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Summary

Since the summer of 2000 a virulent disease has been infecting the Manchester Poplar, in most cases leading to death within three years. The disease has initially been diagnosed as the fungus Poplar Scab.

Manchester Poplar Disease

The Manchester Poplar

Manchester Poplar (*Populus nigra betulifolia*) is one of Britain's rarest native trees. As a wild tree, the species is referred to as the Native Black Poplar, and can grow to a height of 125 ft (38 metres), 8 ft (2.5 metres) in diameter and can live up to 250 years. In the Manchester area, the tree rarely grows taller than 75ft (23 metres), with the largest known specimen being a tree in Beech Road Park, Chorlton.

The Native Black Poplar has the male and female reproductive organs on different trees. The Manchester Poplar is exclusively male however, and has been reproduced from a single cutting - meaning that all Manchester Poplars are effectively clones.

In the late nineteenth and early twentieth century, few trees were capable of thriving in the pollution-laden cities. Manchester, like many other major conurbations, saw their tree stocks severely depleted as industrial pollution increased. The Native Black Poplar became one of the only species capable of surviving in such conditions, and because of this it became the tree of choice for the City's Parks and Cemeteries Committee, resulting in many hundreds of the same tree being planted, city-wide.

The disease

The infection currently affecting the Manchester Poplar is assumed to be the fungal disease - Poplar Scab *Venturia populina*. Strains of the *Venturia* disease affect many other species of tree (the most commonly known being Apple Scab).

The cause of the disease's sudden and virulent appearance on Greater Manchester's Poplar tree stocks has yet to be confirmed. There is evidence that suggests climate change is playing a role, and it is known that wetter springs and hotter summers create the perfect conditions for the disease to spread. Once infected, there is no cure for the tree.

To date, this disease is almost exclusively restricted to the Manchester Poplar.

The symptoms

Initial symptoms of Poplar Scab are hard to detect in isolated trees without a full knowledge of the tree's history and patterns.



Browned leaves and drooping shoot tips in June are a good indicator of Poplar Scab
Andy Johnson

It is more readily detectable in groups or rows of Poplars, where some will appear to have slight browning of the leaves compared to surrounding individuals and early defoliation (in the month of June) will be noticeable (defoliation any later than this is unlikely to point to Poplar Scab). On closer inspection of the leaf, a blackened, drooping leaf tip is a good indicator of Poplar Scab. However it is important to be aware that early defoliation over a period of around three years will leave the tree sufficiently weakened and vulnerable to other diseases.

Treatment

The related Apple Scab can be treated by a combination of pruning out infected twigs, spraying the entire tree with fungicide and removing all fallen leaves that harbour the fungus over winter. However, it is unlikely that any one of these treatments could be achieved on large poplar trees.

Currently, felling diseased trees is the only course of action available. As the disease runs its course and infection levels begin to tail off it is expected that a few trees may survive.

Implications of the disease

The Manchester Poplar is a landscape tree. Either as a single specimen or as a clump or shelter-belt their unique dense crown (described as looking like a green thunder-cloud) make an imposing statement and will be hard to replace. Within some parks in Greater Manchester and other urban areas the Poplar is the dominant mature tree. Their removal will have a localised landscape impact on a scale not seen since Dutch Elm Disease of the mid 1970s.

In the wider context, as the trees in Manchester succumb so quickly, with so little genetic variation and so few trees in the wild, the possibility of the Native Black Poplar becoming virtually extinct in Britain is a possibility. The population of Native Black Poplar in England, Wales and the Republic of Ireland is currently estimated at 7000 trees. However, this figure originated from a survey of "wild trees" and planted specimens in the North West are likely to double this figure.

What's being done

Because we still know very little about Poplar Scab, research will be undertaken to establish the precise nature of the disease and what, if any other factors are aiding the decline of Manchester Poplars. From this research we will hopefully understand how to limit the spread of the disease. That said, it must be stated that the disease already has a very firm hold in Greater Manchester.

Currently, local authorities and others who have Manchester Poplars on their land are assessing their tree's health and monitoring the situation. Unfortunately in many circumstances where the tree is badly infected, they will have to be removed. This may result in a considerable impact, to the local landscape and some people may be distressed by the loss of these trees, it is unfortunate that this action has to be taken but it is obviously necessary on safety grounds. Where there has been considerable landscape impact tree replacement programmes will be drawn up.

New Native Black Poplar trees of different genetic origin are also being planted in many places to see if they are any more resistant to the disease than the Manchester Poplar clone.

Thankfully tree cover in Greater Manchester is increasing. It has doubled since 1980 and over 2 million trees have been planted in Red Rose Forest since the early 1990s. Tree planting is continuing and if you want to get involved then please contact Red Rose Forest for your nearest tree planting event.

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Dock Office Trafford Road Salford Quays Manchester M50 3XB
telephone 0161 872 1660 fax 0161 872 1680
www.redroseforest.co.uk email team@redroseforest.co.uk