

## MEASURING THE ENGLISH YEW IN ALL HALLOWS' CHURCHYARD

Wednesday, 9 August, 2006 at 4.30pm

We measured the yew tree in two ways:

1. By measuring the girth of the whole trunk, just below where it forks into two separate trunks. From this measurement we calculated the age of the tree.
2. By measuring the girths of the two forks.

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HEIGHT AT WHICH TRUNK FORKS: 42 inches (106.7 cm)

HEIGHT AT WHICH GIRTH OF WHOLE TRUNK (BELOW THE FORK) WAS MEASURED: 33 inches (83.9 cm)

GIRTH OF WHOLE TRUNK: 13 ft 5 inches (4m 9 cm)

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HEIGHT AT WHICH FORKS WERE MEASURED: 48 inches (122 cm)

GIRTH OF SMALLER FORK: 3ft 11 inches (119,5 cm)

GIRTH OF LARGER FORK: 13 ft (3m 96.5 cm)

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AGE ESTIMATE -

BASED ON 1996 FORMULA PRODUCED BY TABBUSH AND WHITE

AT LEAST: 520 YEARS

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**THE YEW TREE SHOULD BE MEASURED AGAIN IN FIVE YEARS TIME**

## HOW TO MEASURE THE GIRTH OF YOUR TREE

To find out where to take the girth measurement, using a tape measure, measure 1.3 metres up from the base (usually around chest height in an adult). The girth measurement should be given in metres to the nearest 10 cm (i.e. to one decimal point).



When measuring the girth of your tree the 'lumps and bumps' may get in the way. In this case take your measurement just above or below, whichever is the narrowest or easiest to do, but no lower than 0.5 metres. If you have to do this, please give the measurement up from the base that you took the girth measurement from and explain why. Sometimes the tree may also be covered in ivy, making it an inaccurate measurement. In this case try and assess how thick the covering of ivy is and remove this value from the measurement.

To age your tree, divide this girth measurement (using the "cm" total) by the rule of thumb for annual growth given overleaf. This value is the age. Remember to consider if it is a solitary tree, or growing in a woodland, or if it is a species that does not follow the rules given.

If you are interested in undertaking tree surveys please contact Leicestershire County Council Environmental Resources Centre, 216 Birstall Road, Birstall, Leicester LE4 4DG. ☎ 0116 2671377 for a tree survey form. Alternatively email [cholmes@leics.gov.uk](mailto:cholmes@leics.gov.uk).

Although there are ways of measuring a tree on your own we recommend you do this in pairs for safety reasons. Always remember to get permission from a landowner if you need to leave the public footpath, otherwise you may well be trespassing.

## ANCIENT TREES

### HOW TO MEASURE AND AGE THEM



So, what makes your tree an  
ancient tree?

IN CONSERVATION TERMS THE  
OLDER THE TREE THE BETTER



## AN OLD AGE PROBLEM

Ancient trees are key features of the British landscape, and are important for wildlife. In Leicestershire and Rutland they are prioritised as a target wildlife habitat in our Biodiversity Action Plan. They can be used to help us interpret the history of the landscape through their ageing. This leaflet explains how.



Trees as they age, grow in girth. It is this regular rate of growth that can be used to approximately age a tree. A definition, used by conservationists, of an ancient tree, is one no less than 3.77 metres in girth at 1.3 metres above root level.

As a rule of thumb, a woodland tree has an average growth rate of 1.25 cm of girth per year of life. A solitary tree will grow at around 2.5 cm of girth for each year of its life. For example, a solitary tree measured to have a girth of 250 cm can be aged using the following technique. Divide the girth measurement (trunk circumference) by the average annual rate of growth (in this case 2.5 cm). The age of the tree can be estimated as 100 years.

However there are exceptions:

Yew tree Girth	Age in Years
3 metres	242
4 metres	292
5 metres	720
6 metres	820
7 metres	1,000

The Yew, *Taxus baccata*, for example does not conform to any regular growth pattern. Yew trees are exceptionally slow growing and may have periods of dormancy as they become very old. Ancient yew trees are hollow and generally have a girth of no less than 5.1 metres.

Poplars and American giant conifers have girth growth rates 2 or 3 times faster than the rate of 2.5cm a year. Horse Chestnuts and many of the smaller species grow more slowly. When ageing pine trees count the number of spaces between the rings of branches growing up the trunk. They grow a new 'wheel' each year. This count can be indicative of the trees age.

Other features can often help age trees, for example:

- ◆ Written records or old maps.
- ◆ Archaeological remains or ancient burial mounds nearby, are indicators that a tree, for example the yew, could be part of an ancient site used by mankind for millenia.
- ◆ A siting of a yew tree to the south or South-west axis of the church's nave suggests a Saxon site.

Whatever size your tree, whether it is a dead standing tree, leaning, upright, or fallen, it can be very valuable to wildlife, and especially if it has signs of any of the following:

- ◆ visible fungi
- ◆ hollows in trunk or elsewhere on the tree
- ◆ dead boughs above 2m
- ◆ wounds, for example a dropped branch scar

All of these attributes can be recorded as part of an ancient tree survey.



It might be thought that the house known as "The Barn" which stands opposite to Higher Manor farmyard, was built as a barn and later converted to a dwelling, as so many barns have been.

In fact this building had a far more interesting history. It was built in 1759 for the Lord of the Manor, Mr Francis Kirkham, as an almshouse. He gave the building to the poor of the parish for ever – as a house of refuge for their declining years. In those days there were no Social Security payments to maintain the poor in their old age and even the notorious workhouses, such as the Kingsbridge Union, came later. The plight of those too old or ill to work was a sad one. The almshouse in Ringmore provided essential shelter for many years.

Unfortunately the Lord of the Manor left no endowment to keep the building in repair and eventually it was taken in hand by the Overseers of the Poor, who were the local Churchwardens. In 1839 they sold the building for £33 to the Lord of the Manor of that time.

He turned it into a cattle house and granary barn for his Higher Farm.

From about 1914 until 1944 the lease was taken over by Mr George Luckraft of Pleasant Cottage Farm. The building was then bought by Mr and Mrs May of Kimberley, who kept cattle there. It then passed to their daughter Mrs Ann Lambell who used it as a stable for her horses until shortly before it was converted to a house and bought by John and Jenny Borne who still live there.

*contributed by the Ringmore Historical Society*



## RINGMORE HISTORICAL SOCIETY

### A FEW THINGS ABOUT YEW TREES. . . . .

- **The fine old yew tree** in the All Hallows' graveyard is an English yew, *taxus baccata*, a species renowned for its longevity and its connexion with pagan and religious rites. It is native to Ireland but appears all over Europe, often in association with Druid practices
- **The wood of yew** reputedly outlives iron. A 250,000-year-old yew spear found at Clacton in Essex is the world's oldest known wooden artefact.
- **The Fortingall Yew** in Perthshire is said to be 9,000 years old, has a girth of 52 feet and stands close to a Bronze Age tumulus.
- Yew trees are **dioecious**, that is, they may be either male or female. The seeds are called *arils*. They are poisonous if chewed, though the pulp of the fruit is not poisonous.
- **At least 500 churchyards** in England and Wales contain yews that are as old as or older than their churchyards. At least 130 of these trees are estimated to pre-date Christianity.
- **Many ancient yews** are hollow, although still alive. Some have seats placed inside them. A few have hollows large enough for a coach and horses to be driven through them. Hollow yews frequently resume growth after many years of dormancy.
- **The Irish yew**, which also grows in All Hallows' churchyard, has branches that sweep evenly upwards to form a tidy bundle. Irish yews are often clipped and planted to form avenues.
- **The clippings of yews**, although poisonous to animals, are medicinally and commercially valuable because they yield **taxol**, an alkaloid that is effective in the treatment of ovarian cancer.
- Yews were often planted in **boundary hedges**. It is possible that the All Hallows' yew marks an earlier boundary of the churchyard. If we had evidence of an earlier boundary it would be helpful in dating our tree.
- **A yew tree grows very slowly**. The rate of increase in girth is approximately 1 foot in 30 years, but growth may be much slower in yews that are subject to continuous winds from the sea.
- In Shining Cliff Wood, Derbyshire, a hollow yew known as the Betty Kenny Tree was once home to a family. A bough was hewn out to form a child's cradle and this is said to have inspired the nursery rhyme 'Rock-a-bye-baby'.
- **Yew branches** often bend down as they grow and root themselves to form new trunks that then unite with the main trunk.
- Almost half the parish churches in England and Wales planted young yew trees at **the 2000 millennium**.
- **A yew tree** should be kept free from ivy. It benefits from a gently watered-in compost that includes ox-blood.
- After the famous yew in **Gilbert White's garden** at Selworthy was uprooted by a great gale in 1990, a beautiful lute was made, using the tree's dark and light woods in a striped pattern.
- **The age of a yew tree** may be calculated by measuring its girth just below the place where its trunk divides, or at about 4 feet above ground level. The girth measurement is then referred to a table that gives an approximate age for the tree. But it has to be remembered that this is not rocket science: climate and sea winds, the closeness of a particular yew's tree rings (they may vary from 10 to an inch in a young tree to 100 to an inch in a mature specimen) and the yew's habit of becoming dormant for years, are all factors that have to be considered in trying to estimate its age.
- **Ancient yew trees** should be measured every five years.



The All Hallows Yew



Millennium postage stamp:  
no 29



A place to sit . . .



Or to drive through . . .

## **THE AGE OF THE YEW**

**WE HAVE NOW CALCULATED AN AGE FOR THE YEW TREE. BUT BEFORE GIVING YOU THE RESULT THERE ARE ONE OR TWO THINGS YOU SHOULD KNOW.**

**FIRST:**

**WE HAVE MADE THE MOST MODEST ESTIMATE POSSIBLE. THAT IS, WE HAVE MEASURED IN THE NARROWEST RATHER THAN THE BROADEST PLACES PERMITTED BY THE RULES OF THE MEASURING PROCEDURE.**

**SECOND:**

**WE HAVE MADE NO ALLOWANCES FOR THE FACT THAT THE TREE IS IN AN EXPOSED POSITION. THIS MEANS THAT OUR TREE COULD BE CONSIDERABLY OLDER THAN THE MEASUREMENTS SUGGEST, SINCE ITS GROWTH WILL HAVE BEEN SLOWER THAN AVERAGE.**

**THIRD: A YEW THAT IS MORE THAN 500 YEARS OLD IS RATHER SPECIAL. IT COUNTS AS AN ANCIENT YEW.**

**WE BELIEVE OUR ENGLISH YEW TREE IS**

**AT LEAST \_\_\_\_\_ 520 YEARS OLD.**

## THE YEW

The nationwide enthusiasm to commemorate the year 2000 by planting trees has reawakened interest in that most English of trees, *taxus baccata*, the yew.

The yew is a magnificent and sombre tree, seen mainly in graveyards. There it provides a protective canopy for mourners and graves, imparts a wonderful dignity to the scene and embodies profound meanings concerning both mortality and eternity.

Perhaps the yew's most impressive characteristic is its longevity. Some of the yews in southern England are estimated to be between 2000 and 9000 years old. These estimates cannot be precise because after about 400 or 500 years of growth a yew begins to lose its heartwood and its age can no longer be estimated by ring-counts. A 300-year-old tree growing in optimum conditions might well have a girth of 12 feet.

The two ancient trees in the All Hallows graveyard, although not as massive as yews on more sheltered sites, are probably coeval with the church. But it is possible that they are even older than the church since many ancient Druidic and Celtic burial grounds were planted with yews and were later consecrated for Christian use. All yews are difficult to date precisely because their growth habits are highly variable. Some appear to 'rest' for long periods of time and then start into observable growth again.

Yew wood is extremely hard and it is said that it lasts longer than iron. In his *Flora Britannica* Richard Mabey tells us that there is in existence a 250,000-old yew-tree spear, found at Clacton in Essex. It is the world's oldest known wooden artefact. Yew wood was also used for making longbows, although English yew was not in fact the best wood for this purpose and it is thought that Spanish and Italian yew woods were often imported for the longbows. In Derbyshire, near Ambergate, there is a yew in the cavity of which a family once lived. One of its boughs was hollowed out by a member of the family to make a cradle that subsequently - it is said - became the inspiration for the lullaby 'Rock-a-bye Baby'.

A comparatively recent use for yew that is making it commercially valuable is in medicine. An alkaloid called taxol, apparently efficacious in the treatment of ovarian cancer, is present in the tree. Clippings and foliage are being bought by the drug companies.

The Conservation Foundation, the organization that initiated a scheme to replace lost elm trees, has been running a project called Yews for the Millennium. It provides parishes with young rooted cuttings taken from yew trees thought to be between 2000 and 4000 years old. Several varieties have been propagated to produce a very large number of cuttings for which over 6000 parishes, communities and organizations have applied.

Most popular nowadays, Mabey reports, is the Irish yew, whose branches 'sweep evenly upwards, as if they had been bound into a bundle' and which, he says, are mostly descendants of two trees found on a limestone crag in Fermanagh in the 1760s. These Irish yews are tidier, more manageable specimens, able to be schooled into neat avenues or clipped into symmetrical, individual cones: rather different from the gnarled, mysterious, sprawling giants that have bestowed a special character on so many English and Welsh churchyards, including Ringmore's.