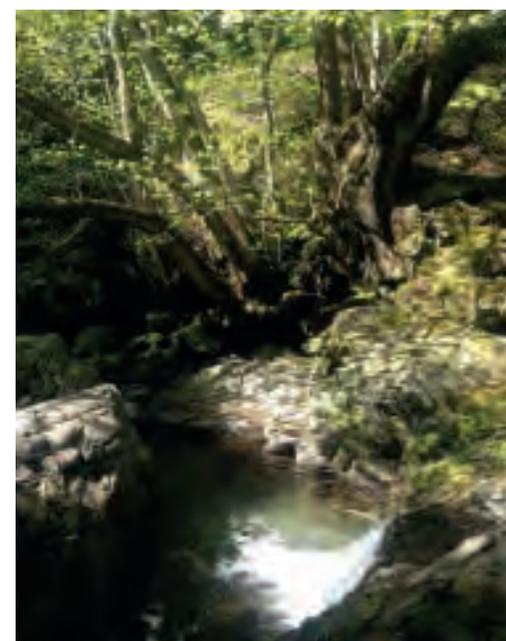
There are two species of lime native to Britain: small leaved *Tilia cordata* and large leaved *Tilia platyphyllos*. Native hybrids are unusual: both species must be close together and they usually flower a

fortnight apart. Nursery hybrids, common lime *Tilia x europaea*, are the lime we see most commonly used as a street tree or in 17th- and 18th-century landscape plantings. Definite identification can be difficult as defining characteristics may only be present on flowering shoots, which require full sun and may be inaccessible. Identification often relies on context: the native species are less likely to be found in landscape plantings and likely to be found in ancient woodlands or on old boundaries; the reverse is true of nursery hybrids, which are nearly always a landscape planting. The flowers of small leaved lime stand erect above the spray of twigs, which is an important characteristic. Leaves can help with identification but should not be relied on, especially near the base of the tree. Small leaved lime has smaller, flatter leaves which when in full sunlight have reddish tufts of hair in the axils; large leaved lime leaves are larger, often wavy and are hairy underneath; while common lime leaves are larger but usually hairless. The most common cultivar of common lime often (but not always) has a great bush of epicormic growth near the base or all the way up the stem, while the others (usually) do not.

*Much of the research about Coniston's lime population (and Tilia more widely) contained in this article was carried out by Professor Donald Pigott and colleagues and is contained in Lime-trees and Basswoods: A Biological Monograph of the Genus Tilia (2012). Professor Pigott and Hugh Milner (of the Limewood Working Group) made helpful comments on this article, for which I am extremely grateful.*



**A huge coppice stool on a boundary in the old working woodlands – the failed stem is again thriving to produce a new thicket of growth. (Luke Barley)**



**The gill trees cling to rocks and low cliffs. (Luke Barley)**

## National Trust seals historic pact with ATF

**800 years after the sealing of the Magna Carta by King John, the Director General of the National Trust (NT), Dame Helen Ghosh, has sealed a historic document at the same site, in a special ceremony to reaffirm its commitment to ancient and other veteran trees.**



Dame Helen Ghosh, Director General of the National Trust, and Brian Muelaner, Chair of the Ancient Tree Forum, seal the ATF Concordat at the Ankerwycke Yew. (Chris Knapman)

'Ancient trees are a vital and treasured part of the natural and cultural landscape. They support a stunning diversity of wildlife and are a very important and highly valued part of our heritage.' So begins the Ancient Tree Forum Concordat which Dame Helen signed and sealed on 11 June near Runnymede in Surrey. The document goes on to set out a vision for ancient and other veteran trees to be safeguarded, and outlines the commitment it expects from signatories such as the trust. These include completing an inventory of the location of all ancient and culturally important trees, and working in partnership to secure no avoidable loss of ancient trees.

In June 1215, King John's sealing of the Magna Carta heralded the beginning of parliamentary democracy and the supremacy of law. Some accounts say that this historic event took place by the River Thames at Runnymede, while others say it was on what is now the far side of the Thames by the ancient Ankerwycke Yew. Either way, this exceptional tree, which is

estimated to be around 2,500 years old, is a living monument to those historic events, and it has now witnessed the sealing of the agreement between the National Trust and the Ancient Tree Forum.

The NT is the single largest custodian of ancient trees in the UK, and the iconic Ankerwycke Yew is thought to be the organisation's oldest tree. 'The Ankerwycke Yew is arguably the most important tree in the English-speaking world, with its connection to democracy and freedom under law,' says Brian Muelaner, Chair of the ATF. 'So it is fitting that the National Trust sealed our Concordat there, and we are delighted that they have shown their continued commitment to ancient trees.'

Dame Helen Ghosh said of the NT's ancient and other veteran trees: 'The Ankerwycke Yew is a symbol of the importance of ancient trees in the life of the National Trust. We are immensely proud of the ancient and veteran trees we look after across the country. We have species of all kinds and from many continents, and our visitors never fail to be awestruck by the centuries of history and exploration that they represent. We must ensure that we have the skills and knowledge we need to look after them in the future.'



## Ancient tree enthusiasts gather in East Anglia



Looking for signs of invertebrates in an veteran apple tree.

**The Ancient Tree Forum's 2015 summer forum was held in East Anglia, and attracted over 100 specialists and enthusiasts with a shared passion for ancient and other veteran trees. Delegates came from Belgium, Holland and Sweden as well as all corners of the UK, and they used the opportunity to network and exchange ideas, to hear from the experts, and to visit old and culturally significant trees in Norfolk, Suffolk and Cambridgeshire.**

Conference speakers and topics were as diverse as the delegates. While the theme of ancient and veteran trees ran through all the presentations, some were based on academic research, for example into the role of fungi in hollowing beech trees, and others drew on the experience of arboricultural consultants like Nev Fay, who described soil and crown treatments he is using on trees affected with acute oak decline. Community involvement was the driving force behind a Herefordshire orchard restoration project, and the need for a register of 'Very Important Trees' was raised by Jill Butler of the Woodland Trust. The speaker who probably received the most enthusiastic response was Professor Lynne Body whose 'Fighting Fungi' presentation on the development



**Ted Green addresses delegates at Aspal Close nature reserve in Suffolk**

of fungal communities in wood made this natural activity look like a gladiator arena game.

The site visits to Aspal Close nature reserve at Beck Row in Suffolk, an orchard near Wisbech in Cambridgeshire, and to the Stanford Training Area (STANTA) in Norfolk gave delegates the chance to hear from the owners, site managers and specialists, and to wander among centuries-old trees. At Aspal Close, huge and gnarled old oak pollards were the main feature. Here, trees are retrenchment-pruned, and haloing of other surrounding trees is carried out to give the veterans light and space. Rabbits keep the scrub down, dead trees are left standing, and humps, hollows and other features of the periglacial landscape, all

valuable for biodiversity, are retained. Less fortunate was an oak tree visited by delegates and estimated as being around 700 years old, which is now outside the nature reserve and surrounded by housing. One delegate described this nevertheless as 'a very important site to witness, and illustration of how the planning system ... is failing to protect priceless ancients'.

On the grass heaths of STANTA, where sheep grazed peacefully in the temporary absence of any military exercises, the group visited some of the best examples of the distinctive 'pine lines' of contorted trees which were often planted in the early nineteenth century as shelter belts and are now iconic features of the Breckland landscape.

Of particular value on the site visits are the connections that are made between delegates, specialists, site owners and managers, with ideas hatched, comparisons made and information exchanged. At the Rummors Lane orchard, near Wisbech, there was plenty of time for discussion about fruit varieties and rootstocks, pruning techniques, community initiatives, invertebrate habitats, the role of fungi and other topics. Veteran fruit trees were plentiful, many of them hollowed and spindly, and Tim Dixon of the ATF remarked that it was a great site 'to demonstrate that veterans don't have to be very big or very old.'

As Brian Muelaner, Chair of the ATF, says, the real value of the ATF's events is that they attract people from diverse backgrounds, and provide the opportunity to share knowledge and experience. 'The idea of our summer forum is to bring people together who share a passion for protecting our ancient trees – whether they're professional arboriculturists, amateur conservationists or simply people who appreciate the beauty of our oldest trees.' It is also hoped that an East Anglia Ancient Tree Forum group may be set up following the event. Anyone interested is encouraged to contact Reg Harris at [reg@urbanforestry.info](mailto:reg@urbanforestry.info) for more details.

The 2015 summer forum was run in partnership with the Suffolk Traditional Orchards Group (STOG) and the ATF is extremely grateful to Paul Read and other STOG members for identifying sites and speakers and co-ordinating the event.

Details of forthcoming ATF events can be found at [www.ancienttreeforum.co.uk](http://www.ancienttreeforum.co.uk).



## News update



### Autumn in the Lake District

The ATF's autumn field visit this year is to Borrowdale in the Lake District, famous for its pollard ash trees and its ancient yews, especially the 'Fraternal Four' (now three) which feature in William Wordsworth's poem 'Yew Trees'. We will also be visiting Watendlath, where there is a very special historic landscape of pollards. Everyone is welcome and discussions are likely to include the management and restoration of pollards, the products made from different species, the impact of ash dieback on the historic

landscape and the latest research on the Borrowdale Yews.

Booking is essential. Email [eventsATF@aol.com](mailto:eventsATF@aol.com) by Friday 2 October 2015 for further details and to book a place. Places are limited and will be allocated on a first come, first served basis.

### Celebrate and protect our Very Important Trees

Have you shown your support yet for a national register of ancient and other 'Very Important' or 'V.I. Trees'? The Woodland Trust is campaigning for official registers of our nationally important and best-loved trees in England, Wales, Scotland and Northern Ireland. Go to the Woodland Trust website and search for 'tree register' to join this vital campaign to save our national treasures.



**Dead yew with bilberry, Borrowdale.**