

Black Poplar

“It is a dramatically handsome tree. The trunk is massive and fissured, covered with bosses and burs, and often developing a decided lean in middle age. The branches turn down towards the ends, then sweep up again into twigs which, once the voluptuous crimson catkins have fallen, carry dense switches of shiny, beech-shaped leaves.” (Richard Mabey, 1996)

1. Aims

- To protect existing trees and encourage restoration in appropriate locations through planned planting.
- To inform and educate landowners, managers and the public about black poplars.
- To ascertain and maintain the genetic diversity and structure of the London population.

2. Introduction

Until recently the black poplar (*Populus nigra* ssp. *betulifolia*) was largely a forgotten tree. It was just assumed to be one of the many types of hybrid poplars that are visible, often in rows, in many urban landscapes.

Black poplars are usually found in wet areas, typically along side streams and rivers. They are characterised by their large, often leaning and ungainly appearance with massively arching, down-curved branches and heavily burred trunks as Mabey describes above. In the spring, the male and female trees produce red and green catkins respectively. Although generally neater in appearance, hybrid black poplars are often mistaken for the now rare native black poplar.

In the past, black poplar wood has been used in mill buildings and for brake blocks, as it is heat and fire resistant. Its shock absorbent properties were exploited in wagon bottoms and it was used to make rifle butts in the First World War. Thin branches from pollarded black poplars have been used for hurdles and fruit baskets in place of hazel and willow.

An action plan is needed for black poplars because of their rarity, generally elderly age profile and likely inability to reproduce sexually due to genetic pollution from hybrid poplars. They will probably be reliant for some time on the planting of cuttings.

3. Current Status

The Atlantic form of the European black poplar is confined to Britain, Ireland, northern France and parts of western Germany. It is found mostly in lowland river flood-plans but can occur locally on higher ground beside streams and ponds. In Britain, most trees are found south of a line from Cumbria to Middlesborough. Aylesbury Vale has about 5000 trees, perhaps half of the total British population. However, the number of individual clones is thought to be small. In common with other parts of the country, reports need to be treated with caution, as confusion with hybrid poplars is commonplace.

Precise London numbers of the sub-species are unknown, but London Natural History Society surveys indicate that they are rare. Trees have been reported from 21 London boroughs with concentrations along the River Thames and North East of the city. Those boroughs with black poplar records are Barking and Dagenham, Barnet, Bexley, Bromley, Camden, Croydon, Ealing, Greenwich, Hackney, Havering, Hillingdon, Hounslow, Kensington and Chelsea, Lambeth, Newham, Redbridge, Richmond, Sutton, Tower Hamlets, Waltham Forest and Wandsworth.

Apart from recently planted cuttings, most black poplars are thought to be in excess of 100 years old with perhaps the oldest reaching over 300 years in age. There are a few examples of seedlings (possibly hybrids) from sites where both male and female black poplars occur together.

Work needs to be done in checking existing records and conducting new surveys. It is not known how many clones of black (or hybrid) poplars are being planted, or how many are being felled, or succumbing to old age and dereliction.

4. Specific Factors Affecting the Species

4.1 Drainage

The drainage of lowland areas may cause localised stress to individual trees. Drier land affects the ability of black poplar seeds and seedlings to survive. Our generally warmer and drier summers may also be a contributing factor. In London rising water tables in some areas, and the creation of new wetlands, may benefit black poplars.

4.2 River, stream and ditch management

Canalisation and bank side development results in the direct loss and damage of black poplars. Moreover, the resulting lack of wet mud banks has removed opportunities for seed germination and growth and for fallen trees and branches to regenerate.

4.3 Tidiness

'Tidying up' of fallen trees and branches prevents trees regenerating from them.

4.4 Cross-pollination

Because of the likelihood of cross-pollination from the widespread plantings of hybrid poplars, it is questionable if any 'true' black poplar seed is being produced in the wild.

4.5 Planting practice

The planting of black poplars is usually from nursery stock that may be from a single clone, or cuttings taken from a single tree. It is easier to obtain a great number of cuttings from a single tree rather than a few cuttings from several trees. If these saplings are planted in large numbers over wide areas, the genetic diversity of populations will be reduced and any underlying natural genetic structure will be lost.

As the black poplar has become in recent years a 'rediscovered tree', some planting projects have been rather ad-hoc. One of the aims of the Action Plan is to promote a more strategic approach to planting schemes.

4.6 Pollarding

In common with other tree species, re-pollarding appears to be damaging or even killing a number of trees often several years after it has taken place.

5 Current Action

5.1 Legal Status

Black poplars receive the same protection as all other wild plants in the UK through the Wildlife and Countryside Act, 1981. Therefore, they may not be uprooted without the permission of the landowner. Tree Preservation Orders and the 1967 Forestry Act may prevent the felling of trees.

5.2 Mechanisms Targeting the Species

These current actions are ongoing. They need to be supported and continued in addition to the new action listed under Section 7.

5.2.1 National Conservation Group

The UK Black Poplar Conservation Group (UKCG) was established in 1996 and aims to bring together practitioners to share experiences and ideas.

5.2.2 Clone banks and planting

There are a number of local initiatives based in Essex, Sussex and Aylesbury Vale. Clone banks have been established at sites in these areas, such as the Lea Valley Park and at Wakehurst Place. The London Wildlife Trust have grown on some female cuttings from trees on one of their reserves at the Centre for Wildlife Gardening in south London. Some of these have been planted out in the London Borough of Croydon.

5.2.3 Genetic research

Genetic research is currently being undertaken at the Universities of Nottingham and Edinburgh as part of an international program, looking at the number of and distribution of Black Poplar clones.

6. Objectives, Actions and Targets

Most of these actions are specific to this species. However, there are other, broader actions that apply generically to a number of habitats and species. These are located in a separate 'Generic Action' section which should be read in conjunction with this document. There are generic actions for Site Management, Habitat Protection, Species Protection, Ecological Monitoring, Biological Records, Communications and Funding.

Objective 1 Locate and record London black poplars and establish their sex

Target: All London black poplars located and their sex established by 2010

Action	Target Date	Lead	Other Partners
Produce survey form/ online resource to encourage public recording	2009	NHM	
Conduct surveys for existing black poplars and establish their sex	2010	LNHS	LA, LWT, RP
Database records and map results onto GIS	2010	GiGL	

Objective 2 Safeguard existing trees

Target 1: TPO's drafted where appropriate for all trees by 2010

Target 2: Establish all clones in ex situ cultivation by 2010

Action	Target Date	Lead	Other Partners
Ensure that black poplars are covered by TPOs where appropriate	2010	LTOA	LA
Ensure landowners and site managers aware of trees existence, location and management best practice	2010	LA	
Establish all clones in ex situ cultivation	2010	LVRP	BTCV, RBGK
Survey known trees for Poplar Scab and other pathogenic diseases	2010	NHM	FC?

Objective 3: Increase public awareness of black poplar

Target: Provide information for general public by 2010

Action	Target Date	Lead	Other Partners
Disseminate information on identification, cultural history and management to general public	2010	?Ancient Tree Forum	UKBPCG, NHM, LA
Make web accessible information on tree locations	2010	GiGL	BSBI, NBN

Objective 4 Maintain and enhance the black poplar population in London

Target: Prevent the loss of diversity and augment existing populations to double the number of black poplars by 2015 compared to the number in 2007

Action	Target Date	Lead	Other Partners
Establish nurseries for London-sourced black poplars	2010	LVRPA	BTCV, LWT, LA
Establish a suitable record system for planted trees	2010	LWT	LNHS
Identify suitable planting sites	2010	LA	GLA, LWT, TFL, BTCV, EA
Plant new trees from local stock in existing and new locations to increase current population	2010	BTCV	TFL, LA, EA
Establish a longer term planting scheme to ensure a balanced age structure	2010	BTCV	TFL, LA, EA
Ensure management practices on	2010	LWT	EA, RP, LVRP

protected sites maximise chances of natural regeneration

Objective 5 Identify the genetic variability of London’s black poplars

Target: Document the genetic variability of London’s Black Poplars by 2010 and use this information to inform conservation and planting strategies

Action	Target Date	Lead	Other Partners
Identify number and location of black poplar clones present in London	2010	NHM	
Establish genetic identities of clone banked stocks	2010	RBGK	FC
Plant selected clones to augment existing populations and maintain genetic structure	2010	BTCV	TFL, LA
Consider suitability of artificially increasing genetic diversity in future planting schemes	2010	NHM	

7. Relevant Action Plans

7.1 London Plans

Canals; tidal Thames, Open Landscapes with ancient/old trees; grazing marsh and floodplain grassland; marshland; ponds; lakes and reservoirs; farmland; parks, amenity grassland & city squares; hedgerows.

7.2 National Plans

Wet woodland; Rivers & Streams

Key References

Mabey, R (1996) *Flora Britannica*. Sinclair-Stevenson, London.

Mabey, R (1996). *The native black poplar: A species in the ghetto?* British Wildlife, October

Spencer, J (1994). *The Native Black Poplar in Britain: An Action Plan for its Conservation*. English Nature, Newbury.

Abbreviations

NHM – Natural History Museum
 EA – Environment Agency
 CG - Common Ground
 FC - Forestry Commission
 GLA - Greater London Authority
 LA – Local Authorities

LVRPA - Lee Valley Regional Park Authority
 LNHS - London Natural History Society
 LTOA - London Tree Officers Association
 RBGK – Royal Botanical Gardens Kew
 TFL – Trees for London
 BSBI- Botanical society of the British Isles

LWT - London Wildlife Trust

NBN- National Biodiversity Network
RP – Royal Parks

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