



The Alan Mitchell Lecture 2003

by Fred Hageneder

Friends of the Trees

On Saturday, 26th April 2003, The Tree Register of Britain (TROBI) invited a limited number of guests (120) to an event at Windsor Great Park, by kind permission of the Crown Estate. Guest speaker was TED GREEN who guided a three-hour tour to the ancient trees of Windsor Great Park and in the evening gave a slide lecture titled "The Ancient Oaks of the British Isles - the remnants of Europe's rainforests". He was accompanied by Jill Butler of The Woodland Trust who also manages the Ancient Tree Forum's website. The event was kindly sponsored by The Woodland Trust.

Six decades of working with trees have made **Ted Green** a most interesting and enjoyable lecturer. It was him who founded the **Ancient Tree Forum** in 1993 and he still is one of its trustees. Presently, he is also the Consultant to the Crown Estates and supervises the management of their woodlands and ancient trees.

And ancient trees they have! Particularly oaks, and we had the joy of being introduced to them by someone who *knows* them.

The Ancient Tree Forum has the foremost goal to protect ancient trees and (having originally been under the roof of The Tree Register) hopes to achieve this task by first finding and registering these trees. So far they have detected over 500 sites in the UK with at least 10 ancient trees, and 10 sites with more than 1,000! Windsor Great Park is one of them, with about 2,300 oaks and beech, field maple and sweet chestnut. The other sites are Crom Castle Park, Dynefwr Park, Horner Woods, Glen Finglas, Borrowdale, Sherwood Country Park, Dalkeith Oakwood, Duncombe Park, and Hatfield Forest. On the continent one has to travel much greater distances to get from one such ancient place to another and it turns out that **BRITAIN IS THE HOME OF 80% OF EUROPE'S ANCIENT TREES.**

For more information visit www.ancient-trees.org.uk. The Ancient Tree Forum, by the way, is now under the roof of The Woodland Trust.

Soil and fungi

In the guided tour, Ted made us aware that when we look at an ancient oak of about 1,000 years of age we are looking at one of the oldest specimen of *Quercus robur* on the planet! (emphasis by Ted). These things are irreplaceable, man can rebuild houses or even Windsor Castle but no-one could bring back an ancient tree. We are going to great expenses protecting an ancient painting – why not do the same for a tree?

Ted told us that if one wanted to plant an ancient tree parkscape like the one we were standing in, the distance between the single trees had to be 35 metres. For oaks do not like touching each other or any other tree (with the exception of Pine, interestingly), and only this kind of space would encourage the trees to grow into their full size, the optimum shape to gather light.

He also spoke about the far-reaching root systems which are bigger than anyone expects. A multiple of the diameter of the crown is perfectly normal. And the ground (for all trees) should be soft and not be compacted by any kind of vehicle driving around. Today, the old trees at Windsor are protected even from drive-around lawn mowers, but many other trees in the world are threatened by the pure stupidity of roads and car parks sitting ON their root system, and often enough compacting the soil towards and beyond the point where life stops.

"There is as much below the ground as you can see above" Ted says, and this doesn't only refer to size. The hidden life below ground is what makes the tree, namely the mycorrhiza = the symbiosis of higher plants and fungi. Fungi cannot photosynthesize and the tree supports them with carbohydrates and amino acids. In return, it is the fungi which actually develop the ground nutrients for the tree, by breaking down molecules and changing them so the tree can absorb them. They also protect the roots



Ted Green at Windsor, April 2003

from various diseases. For this their mycelium grows closely around the hair roots of the plant or even penetrates them. Tree and fungi are an unseperable union and there would be no forest without the fungi or the ground insects and manifold microbacteria. The mycelia (fibre networks) of fungi can be absolutely gigantic in size (one recently discovered in the US measures 50 kilometres across and represents the largest living creature on this planet!), and grow very, very old – because they don't have to die. So, when a tree seed comes along and nests itself in this living ground, who can say whether the tree is the host to the fungi or vice versa?

To illustrate the incredible vitality and flexibility of the fungi beings Ted mentioned an incedent from a few years ago when transatlantic flights from Heathrow started having problems with their fuel flow. Finally it was discovered that these aeroplanes had a *fungi* growing inside their tanks and pipelines, living on petrol! So much for versatality. These things 'know' what they're doing.

Hollow trees

Other fungi help the tree to decompose. Yes, *help*. While the common view understands that toadstools appearing on a tree trunk mean the advent of death of the tree this is not necessarily the case at all. Fungi and other microbiological lifeforms take out the hardwood of the tree and let the tree "recycle itself". This brings us to Ted's **hollow tree** theory, which is actually not so much a theory but the wisdom of a lifetime of observation.

A hollow tree is commonly understood as on its way out, dying (and hence has NO protection in this country *as of yet*). But Ted says that the hollowing is an important survival strategy. First, the hardwood gets decomposed and the nutrients contained therein can be absorbed again by the tree, together with the droppings of the helping insects (which in return attract birds etc). Then, the cracks and crevices offer homes to an abundance of wildlife like more insects, and snakes, birds, mammals [or even ancient Irish saints, FH]. Bat droppings, for example, are one of the most potent fertilizers we know. Thus the diet of our tree becomes more diverse.

And last not least, a hollow tree is much more flexible, in a mechanical sense. In heavy storm, younger trees have to, if worst comes to worst, break at the root while a hollow tree can swing much better with the movement of the air. We are really only beginning to understand the physics of trees, and far too many trees are still being cut down as 'dangerous' when they are not. But there is hope since some pioneers like the German author Klaus Matte are one the case who is producing ratio formulas of living wood/hollow wood in regards to load distribution and safety. After the devastating 1987 storms Ted rushed out into the woodlands and found that many beautiful young and mature trees had fallen but the old hollow ones were *all* standing. On another incidence Ted met foresters in France and as they showed him round their estates (again after heavy storms) he asked why so many of the few still standing trees had crosses painted on them. They admitted "Those were the ones we thought unsafe!"

Other threats

Ted also adressed other threats to oak life, particularly the phenomenon of mutant acorns looking like "meteorites". These are caused by a special kind of wasp which lays its eggs in the ovulae of the oak flowers. And the tree will produce a wasp cradle instead of an acorn. This wasp species came with the introduction of the Turkish oak, and continues to spread with it. Unfortunately, jays and other acorn-spreading animals get put off by an infected native oak and might end up distributing the dreaded Turkish acorns instead. Ted's advice is "Kill the Turkish Oak!"

Regarding another imported enemy of native trees, the Canadian grey squirrel, the advice is similar, and can best be achieved with the help of foxes, weazles, martens, buzzards etc.



Conclusion and Implications for Friends of the Trees

All in all a most exciting day for many tree lovers, and a successful day too for the Ancient Tree Forum since Ted and Jill managed to bring across the spirit and the goals of this initiative so well.

I was most interested to hear from Jill that the **tree laws of this country are presently being reviewed** and that the ATF, the WT, English Nature and others are strongly lobbying *on behalf of the trees*. The Tree Council, for example, is suggesting a 'Green Monument' label to protect ancient trees. With someone of the understanding of Ted being a player in the game I have a lot of hope for the near future.

Since our charity also has the conservation of ancient trees high on its banners I believe that Ted and the ATF are most important allies for us. I have always said that any work does not need to be done twice and hence I told Ted when we had a private talk that I as much as the Friends of the Trees are FULLY behind him.

For these reasons I urge every member or prospective member of Friends of the Trees to visit the website of the Ancient Tree Forum and support them any way you can. Beyond that personal level, we the trustees of Friends of the Trees will soon engage in talks with Ted and his fellow trustees about what our two charities can do TOGETHER.

This is an important time. Let's wake up and ACT.