

The Great British Elm Experiment at Thames Chase

As a forerunner in the UK's woodland conservation, Thames Chase Community Forest have applied to plant 12 individual Dutch Elm saplings through The Conservation Foundation's Great British Elm Experiment, in the hope of helping to recover some of the British population lost to Dutch elm disease over the last two centuries. We have planted two species of tree (*Ulmus procera* and *Ulmus minor*) from four separate populations, so that we can closely monitor the success of individual breeds in terms of their disease resistance, strength of growth in our soils, and benefits to wildlife.

English Elms are one of our most impressive trees, growing as tall as 40 metres and potentially living to over a hundred years. Their bark is grey-brown, rough and fissured, and their twigs are often finely hairy. They have oval, toothed leaves that are pointed at the end, and covered with distinctive hairs. Interestingly, Elms are hermaphrodites, meaning both male and female reproductive parts are contained within the same flower. The petals are deep red, and the flowers hang in tassels as they bloom in early spring. Once pollinated, they develop into tiny winged fruits known as samaras.

Once upon a time, Elms were a conspicuous and well-known feature of our landscape that grew everywhere in habitats ranging from hedgerows to forests. The original London Bridge was built of Elm wood in the twelfth century, and remained standing up until the 1800s. Elms were also the focus of some of our best pieces of literature – poets like William Wordsworth, and even the famous 19th century painter John Constable, referenced the grand trees in their work, and now they are to many a poignant symbol of the times that once were.

Dutch Elm disease is so named as it was first researched in Holland, since which time it has spread throughout Europe to kill up to 90% of the trees it has infected. It is caused by three identified strains of *ascomycete microfungi*, a deadly pest introduced from Asia to Europe, America and New Zealand though the movement of Elm bark beetles with human trade. Valuable wildlife that traditionally use the trees for foraging, shelter, and even for producing offspring, which includes the white letter hairstreak butterfly, tree sparrow and rook, have faced serious population declines and now are scarcely seen in many parts of the country.

However, it has been seen that some local cultivated populations have now developed a genetic resistance to the disease, leading to hope that it may be possible to replace some of the trees that have been lost. The experiment that Thames Chase is participating involves the planting of a series of species so that their unique strengths can be monitored and understood, and also that any trees that unfortunately do succumb to the disease will have a lower chance of spreading the disease to the other trees on site, and will be replaced by a different breed.

Already both Nuthatch and Treecreeper – two charismatic woodland birds that faced serious local declines due to loss of Elm woodland from some parts of the country – have been seen foraging at Broadfields farm this winter, which shows that there is still very much hope for restoring our unique elm ecosystems should any of our trees be successful. Visitors will soon be able to participate in our new tree trail, which showcases both our original and brand new stands of English Elm, and it will be possible to track the progress of our trees using The Conservation Foundation's interactive online map. If you would like to get involved in our conservation work, there will be many opportunities listed on our website at www.thameschase.org.uk/get-involved, or alternatively feel free to inquire at The Forest Centre.

By Benedict Green - Volunteer