



*****Newsflash- Our January talk by Andy Gordon is cancelled due to Covid-19******

Dear Member,

I hope that you all were able to enjoy Christmas and to meet up with your families. For the first time in 49 years Fiona and I spent Christmas on our own as neither our GP son nor our district judge daughter in law were prepared to risk having contact with us as they had important appointments later that week. Let us hope that 2022 is more normal.

I apologise for the situation in regards to cancelling the 11th January talk, so a short synopsis follows:

You may remember that I am down to talk on “*Unlocking some of the secrets of Tree Seeds*”. It is proving a real challenge to condense 52 years of experience with tree seed into a 45 minute talk! I would therefore have given a short history of Tree seed collection in the UK, explained the differences that joining the EEC made on what British forestry nurseries could collect and grow, shown some of the methods involved in collecting and processing seeds- including how the hawthorn fruits that Andrew Allott and I collected on Hopesay Common in 2019 have been successfully handled- then finished off with two case studies, one obtaining *Nothofagus* seed from Chile and second the challenging and at times frightening experience of obtaining Nordmann Fir seed from Georgia just as it was leaving the former U.S.S.R.!

It is hoped that we will be able to run a full programme of lectures and visits throughout most of 2022 and that you will remain a member. With this Newsletter is the Renewal Form for those who don't pay by Direct Debit and to enable others to bring their details up-to-date. Please send the form by post to John Tuer and we will send out the membership cards. *Andy Gordon*

Trees: Great Heights and Hidden Depths by Bob Watson

This was an unbelievably interesting and thorough look at trees in all their situations. Given a title such as *Trees: Great Heights and Hidden Depths* one can understand that this talk could only be covering all manner of tree matters. And it did. So how can I report on a talk that covered everything to do with trees?

I think the best way is to pull out those things. So this will, perforce, be very subjective and someone else writing this might write a completely different report. No matter. Here goes:

Bob started by showing us some usual and unusual features of trees by passing around hand-held specimens. I had never before seen such fascination in the branch of ash that we held, a flattened branch with black buds literally everywhere and clustered together with no regard for the rule they should abide by of being opposite each other. Then there was the less common feature of corky wings, but more common on this branch of Field Maple. Bob showed us what he called the Chinaman's moustache, the branch bark ridge through which we mustn't cut when pruning. He showed some easily-identifiable lenticels in a piece of birch bark, all a good starter to whet our appetite for what was to come.

A quick run through all the benefits that trees offer us led to the two main thrusts of Bob's talk: forest bathing (yes, there is such a thing) and the wood wide web.

Above ground, Bob spoke of photosynthesis and how it occurred less on trees facing strong winds because they transpire more quickly but how this process is moving gasses through the air all the time unfelt by us. As we walk through woods and forests, all around us, water and carbon dioxide is being moved into trees and oxygen is moving out. Ions, too, are moving backwards and forwards and the air is awash with unseen elements as we blithely pass through. But we benefit from these and this is Forest Bathing. Leaves are not the only photosynthetic parts of trees. Just beneath the bark, the green of chlorophyll shows this, too, to be photosynthetic. So we are being bathed not solely from, the crown.

Bob mentioned the phloem conundrum. That's my term for it, as it has often puzzled me. While each year, the woody tissues put on extra rings of cells, these differentiate into phloem (the outer vessels through which the plant foods move) and xylem (the inner vessels through which water moves). Now we know that as the xylem "dies" it stays to form the heartwood as it is filled with lignin and forms the upright support for the tree, but what happens to the phloem? The phloem goes to form the bark. But if there are as many xylem cells as there are phloem cells, surely all the phloem isn't taken up as bark. Bob showed how it is sloughed off the outer part of the tree. The bark scales can lift to allow it to drop. He showed us a slide of the papery bark of *Betula nigra*, peeling away, another way of sloughing the excess "dead" phloem once it has done its work. Problem solved. I didn't know that!

Bob showed us some slides of *includation* whereby a tree grows to wrap itself around adjacent man-made objects, such as signs and posts. However, he did show us where a tree had wrapped itself totally around a piano. Now that would be worth a trip to see. He also talked about "inosculation" where branches fuse together. Apparently by doing this they share cells and become a single unit.

Epicormics are not integrated deeply into the structure of a tree. A tree's branch not only has its annual rings added each year but also has the rings of the bark from which it extends added to it. In this way a branch is given superstrength and, of

course, this is how a tree can manage to support a very heavy branch held out horizontally from the main trunk. Epicormics do not have this extra bark connection, so are much weaker and can easily break away.

Before looking below ground, Bob spoke of the extent of roots in relation to the above-ground canopy. He told us that the spread is usually twice the diameter of the crown or more. This cannot always be seen from uprooted root plates because many of the roots have snapped off by the time the tree has keeled over. But, looking below ground now, we were told that roots rarely extend below 1.5 metres. Just on some occasions they can extend to below 2 metres but this is very rare as the deeper a root penetrates, the less oxygen there is and roots need oxygen.

Bob talked about the effects of micorrhiza, that friendly fungus (as the packet calls it) and, not only how it can extend the capacity of tree roots to gather water and nutrients from huge areas but how it can connect roots of different trees to enable them to communicate with each other chemically. Yes really ! (Read Peter Wohlleben's 'The Hidden Life of Trees' or, better still, Suzanne Simard's 'Finding the Mother Tree') Bob's slides of mother trees connecting and "nursing" the younger trees around them was an eye opener. All mycorrhizal 'infected' trees are more efficient in their uptake of phosphorus and nitrogen and while Fly Agaric is very common in the messaging systems of tree, honey fungus is a killer. Apparently an individual honey fungus found in America extends its mycelium (root-like structures) over an area of 2,000 acres.

Root systems can graft, said Bob, but the mycelium of mycorrhizal fungi allows chemical messages to pass more easily from tree to tree. Chief Seattle's message was never more relevant: '*All things are connected in the web of life*'. The system of mother trees runs through forests and acts as hubs of information for other trees that depend on them.

Bob showed us diagrams of connections above and below ground between tree and tree, between tree and air, between tree and ground, and these connections were manifold. We walk through all this when we walk through a wood or a forest. Bob called it a soup, a very apt word, well understood after seeing his diagrams with hundreds of elemental connections, unseen yet passing all around us.

Bob did mention other things such as the difference between callus and wound-wood. He mentioned compartmentalisation. He looked at the strength of hollow trees. I could go on.

This was a most fascinating talk, if fascinating is enough of a word to describe it. Many (well, there were only 18 of us!) people said afterwards just how much they had enjoyed it and how much they learned from it. Some even suggested that we ask Bob to give this same talk again as they felt it was something that should just

not be missed. Now there's an accolade. Thank you, Bob, for a superb talk. *John Tuer*

Forward notice of A.G.M. on Tuesday 8 March 2022 @ St Peter's Church Hall

If and when the A.G.M. goes ahead as planned then we are hoping that after the A.G.M. itself we will have an exhibition of members photographs of trees that a panel (mostly although not exclusively committee members) will have to guess the species of tree from the photograph provided. The photograph will have the species written on the back. Since it is now winter and the leaves have fallen unfortunately there is no chance to take new pictures but we are giving you notice to look through your photo albums (digital or otherwise) and find a few to test the identification skills of our experts! We are also opening up the competition to paintings of trees (nothing too abstract please). Feel free to email or phone the Committee for further information.

Hedge Planting at Cow Hall, Newcastle-on-Clun.

A big thank you to all those of you who came along to the hedge planting at Cow Hall.

I realise this was a bit too far away for many of you: The Welsh Border was just up the road. What made the trip worthwhile were the lovely views of the hills. We planted a mixed 75 metre hedge of about 430 plants 175 Hazel, 175 Hawthorns, and the rest a mixture of Birch, Rowan,

Buckthorn, Spindle, Dogwood, Field Maple and Holly.



Figure 1: Hedge planting at Cow Hall, Newcastle on Clun (photo Richard Dorrell)

Hopefully the next planting date will be **January 29th 2022 at UPPER DARNFORD, RATLINGHOPE, CHURCH STRETTON. SY5 0SR**

TIME 9.30 a.m. onwards

This will be another planting with the C.P.R.E. to assist them with their hedging project which is their attempt to reinstate many hedges around the County.

Sarah Jameson, who is the local administrator for the C.P.R.E., has asked us if we would become involved. Of course, we're happy to oblige.

Richard Dorrell's phone number 07790 956 496

THE SEVERN TREE TRUST – Membership Renewal 2022

For those who completed a Standing Order form last year or earlier, please use this form to correct your details if necessary.

For those renewing their membership by cheque, please complete the following and send it to our treasurer.

John Tuer, Evergreen, 5 Woodside, Homer, Much Wenlock, TF13 6NQ

(please tick as appropriate)

Single Adult membership (£15) _____ Under 21s Membership (£5) _____

Double Adult Membership (£20) _____

Title (Mr.) (Mrs.) (Ms.) (Miss) (Dr.)

Name(s) _____

Your email address if you have one (This is to confirm that we have your correct current email address) and phone number.

Address

Receipt of newsletter. If possible we would like to send you the newsletter to you by email as it saves on postal costs. However our editor will post it to you if you have no email access.

Some people with emails have NOT been receiving the newsletter by email, mostly due to Firewall settings. Some have had trouble opening pictures and attachments. If you have had any problems in receiving the newsletter, usually sent during the last ten days of the month please indicate below.

Newsletter received by email _____ Newsletter received by post _____

(newsletter always available on the website)

Newsletter not received or other problem

Membership cards These will be sent out on receipt of your subscription but can also be collected at the next talks and the AGM in March.

Thank you for renewing your membership. The committee will do its best to provide an indoor and an outdoor programme as restrictions permit.