

## ASH DIEBACK



In 2012 there was news of the arrival of a new disease of ash trees in Britain. In some respects its arrival was expected as it had been progressing across Europe for 20 years. It is called ash dieback as an early sign is of blackened leaves dying on the tips of twigs and branches followed by black strips on twigs and small branches which then often die. Young saplings are readily infected and soon die. When high twigs on bigger trees are infected there may be temporary re-growth of leaves forming clumps in the tree top akin to odd mistletoe clumps in appearance and it may take several years for the tree to die.

The disease is caused by a microscopic fungus named *Chalara fraxinea* which gets into leaves and twigs and produces viridiol, a chemical very toxic to ash. Masses of spores are formed on the leaves which may be washed around the tree by rain causing more infection. When the leaves fall *Chalara fraxinea* changes to a tiny white cup fungus *Hymenoscyphus pseudoalbidus* about 3 mm across which grows on the dead central leaf stem. Each cup produces vast numbers of spores – a single leaf stem with a group of cups may produce millions – which blow away on the wind to infect new trees. Nothing can be done to prevent the inevitable spread of the disease. Large numbers of ash will probably die but European studies suggest some will survive. Ash is genetically diverse and detailed studies are finding ash trees that are resistant to the disease.

We thought we saw the first signs of the disease in Tiddesley Wood, near Pershore two years ago and this summer it was obvious in both young saplings and bigger trees. Tiddesley Wood contains millions of ash trees. The vast majority are seedlings and saplings but we have encouraged the growth of many big trees. Also noteworthy are huge coppice stools (we have mapped over 200) producing many stems and these have provided a continuous source of timber for a very long time and are many hundreds of years old. They are susceptible to the disease and it will be sad to see them go – hopefully a few will survive.

Most of Tiddesley Wood sits on clay, mildly alkaline soils and woods on this are generally classified as ash-field maple woods indicating these two species are likely to be the dominant trees amongst many others together with a typical ground flora. Early Victorian documents indicate that coppiced oak trees were there amongst mixed coppice. In the early 1960s Tiddesley Wood was devastated by an attempt to convert it to a conifer plantation in keeping with woodland management of the day. Most of the wood was cleared of trees and shrubs and large areas treated with herbicide to try and kill off broad-leaved trees competing with planted conifers. Despite this the wood recovered and much of the conifer crop failed.

What will happen when ash dieback hits the wood? The majority of the most abundant tree, ash, will die but this will leave space for others to grow, especially if deer numbers are low. New woodland will arise. At first there are likely to be more open spaces with brambles and these may well be nurseries for young oaks and Field Maples and the growing trees will eventually shade out the bramble. The new sunny spaces are likely to hum with insects including butterflies and give plants of sunny places a chance to shine. The woodland may actually become more diverse based on a simple species count.

Although we shall harvest much of the big ash in keeping with our present programme there will be an increase in dead and decaying wood which will support many specialist insects such as longhorn beetles.

What other trees and woody shrubs will grow in the new open glades? We know that the following already grow in the wood – here comes their chance! Birch, dogwood, lime, sallows, willows, aspen, yew, hawthorn, blackthorn, hazel, buckthorn, wild service, crab apples, even pears perhaps. There is also a small amount of small-leaved lime in the wood and this may have a chance to spread as the warming climate encourages the production of fertile seed.

Shall we be planting trees? Maybe a few but at first we shall mainly watch and see what happens and keep a sharp lookout of any ash that survive. After all, Tiddesley Wood is primarily managed as a nature reserve not as a commercial forest although in the long run we would like to produce good timber amongst the other wildlife.

So although ash dieback is a tragedy that will alter the appearance of the countryside in this wood the outcome could be good and it will be fascinating to see the changes take place

Harry Green