



Chairman's Comments

Dear Members

It has been a great year for Severn Tree Trust. We have welcomed many new members and it is good to see you at our lectures and on our walks. I certainly am still learning about trees: Proof that there is plenty of work for our team of experts, many of whom serve on the Committee. These skill sets include arboreal professionals, teachers, farmers, a mechanical hobbyist, an ex council tree specialist and myself a historian. There must be plenty of members who can bring their interests to the committee; it is only one evening a month extra work. In order to continue the work of the Severn Tree Trust it is vital to have a multi interest group with many diverse skills. If you enjoy helping others please think of the committee with our A.G.M. approaching in February. I can guarantee that we have some more treats in store this coming year.

Up till then I must wish you all a Happy New Year

Membership renewal. There was an excellent response to the note about Membership Renewal in the December Newsletter. Renewal forms will therefore only be sent by post to those who either have not paid by cash or cheque- many did so at the last meeting- or who pay by Direct Debit or Standing Order. For members who have joined since October 2019 your membership is held over to 2020. Memberships can still be paid at our first meeting of 2020 on Tuesday 14th January.(details below). To avoid a crush at the door on the night please bring the **correct money** either cash or cheque **in an envelope marked with your name and give it to Hilary**. She does not want to be dealing with cash on the night. Membership Cards with the 2020 Programme will be given out at the January Meeting to those who have paid or will be sent out by post. The membership fee has not changed in 10 years. What other organisations can say that?! It remains at £15 for individuals and £20 for joint members. For those who request that their Newsletter is sent to them by post, please make a contribution to the postage. Twelve second class stamps is well over half your subscription!

I look forward to seeing you at St Peter's on 14th January.

David

Talk 10th December 2019: Peter Aspin on "Silvopastoral Agroforestry"

Peter owns a farm in north Shropshire. About five years ago he sold the last of his own cattle, since when he has contract reared heifers for a local organic dairy farmer.

Before I go any further, I must tell/remind members that, in the last five or six years, we have made two visits to Peter's farm: in May 2014 and in July 2016. Full reports on these visits may be found in the Newsletters of June 2014 and August 2016 respectively. Also, Peter's own website has lots of information on his farming methods that he described so eloquently in his talk: <http://www.silvaspin.org.uk> So I must

ask our longer serving members, who perhaps still have their past newsletters, to forgive me while I write this for our newer members. So to continue

Peter planted a small forest garden in the late 1990s which led to his interest in agroforestry. His forest garden was developed along the lines promoted by the national authority on this type of gardening, Robert Hart in his garden on the side of Wenlock Edge and in his book on the subject. ("Forest Gardening - Rediscovering nature and community in a post-industrial age" by Robert A. de J. Hart. Green Earth Books 1996. It was reprinted in 2009 and I think is still in print.) Peter managed to visit Robert's garden in 1999 although, by then, Robert was in poor health and unable to maintain it.

Peter's own forest garden holds a huge range of fascinating tree specimens, many quite rare or unusual. He has trees for fruit, trees for nuts (well, nuts are fruit aren't they !), trees to encourage pollinating insects, trees for shelter, trees for hedging, trees to stabilise the soil. Trees must work for Peter rather than merely be pleasing to look at. One example is the rare South American *Polylepis australis*, that, in its home Andean territory, grows higher in the world than any other woody plant. Peter grows it for the similar home purpose of binding together the soil. Not the common *Amelanchier*, but *Amelanchier alnifolia* is grown for its prolific fruit contribution. Bladder Nut (*Staphylea pinnata*), Pawpaw (*Asimina triloba*) and the Hardy Rubber Tree (*Eucommia ulmoides*) are just some of the other specimens that Peter grows. But, I digress. I must return to agroforestry.

What was it that started Peter thinking along agroforestry lines ? He told us how significant climatic events during his lifetime had started this together with his reading of the book "Temperate Agroforestry Systems" edited by A.M. Gordon and his own observations of the uncomfortable situation of animals in open fields in hot weather with no shade. Research carried out by Manchester University in the 1980s proved that a 40% canopy cover in urban areas reduced ambient temperatures by about 15°F (8°C) and Peter wondered how this information could be converted into a farmland situation. In addition, as a farmer with his own farm, he became increasingly aware of the impact of high rainfall and the slowness of land drainage.

All these things set him on the road to fulfilling his frequently quoted saying: while many farmers farm for the land with grants and subsidies in mind, farming should be for the animals and for the land's potential. In an agroforestry situation, TOTAL yields are at least 20% higher than in a conventional system. To this end, Peter has divided his land into what he calls "alleys" aligned north-south, twenty metres wide and about 400 metres long. He has planted trees at 5m intervals along the parallel boundaries of these alleys and the trees are protected by parallel lines of electric fencing at each side of the trees. The species of trees chosen are many and various. Some are the result of trials in his forest garden, some the result of his research into what is used in other countries and in the past. It seems that the Foxglove Tree is much used in China and the English Elm was the species most used in Britain before its decline. Peter believes that the diet of many farm animals today is "frighteningly narrow". So, in addition to the trees he has planted his pasture with a wide range of wild flower seeds which include clover and chicory.

After heavy rainfall, Peter has noticed that, because of compaction caused by cattle movement over the main part of the pasture, the strips beneath the trees are the places where the water can drain easily - no compaction here and the tree roots have broken up the soil. The trees themselves add much leaf litter to the ground improving the soil by improving its texture. The smaller the leaves the better as they rot more quickly and are taken below by invertebrates. The electric fencing is strategically placed to prevent the tree stems being grazed but as the cattle will graze up to about eight feet the branches are allowed to hang low over the electric fencing to ease this. So the trees provide shade and food for the cattle and, with the variety of herbage underfoot, the animals are guaranteed a very wide ranging healthy diet.

So which trees has Peter planted ? In the absence of English Elm, it appears that Ash is now the best grazing tree. But Peter has planted a wide range of species along the sides of the alleys not just to provide the varied diet but also to avoid the disadvantages of monoculture. I remember my first and only visit to the National Arboretum at Alrewas – lots of rows of the same tree species, many suffering from disease. And why ? Because they had planted the same species together in rows and one of the trees had become infected by a fungal pathogen which had spread along the line. There were so many lines of trees like this that we left and

spent our time in Cannock Chase forest instead ! What a disappointment. Perhaps they've done something about that now. We must give them a second chance. But I did know exactly what Peter was talking about.

Peter has alternated species along the sides of the alleys, in some places planting a number of different species in a line. He has used 8 species of Ash and 40 of Walnut, 7 species of Elms and Zelkovas, 6 of Hickories, 2 of Cladastris and 6 of Ginkgo. Other species used are the Wild Service Tree (*Sorbus torminalis*), Almond (*Prunus dulcis*), an unusual Sweet Gum species (*Liquidambar acalycina*), the Osage Orange (*Maclura pomifera*), Chinese Hornbeam (*Carpinus fangiana*), *Robinia pseudoacacia*, Tulip Tree (*Liriodendron tulipifera*), Judas Tree (*Cercis siliquastrum*) and, of course, Foxglove Tree (*Paulownia tomentosa*). He is sampling all these species to find which suits agroforestry best. The Siberian Elm, he told us, was the first to leaf in spring and the last to lose its leaves in autumn. The Manchurian Walnut was not so good for nut production or timber, he told us, but good for cattle grazing. But his biggest disappointment to date has been most of the Almond varieties which have had to be removed. The *Robinia* flowers were excellent for honey and “I can't keep the cattle off it”. Peter's throw away lines are worth noting: “Honey and tree seed are the best foods for man on the planet” and “Every farmer should grow 1 one acre of ash for every 20 acres”*. All Peter's ash trees are free from ash die-back. Of course, here is a fine example of biodiversity and sustainability so why should anything become infected ?

Peter's farm is a great success story, a story he told us with great enthusiasm and clear and relevant powerpoint slides. Thank you, Peter, for preparing this excellent talk for us. Your audience showed real approval at the end.

*Peter tells me that this latter quote actually comes from John Evelyn.

John Tuer

Footnote to December Newsletter

One of our members, Christine Scott, has told me of something she'd read about Norfolk Islands Pines which I thought would be interesting to pass on to you all. She read it in an Australian book “The Fatal Shore” by Robert Hughes.

Apparently in the late eighteenth century, an embargo in the Baltic prevented supplies of tall pines coming from Russia. We needed them for the masts of our ships. So, looking elsewhere, Captain Cook's voyage to the Pacific had discovered 180 feet tall Norfolk Island Pines on Norfolk Island. These often had diameters of 3 feet – large trees – and would have been ideal replacements. The difficulties of obtaining flax for linen sails could also be relieved using New Zealand flax, from the same part of the world.

However, neither was found to be suitable. Whereas true pines from Russia and Scandinavia, because of their pine resin, could flex in high winds at sea, the Norfolk Island Pine did not have this capacity and, being more rigid, would snap rather than bend with the winds. The Norfolk Island Pine was an *Araucaria* not a *Pinus* species.

John Tuer

First Meeting of 2020. 14th January at St Peter's Church Hall, Monkmoor Road, Shrewsbury SY25SW

County Tree Officer Dougal Purce will talk about his work with trees in Shropshire and will focus on Tree Preservation Orders and trees in Conservation Areas; it will cover the latest legislation regarding tree conservation and protection.

As always the meeting starts at 7.30pm. Admission to the talk for non-members is £5 including refreshments.