Ancient Trees for Tree Wardens

15th June - Adam Owen

The South East Forum for Tree Wardens was held on 1st November 2008 at Alton Maltings, Alton, Hampshire. Alton Maltings, a Grade II listed building, is a beautiful place to hold such an event, with its exposed beams and timber framing; it reminded me exactly how much we rely on trees for their many uses. As the name suggests it used to be the place where malt was processed for the brewing industry. Built in around 1850 it ceased to be used as a maltings in about 1970. The north Wey valley which used to be very productive for barley and notably hops, now favours other arable crops. If you'll excuse me departing from the main story for a moment, because I think it is good to widen ones knowledge - a maltings is a building that houses the process of converting barley into malt, for use in the brewing or distilling process. Traditionally this was done by kiln-drying the sprouted barley, usually by spreading the sprouted barley on a perforated wooden floor. Smoke, coming from an oasting fireplace (via smoke channels) then used to heat the wooden floor (and thus, the sprouted grain with it). Temperatures frequently used to be around 55° Celsius (131° Fahrenheit) – quite hot, especially indoors with poor ventilation and all that dust. Those were the days...

For more information on Alton and the Maltings – click on picture

So to the main course… the day was very successful with many tree wardens from the surrounding counties attending. Top of the agenda was guest speaker Fred Hageneder, a German chap living in Wales. Fred has travelled the world studying the ecology and heritage of the Yew, *Taxus baccata*. Rather imaginatively Fred began his talk with a harp. A harp made of Yew. A harp that was 7 years old. The last yew Fred saw was over 3 500 years old. The harp, the music and the yew was quite inspiring and certainly set the mood.

Yew is a climax species, ten times more shade tolerant than its closest rival, the Silver Fir (*Abies alba*). The male yew has the highest pollen count of any tree in Britain and the female

yew captures over 260x more pollen than is required to have successful fertilisation. Within 6-8 weeks of the flower being fertilised a seed is produced. Now the flesh of the seed, whilst being a very distinctive red, is not toxic – however it warns of a dark secret, for the inner pip is quite toxic – a survival mechanism to facilitate germination.
The yew is nothing if not safety conscious. Its survival strategy is to go slow and steady and out compete everything possible. Perhaps this is why the yew can be found right across the northern hemisphere, from Canada and Alsaka, the UK, Europe and Russia to Far Asia - Japan, China and even dipping into the southern hemisphere in Sumatra. In many places you would not recognise the yew for it does not grow as it does in the UK. It can grow in desert and on mountain – dwarf sized or blasted by wind the yew's shape is varied.

However, it is a miracle the yew has survived this long – the yew has the hardest wood of any European tree, it is durable and flexible; properties that have been recognised for millennia. There is a set of six musical pipes that were discovered near Greystones, Ireland that are over 4000 years old, and archaeologists could still play notes on a few of them (**Wooden pipe find excites Irish archaeologists**).

The yew came into its own as the longbow, an established weapon; the oldest ever found is over 5000 years old. The Welsh armies used the longbow with great success and Edward III recognised the value of the longbow as a weapon of mass destruction, so much so that he expanded the trade corridors across Europe to bring yew wood to Britain, whilst protecting our own yews. This trade continued well into the middle 1500s when, not surprisingly, yew wood and indeed the yew tree became scarce, virtually extinct. Subsequent wars have ravaged Europe and there has been no concerted effort to replenish the yew stock. Hence this is why Britain has the greatest number of ancient yews across Europe and possibly the globe.

In the UK there are 850 ancient yews recorded with a girth over 17 feet of which 450 are over 20 feet in girth. Other ancient yews do remain elsewhere, notably the Shindu province, Japan.

The yews survival strategy, slow but steady, has been mentioned. The yew invests heavily in its root structure. Everything is slow as it regenerates through layering; the laying down of branches which take root. This process anchors the tree to the ground providing stability. After 800 – 1000 years the tree is hollowed by special decay fungi. Aerial roots are formed which in turn become internal stems and eventually replace the outside of the tree.

Ancient yews such as the Bettws Newydd Yew, or closer to home the Lingfield Yew are wonderful examples of this process. Research from around the world has shown that the average annual growth of ancient yews is so varied it can be meaningless without considering

many other factors. However it is safe to say, if you have a big, fat, hollow yew, it's bloody old.

The fact the yew tree can live for so long and in a variety of climates and continents has meant the tree has become intrinsic in many different and ancient cultures. There are pre-glacial cave paintings of the tree. That was over 25 000 years ago. The yew has long been associated with life and birth – the red bleeding from the sapwood links with menstruation; blood of Christ; birth, death and re-birth. The name 'Europe' is derived from 'Yew rope'. From Palaeolithic to present day the yew tree has been depicted in paintings, pottery and writings. The location of the monumental yews of Turkey and Greece coincide with the Amazon legends and the golden fleece. Once you start looking the yew is everywhere!

Unfortunately the yew is again threatened by humans, on a similar scale to that of the 1500s. Taxol is a drug used to cure some cancers. It comes from the yew tree. Discovered in the 1960s the drug was finally available in 1992. To obtain Taxol the bark and tissue of the yew tree is used. It is now also extracted from the leaves and part synthesised. Such is the demand for Taxol that pharmaceutical companies sponsored the felling and harvesting of yews in developing countries. Between 1992 and 1997 the entire yew population of India virtually disappeared. In recognition of the problem there are now monocultures of yew, over 70 million trees in plantations – all clones. There is a significant risk that the genetic heritage of *Taxus baccata* is about to be compromised.

Fred's book, 'Yew – A history', details much more that what I have scribbled down here. It is an inspirational read and if you are remotely interested in the ecology, culture and future of one of our most ancient tree species I advise you buy a copy. £25.00 Hardback ISBN 978-0-7509-4597-4

Fred has written a number of articles on the culture and symbolism of trees, **more information**

After Fred had eulogised on the yew we were treated to some fresh air. Groups visited the Farringdon Yew and trees in Alton town. The Farringdon yew is an ancient yew possibly over 3500 years old. Sited in the church yard it is reasonably protected. A completely hollowed shell with heavy branches slowly layering it is a fine example of how this species survives for so long. Whatever your belief, it is incredible to think that this yew tree was old long before Christianity evolved as a religion, let alone before the local church was built around it.

Discussions abounded on measuring ancient trees; where to place the tape; what to do about the layering branches that will eventually drop onto the surrounding footpaths and gravestones;

how best to protect the tree and what, if any arboricultural works were required. Suffice to say, if it's survived for 3500 years without us it is probably best we leave it alone…

An interesting point though, was that the church was Grade II listed, two adjacent gravestones were Grade II listed and the tree was not even listed as an Ancient Tree on the Ancient Tree Hunt website – nor was it offered any statutory protection.

Jim, the local tree warden and the tree officer for East Hants District Council took the group around Alton to look at some trees in town issues. Consideration was given to appropriate works; assessment of a tree's risk of failure and when to intervene; how trees should be a material consideration in the planning process and subsequent problems if they are not; the impact of street trees on the local environment and good management of hard and soft landscaping.

Much discussion was provoked by the decision to remove a 250 year old Atlantic Cedar (*Cedrus atlantica*) that had had 18 branch failures in a 20 year period, in a public garden. No-one had been injured. A single arboricultural report condemned the tree and the Council decided to remove the tree rather than the target. Rightly or wrongly, it was an excellent example of the difficult decisions landowners are faced with when it comes to the management of trees, especially in a public place.

Following a much welcomed lunch and hot drink given the rather inclement weather (occasionally I am prone to mild understatements), Dave Lonsdale took the centre stage and introduced us to some old friends and some new. Dave worked at Alice Holt Research Station and is very experienced in identifying and understanding nature's threats to trees. He mentioned many fungi, bacteria and pathogens associated with most of our British native trees.

A description of many of these can be found on our pest & diseases webpage, though if you fancy a flavour I suggest looking up the following, these are all common in the UK: *Seridium cardinale, Phytophora ramorum,Phytophora cambiveria, Pseudomona syringae pv aesculi, Rhytisima acerinum, Apiognominia erythrostomoa*

For a look at some of our potential newcomers: *Ceratocystis fimbriata, Phellinus punctatus*

And some beautiful fungi: *Polyporus squamosus, Inonotus hispidus, Ganoderma adspersum, Phaeolus schweinitzii,Fistulina hepatica, Rigidoporus ulmarius*

It must be stated that just because a tree may have some or many different decaying fungi, bacterium and pathogens it does not mean that the tree is hazardous or needs to be

removed. Remember that most of our well loved, ancient trees are very decayed, have significant structural defects and poor vigour. Yet these trees continue to live for decades, providing valuable niche habitats for plants and animals, many that are also rare and endangered.

I think the adage, an oak grows for 300 years, rests for 300 years then dies for 300 years is well worth remembering.

And this neatly brings me onto the final point of the day – Ancient Trees. They are everywhere, yet remain one of most hidden treasures. The Ancient Tree Hunt has 13 472 ancient trees verified to date (10 November 2008). However, we are aware of many more that are not listed.

As a society we list our old churches, houses, barns, standing stones, walls and even road signs. We grade them I or II. We offer them statutory and local protection. We pay people to police them, look after them, and restore them. Our affectation for such listed structures seems endless. Why then not trees? We have the Tree Preservation Order yet it is rarely used on ancient trees. We do not offer grants to protect trees. Nor to enhance their surroundings. Nor to educate ourselves. Strange do you not think?

The Tree Council is pushing for national recognition of our green heritage, our trees but it cannot do so without knowing where they are. Be active. Be an ancient tree recorder or verifier. The Ancient Tree Hunt aims to record at least 100,000 ancient trees throughout the UK by 2011. That is almost 30 000 trees every year until 2011. It cannot be achieved without your help. Visit the **Ancient Tree Hunt** to learn more.

Finally, I wish to thank EHDC and the Harvest Church, Alton Maltings Centre for hosting the event and the Tree Council for helping organise and promote the day.