

Helping our Rarest Native Timber Tree, the Black Poplar



Sussex
Wildlife Trust

Black Poplar Under Threat

There are only 38 mature Black poplar trees (*Populus nigra ssp. betulifolia*) left in Sussex and only around 10,000 trees left in the UK. The genetic diversity of the remaining trees is very limited and new diseases have recently wiped out whole swathes of the species in Manchester.

Without a concerted effort to protect existing trees, to plant saplings and restore habitats to enable natural reproduction, Black poplars could very soon become extinct in the UK.



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The history and properties of Black Poplar and its wood

Historically, Black poplar played a significant role in local communities. It was planted to mark field boundaries on floodplain land and the wood was often used commercially as the tree is fast growing and has many desirable properties. The Black poplar can be coppiced or pollarded to provide a crop of wood for bean sticks, thatching spars, scaffolding poles and fruit baskets. Young shoots (which do not split easily) were used in Victorian times as clothes pegs. The wood is relatively fire resistant and was often used for flooring when paraffin lamps were still in use.

Black poplar wood is naturally springy and was used to make cart wheels, wagon bottoms and clogs. The branches of mature trees grow in a natural curve and the timber can therefore be used to make the arched supports of timber framed buildings. Later, it was discovered that the wood absorbed paraffin so it was used to make matches. The wood turns well and the large burrs found on the trunk are still used today to make bowls. The Black poplar tree is famously depicted in John Constable's painting - 'The Hay Wain'.

How to recognise Black Poplar

The Black poplar is distinctive, and can grow up to a height of around 30 metres, with a trunk diameter (at chest height) of up to 2.5 metres. Mature trees often lean at an angle, and have dark grey, deeply furrowed bark interrupted by woody burrs or swellings. Older trees often have down-curving branches, upswept at the tips. Young shoots are pale yellow brown, with shiny brown alternate sticky buds. Catkins appear before the leaves. Male catkins are crimson and appear in late March or early April. Female catkins, which are yellow-green, appear shortly afterwards. Young leaves generally open in early spring (March-April) and are pale green, occasionally tinted bronze at first and have a distinct aroma. Leaves are triangular shaped with serrated edges.



Helping the Black Poplar Tree

Why is the Black poplar important?

Native black poplar is associated with riverside woodland – itself a threatened habitat requiring conservation. The tree is also valuable for wildlife and has over 100 specialist insects associated with it. Moth species include the hornet moth, wood leopard moth, poplar hawk moth and the figure of eight. Catkins provide an early source of nectar for bees and the seeds are enjoyed by finches. The rare migrant butterflies the Large tortoiseshell and the Camberwell beauty rely upon poplar and elm species for their food plants. A decline in both of these tree species has resulted in these butterflies becoming extinct in the UK.

Why did the Black poplar decline?

Centuries ago, the Black poplar would have naturally occurred in winter-flooded riverine woodlands. It survived phases of woodland clearance as a tree of riversides and floodplain grasslands. Large-scale agricultural drainage since the 17th century caused a huge decline in their numbers. Since then, survivors have only regenerated when planted as cuttings.

The last 200 years saw an even greater decline in the native Black poplar which was replaced as a working timber tree by fast growing hybrids imported from abroad. The decline in its use severely reduced the need to plant it. Native trees also hybridise easily with non-native imports. This, combined with the Black poplar requiring specific conditions to reproduce naturally, has led to a steep decline in its numbers. Female trees also produce a copious, downy seed which is often seen as a nuisance. Female trees are consequently often destroyed and seldom planted.

Black poplar is now one of the species included in the European Forest Genetic Resources Programme (EUFORGEN). Many of the remaining trees in Britain are of an even age and approaching the end of their natural life spans. These trees are genetically very closely related. This makes them particularly vulnerable to chance extinction events. There are only 5 'genetic' clones within the 38 surviving Sussex trees.

How do black poplars reproduce naturally?

Native Black poplar seeds are short lived. To reproduce, the fertilised seeds of a tree (requiring a male and a female tree in close vicinity with no hybrid pollen present) need to fall on bare, wet alluvial soils free of competition from other vegetation between June and October. Flooding or drought during this period (much more common over the last century) causes seedlings to perish. There are few documented cases of these native trees reproducing naturally, although Kew gardens is working to increase its genetic variety through seed pollination. Occasionally the tree will reproduce vegetatively from fallen trees, branches, or severed roots but this process does not increase genetic diversity.



Black Poplar © Tim Bernhard

Helping the Black Poplar Tree

Conserving the Black poplar in Sussex

The Sussex Black Poplar Working Group was established in 1998 to publicise the plight of the Black poplar. They originally found thirty four mature trees in Sussex and later a further four were identified. They formed a voluntary partnership with the Royal Botanic Gardens (RBG) Kew (Wakehurst Place) and took cuttings from each mature tree, which now grow as active coppice stools. Every year, cuttings of young trees are taken and are planted throughout Sussex in river valleys. Over 6,000 trees have been planted. Sadly one of the trees died of old age in 2003, but it lives on at the Wakehurst nursery and through the cuttings taken from a coppice stool every year.

What can I do to help save the Black poplar?

Every year, Sussex Wetlands Project helps to hand out young black poplar trees to landowners who can plant them in their native habitat. If you think you can plant some Black poplars as part of a floodplain woodland, then let us know - **we may be able to supply trees to you for free.**

What is a floodplain woodland and why does it help Black poplar trees?

Floodplain woodlands are one of the most natural and dynamic woodland systems in existence. These woodlands have between 30 - 70% woodland cover and include a mixture of open floodplain areas, woodland and wetlands. They are self regulating through natural processes and need minimum human intervention. Natural variations in floods and water flows from adjacent rivers cause the woodlands to constantly change in shape and structure. Water flows create bare mud and open habitats in which black poplar seed can grow, or in which pieces of broken branches can float down river and root themselves in new sites. Floodplain woodlands can also benefit people by helping to slow down and clean floodwater as well as encouraging the return of rare species which depend on this habitat such as the otter and the spotted flycatcher. In the long term, we hope that every river catchment in Sussex will be managed to address landscape and water use issues and to encourage natural environmental services through river and floodplain woodland restoration.

Can I help Black poplar by planting a floodplain woodland?

If you have an area of land near a river or stream which floods regularly, and the land is not already of value for wildlife, then you may be able to plant floodplain woodland with Black poplars. This can help us to restore some of this precious habitat for these and other rare species. There may be grants available to help you do this through the Woodland Improvement Grant Scheme (WIGS) or through Natural England Higher Level Stewardship grants. Free advice is also available from Sussex Wetlands project.



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How else can I help Black poplars?

If you own or manage an area of Ancient Semi-natural woodland in a floodplain in Sussex and would be prepared for us survey it then please contact us. Surveys help us to ascertain species' abundance and the state of habitats in the area.

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Contacts

Sussex Wildlife Trust
(Wetlands Project)

www.sussexwildlifetrust.org.uk

01273 497555

Environment Agency

Ask for Fisheries & Biodiversity or
Land Drainage consent teams

03708 506506

www.environment-agency.gov.uk

Natural England

0845 600 3078

enquiries.southeast@naturalengland.org.uk

River Restoration Centre

01234 752979

www.therrc.co.uk

Woodland Grant Schemes

(Forestry Commission)

www.forestry.gov.uk/ewgs

Sussex Biodiversity Record Centre

www.sxbrc.org.uk

01273 497521

Woodland Trust Grant Schemes

www.woodlandtrust.org.uk

0845 293 5689

References & Further Reading

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- **Sussex Black Poplar Species Action Plan** - www.biodiversitysussex.org.uk/species/

Sussex wetlands project promotes the sustainable management of rivers and the restoration of wetland habitats for people and wildlife

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