Practical Guidance

Ancient tree guide 4:

What are ancient, veteran and other trees of special interest?

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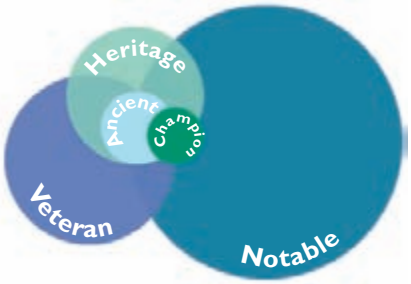
Trees of special interest

Trees of special interest

Across the UK there are many special trees. They may be outstanding because they are old, provide important habitat, are the biggest of their species, are linked with an important historic event or have some exceptional cultural significance. Often it is obvious why they are so special – their appearance is so out of the ordinary or their heritage value is so long established. However, there are circumstances when we want to make it absolutely clear that a tree has special interest. This is when we need to be able to describe what we mean by the terms:

- Ancient or aged
- Veteran
- Heritage
- Champion
- Notable



Who is this guide for?

This guide is intended to help people recognise trees that have special interest and to help justify why a tree (or group of trees) stands out from others of the same species. Sometimes it is important that their specific qualities can be clearly recognised, so they can be properly protected and managed.

The guide is intended for anyone who is interested in the wonderful world of these remarkable trees. It is for those involved in tree protection, specialists and amateurs, writers, landscape historians and archaeologists, recorders and owners, children and adults; in fact anyone.

> *"...those grey, gnarled, low browed, knock kneed, bent, huge, strange, long armed, deformed, hunchbacked, misshapen oak men that stand awaiting and watching century after century."*
>
> Frances Kilvert on ancient trees at Moccas Park, 1876

Andrew Cowan

Ancient oak with a crown which is just starting to retrench

What is an ancient tree?

An ancient tree is one that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species. Its canopy may be small. It will probably have a very wide trunk relative to other trees of the same species and it is very likely that it will be hollow. These features are not a sign that the tree is about to die. In fact, even in this ancient stage the tree may stay alive and healthy for many decades and often centuries. All these characteristics are used to help identify a truly ancient tree. However, ancient trees grow in so many different environments and have been influenced by so many factors over their long lives that they may not always have large girths.

The older the tree the more valuable it becomes. Dying ancient trees may endure for many decades and by still being present in the landscape continue the biological, historical or cultural connection, as well as providing very valuable habitat for wildlife.

Ancient trees – the ageing process

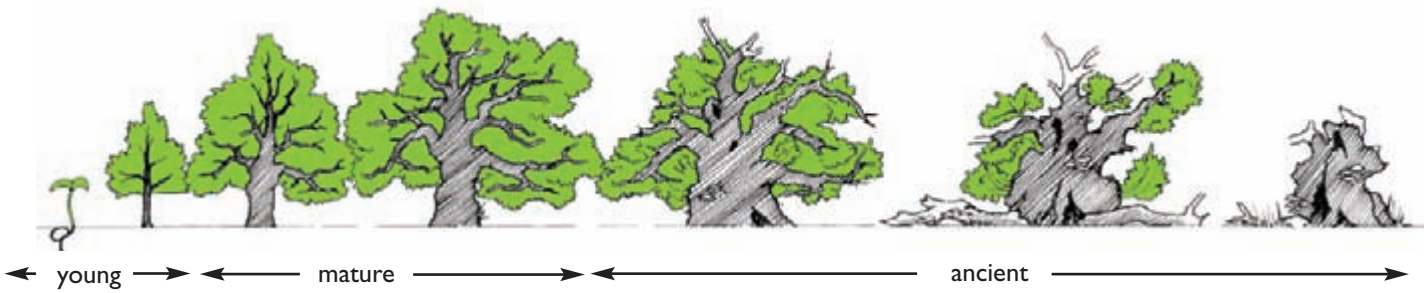
Most people would think that trees keep growing taller and taller, but ancient trees prove us wrong. Even though the crowns of ancient trees continue to be very much alive, they become smaller, due to gradual dieback and branch loss. This starts to occur after the tree has passed its peak of maturity and is a natural process in which the area of foliage and the root system are rebalanced with each other. This process is known as crown retrenchment and is sometimes also described as 'growing downwards'. In some conifer species flattening and broadening of the crown may be the only indication of retrenchment. Dead, broken, lower branches may also remain attached to the trunk due to the durability of the wood.

A small crown and a wide trunk allows a tree to withstand high winds and avoid being uprooted. Conifers may also develop many new multiple stems following storm or lightning damage, resulting in the appearance of a flattened upper crown.

Hollowing of the trunk as a tree ages is entirely normal and is not a sign of ill health. It is the deadwood in the centre of the tree that is slowly decayed by fungi which rarely, if at all, colonise the living sapwood. The hollowing of the trunk (and the shedding and decay of dead branches associated with retrenchment) may help the tree to live for longer, by releasing minerals that were 'locked up' in the wood so they are available for the tree to re-use.

It may take several hundred years for this special habitat to be created and be suitable for many rare and specialised fungi and animals. The decaying wood of an ancient tree is one of the most important habitats that exist in Europe and therefore it is vital to conserve all our ancient trees.

Diagram showing the stages in the life of an ancient tree



The ancient phase may be the longest phase in the tree's life and the most valuable for associated wildlife

How old is it?

When a tree is growing in average conditions, its girth may be a guide to whether it is ancient or not. Consider the largest girth of the species of tree (see chart below) and relate it to that. There is a way of estimating the age of a tree – see White, 1998. However, always bear in mind that soils, altitude, climate, growing conditions and whether the tree has been pollarded (cut repeatedly through part or all of its life) can affect the rate at which the tree grows so this method can only be used as a guide to ageing a tree. Ancient trees growing in environmentally challenging places like the uplands may be significantly smaller.

The more we look at trees in different growing conditions, the more we learn about tree girth as a guide to separating 'ancient' from 'veteran' and 'notable' trees. We have provided a provisional guide to typical girths of some common tree species growing in average conditions, but as we gather more data we may need to adjust the ranges.

Key characteristics* of an ancient tree

- Crown 'growing downwards' or flattening (in conifers) through the ageing process
- A large girth by comparison with other trees of the same species – (it may have a smaller girth if it is growing in poor conditions or is a pollard)

Also:

- Hollowing trunk; this may have one or more openings to the outside
- Stag-headedness (dead, antler-like branches extending beyond the crown)
- Fruit bodies of heart-rot fungi
- Cavities (eg where branches have broken away), sap runs or naturally forming water pools in branch hollows
- Rougher or more creviced bark
- An 'old' look which has high aesthetic appeal
- Aerial roots growing down into the decaying trunk or branches

**The more of these a tree has, the more likely it is to be ancient.*

Vikki Bengtsson

An ancient apple tree, not very large but definitely old for its species

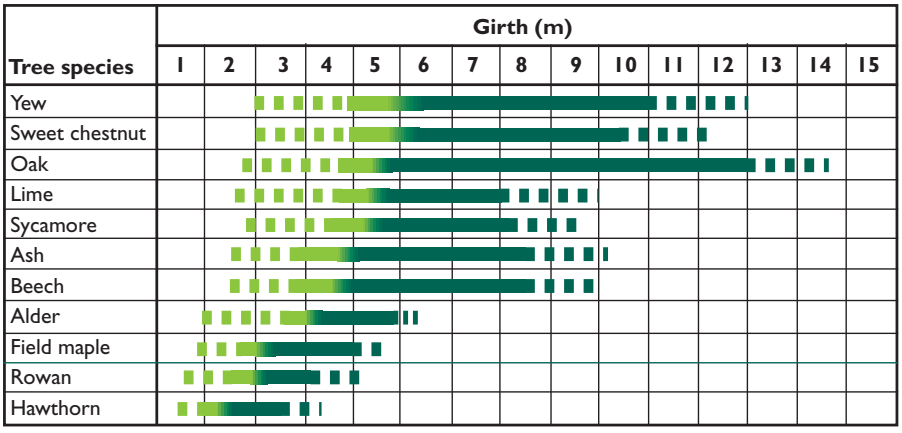


Chart showing typical relationship between girth and tree species growing in average conditions.

What is a veteran tree?

Veteran is a term describing a tree with habitat features such as wounds or decay. The terms ancient and veteran have been used interchangeably in the past, however, it is important to know what the differences between them. A veteran tree is a survivor that has developed some of the features found on an ancient tree, not necessarily as a consequence of time, but of its life or environment. Ancient veterans are ancient trees, not all veterans are old enough to be ancient. A veteran may be a young tree with a relatively small girth in contrast to an ancient tree, but bearing the 'scars' of age such as decay in the trunk, branches or roots, fungal fruiting bodies, or dead wood. These veteran features will still provide wildlife habitat.

These habitat features typically start to appear in the mature, pre-ancient stage and also in traditional pollards.

Vikki Bengtsson

Not all veterans are ancient: a tiny veteran beech tree

Accelerating the ageing clock

Stress (eg from drought) and physical damage (eg from lightning) may also create veteran features, although where it significantly reduces the life expectancy of the tree, it will only provide short-lived habitat value. Cultivation too close to the tree, damage from construction and trenching work to street trees are a common cause of root damage. They can often lead to die-back in the crown creating lots of dead branches, which may lead to rapid decline and death before the complex habitats which characterise veterans have a chance to develop.

There is an important distinction between retrenchment and trees appearing to die back from serious disease or wounding damage. If a tree is undergoing natural retrenchment, individual branches are shed or die back but the remainder of the crown continues to flourish and remain healthy. This may happen on many occasions, and often leads to development of another crown (ie resetting the age clock). If, however, the tree is in serious decline or about to die, the entire crown looks thin or pale and progressively dies back. In younger trees die-back is often associated with massive injury or stress.

> *"Working out the stage in life a tree has reached comes from practice and not from books."* (Rackham, 1976).

Key habitat features of a veteran tree:

- Evidence of decay processes, such as hollowing in the trunk, fruit bodies of fungi known to cause wood decay and cavities or rot holes (eg where limbs have broken off or bark is damaged).
- Significant amounts of dead wood: many dead limbs or branches (larger than 20cm in diameter) in the crown or fallen.

Champion and heritage trees

What is a champion tree?

Ted Green

The fattest cherry in the UK

David Alderman

Dughall Mor (tall, dark stranger), the tallest tree in the UK

A champion tree is one that is the tallest or has the largest trunk girth of its kind in the UK (or a given region). Champions that have a very large girth will usually be ancient trees. However, champions because of their height are unlikely to be ancient. The tallest champion trees can be mature trees, at the peak of their growth. However, they may also be quite young trees: a rare or introduced species of tree may be quite young for its species but can be the tallest or have the widest trunk when compared with others of the same species growing here in the UK. The Tree Register of the British Isles holds the details of all the largest trees of each species – the definitive record of Britain and Ireland's champion trees.

What are heritage trees?

A heritage tree is one that has contributed to or is connected to our history and culture. Relevant attributes include:

- Historical, archaeological or cultural associations especially with important or colourful events or famous people (eg the Major Oak in Sherwood Forest). Alternatively they may be trees planted to commemorate a particular occasion or old pollards demonstrating the importance of this system of tree management down the centuries.
- Aesthetic appearance, landscape character or architectural setting. They might have strange shapes from natural growth or human intervention (eg great layering trees or the Cage Pollard at Burnham Beeches). The trees may also be of exceptional importance because they make a particular design statement (eg the Albert and Victoria cedars at Stowe Park). They may be groups of trees such as found in avenues, orchards, groves of particular exceptional importance (eg the lime avenues at Hampton Court or the Meikleour beech hedge in Perthshire). They can be well loved landmarks in local communities.
- Rare or having great botanical interest. They could be rare native trees (eg whitty pear), or first trees from seed planted by a tree collector (eg the first Douglas firs planted), or special cultivars of historic interest (eg the first Bramley apple tree).

Heritage trees are often ancient but not necessarily so. A tree that has been planted by some notable person, such as Queen Elizabeth II, or to commemorate an event will have historic value but is unlikely to be ancient. However, all ancient trees are heritage trees.

Ted Green

The Major Oak – one of the most famous ancient and heritage trees in the UK

Ted Green

The Meikleour beech hedge, Perthshire

What is a notable tree?

Notable trees are usually magnificent mature trees which stand out in their local environment because they are large by comparison with other trees around them. They are often taller than ancient trees and they may be fatter than many veteran trees but do not have any obvious veteran characteristics. In parts of the UK where trees are less common, a tree that is relatively small may be notable because it is significant in its local environment. Some notable trees may be relatively young eg Wellingtonias but still appear remarkably large. Most notable trees will be worthy of recognition regionally or locally.

Ted Green

A notable mature elm

More information:

This leaflet is the fourth in a series about ancient trees:

Ancient Tree Guide no.1: Trees and Farming.

Ancient Tree Guide no.2: Trees in Historic Parks and Landscape Gardens.

Ancient Tree Guide no.3: Trees and Development.

They are available from the Woodland Trust or can be downloaded (as a pdf file) in English and Welsh from www.ancient-tree-forum.org.uk.

Mae'r daf len hon ar gael yn Gymraeg fel pdf o wefan.

Advice and information on ancient and veteran trees:
www.ancient-tree-forum.org.uk

Tell us about a tree you have found or find one at:
www.AncientTreeHunt.org.uk

Tell us about a wood or tree under threat and get lots more information about fighting a threat at:
www.woodsunderthreat.org.uk

Information about heritage trees:
www.treecouncil.org.uk

Information about champion trees in the British Isles and the Ancient Yew Group:
www.treeregister.org

Further reading:

Veteran trees: A guide to good management (2000) ed H. Read. Published by English Nature (now Natural England). No longer available in hardcopy, only as a pdf from their website at **www.naturalengland.org.uk**

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Mabey, R. (1980) *The Common Ground*. Hutchinson

Rackham, O. (1990) *Trees and woodland in the British landscape* (revised edition). Pheonix, London.

Rodger, D., Stokes, J. and Ogilvie, J. (2006) *Heritage Trees of Scotland*. The Tree Council

Stokes, J. (2002) *Great British Trees*. The Tree Council

White, J (1998) *Estimating the age of large and veteran trees in Britain*. Forestry Commission Information Note No 12

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