

Richmond upon Thames

Species Action Plan

Mistletoe: *Viscum album* (platyspermum)



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1. Aims

- To promote the conservation and spread of mistletoe within the London Borough of Richmond upon Thames.
- To increase awareness of the special status of mistletoe in the borough.
- To encourage interest in the conservation of mistletoe amongst residents of the borough.
- To monitor the existence and spread of mistletoe in the borough.
- To co-operate with other biodiversity groups within the borough, and with complementary groups of the Greater London Authority.

2. Introduction

Our native mistletoe has the Latin name *Viscum album*, which refers to the sticky (viscous) white (e.g. albino) berries. The berries ripen in the late autumn in pairs in the V-shaped crotch between mistletoe shoots. *V.album* is only partly parasitic on the deciduous host tree because its dark green leaves allow the mistletoe to photosynthesise like its host and other plants. Mistletoe therefore takes only fluids and support from the host. It is a “hemi-parasite”, causing little if any harm.

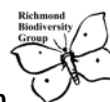
For centuries mistletoe has been seen as a mysterious, even magical, plant. There are many stories about, for instance those dating back to the herbalist Culpeper in 1652. The earliest account is from the Roman Pliny, writing in 77AD. He described how the Druids specially prized mistletoe taken from oak trees.

In reality mistletoe grows best in open landscapes like gardens, streets and parklands; and seldom on oaks. In Bushy Park and Home Park, beside Hampton Court Palace, are some of the best growths of mistletoe to be seen anywhere in London: Richmond is fortunate.

It is appropriate that mistletoe is the subject of a Species Action Plan, within the Biodiversity Action Plan for the London Borough of Richmond upon Thames. It is much less common elsewhere in London as a whole. We have both the opportunity and the responsibility to care for our mistletoe and, if possible, to distribute it more widely.

3. Current Status

You can see mistletoe in Richmond borough easily. It grows profusely in Bushy Park. Walking along the great Chestnut Avenue, look at the upper branches of the hybrid lime trees in the outer lines of trees. There you will see the typical dark green spherical growths of mistletoe. They are abundant where a side road leads west following the line of “Cobblers Walk”. About a third, 70, of the limes in the great avenue are hosts to mistletoe. About 150 of the hawthorns, that give Bushy its name, also have good growths.



Within Home Park, the great hunting park of Henry VIII, there are large growths high up on the old hybrid limes in the avenues running from Hampton Court Palace north east towards Kingston Church and south east towards Thames Ditton. Some of the exotic trees near the palace also support mistletoe. More typically, there are mistletoe growths on various apple (*Malus sp.*) and lime (*Tilia vulgaris*), and abundantly on a fine false acacia (*Robinia pseudacacia*) beside Barge Walk at the west front of the Palace. The most remarkable mistletoe near the Palace is on the crescent avenue beside the canal in the east front garden. The avenue was replanted with 200 hybrid lime trees in 1987: already a third of them are carrying mistletoe growths.

Just walking the streets of Richmond, mistletoe can often be seen. Favoured hosts for mistletoe are species of lime (*Tilia*), hawthorn (*Crataegus*), apple (*Malus*) and poplar (*Populus*). Mistletoe is extremely rare on oak (*Quercus*). That is why Richmond Park with its old oak trees has only one growth, which is on a lime near Petersham gate.

4. Specific Factors Affecting the Species

4.1 Vectors

Mistletoe seems to prefer open man-made landscapes like parks, gardens and roadsides. There is no certain explanation for this. Perhaps it is to do with the feeding and roosting habits of the vectors of mistletoe; that is birds. When eating the berries their sticky pulp (viscum) sticks to birds' beaks. The birds scrape it off, leaving pulp and seed to germinate on a new tree. Alternatively, the seed comes out partly digested the other way. The mistle thrush (*Turdus viscivorous*) is the best known carrier of mistletoe, and it can be seen high up near the growths, perhaps guarding the crop of berries for itself. It is a defecating vector: "Turdus". Other birds in that family presumably eat the berries too. The blackcap (*Sylvia atricapilla*) is a beak wiping vector. Possibly those bird species are decreasing nationally. If that trend is occurring locally there is a danger that the natural spreading of mistletoe will also decrease.

The small flowers that occur early in the year, about February, are pollinated by insects – usually small flies – and possibly partly by wind. The bright yellow of the flowers is spectacular – perhaps the "Golden Bough" of antiquity. Low accessible growths are at risk of being illegally gathered.

4.2 Pests

Six insects are known to attack mistletoe in England: one moth, four bugs and a weevil. The Royal Parks has published a helpful leaflet on the subject, based on information published by Buglife. Because of the difficulty and the lack of surveys of mistletoe pests, it may be that more pests will be identified in the future. It is not known whether, if at all, these pests endanger mistletoe.

4.3 Management practice

Existing forestry and management practice in boroughs, parks authorities etc. may be unsympathetic – for example, being a tree parasite, the species is sometimes pruned out. Also, because much mistletoe grows in man-made habitats frequented by the public, responsible authorities feel obliged to trim or even fell the older branches or trees on which mistletoe has become established. Besides removing the existing growth, this reduces the food stock of berries for potential growth through the distribution by birds. That could cause a vicious cycle of decline. There is neglect of some mistletoe colonies and possibly a loss of management techniques. For example, traditional "sustainable" harvesting, which controlled infestations whilst allowing their survival, may no longer be practised. However this would typically apply to apple orchards and therefore not be a problem in Richmond.

4.4 Omission from habitat creation schemes

Mistletoe is often omitted from otherwise suitable habitat creation schemes. Examples include Community Orchard and allotment schemes, which often fail to include mistletoe planting.

5. Current Action

5.1 Legal Status

Mistletoe receives the same protection as all other wild plants in the UK through the Wildlife and Countryside Act (1981, as amended). Therefore, it may not be uprooted (which would include

pulling down whole plants) without the permission of the landowner. The felling of host trees may be prevented by Tree Preservation Orders.

5.2 Surveys

The national mistletoe survey (Briggs, 1999) raised the plant's profile significantly and gave rise to much public interest. This survey still continues informally. Detailed local surveys have been made in Bushy and Home Parks in 1995, partly up-dated in Home Park in 2004. Those map the location and host species of all mistletoe growths.

5.3 Habitat management

Various campaigns promoting conservation of traditional orchards (e.g. Common Ground's projects) and the conservation of parkland and veteran trees may be indirectly helping mistletoe. The London Biodiversity Partnership has an Action Plan for mistletoe, which is encouraging the conservation and spread of the species.

6. Objectives, Actions and Targets

The following list of objectives, targets and actions are proposals. They will be changed as work proceeds. Please note that the partners identified in the tables are those that could be involved in the process of implementing the plan. It is not an exclusive list and new partners are both welcomed and needed. The leads identified are responsible for co-ordinating the actions - but are not necessarily implementers.

Objective 1: Co-operate with major landowners/managers to record and conserve Richmond's mistletoe.

Target: Identify main sites of mistletoe within the borough. Plan to monitor its growth.

Action	Target Date	Lead	Other Partners
1.1 Alert principal organisations within the borough to the importance of conserving existing mistletoe; record areas of growth.	Mostly done 2004. Locate others 2005	M'toe group	GIGL
1.2 Identify sites where the growth of mistletoe can be readily and regularly monitored.	2005	M'toe group	HRP, RBGK, LBP, TRP
1.3 Survey identified sites and publish results.	2006	M'toe group	ECSS, FoBHP, LBP

Objective 2: Generate an appreciation of Richmond's special mistletoe to the general public in the borough and to specialists.

Target: Promote a series of awareness raising activities in London Borough of Richmond upon Thames

Action	Target Date	Lead	Other Partners
2.1 Make plans to publicise the importance of our mistletoe to local residents; identifying different audiences and media.	2005	M'toe group	LA press office and schools
2.2 Consider using existing or making new publications to promote mistletoe.	2005	LA	M'toe group
2.3 Devise talks, walks and/or other means to involve local residents more directly in conservation of mistletoe.	Ongoing	M'toe group	HRP, ECSS, FoBHP, TRP, U3A
2.4 Identify roles suitable for local volunteers.	2006	M'toe group	BP volunteers, HRP, HHC

Objective 3: Establish mistletoe at suitable new sites in the London Borough of Richmond upon Thames.

Target: Propagate the species in suitable sites and record success.

Action	Target Date	Lead	Other Partners
3.1 Select sites suitable for the introduction of mistletoe, and if possible for subsequent monitoring.	2005	M'toe group	Other RuT groups, RBGK, Site owners & managers
3.2 Get berries and introduce mistletoe to these sites.	2006	M'toe group	HRP, TRP as sources, & Site owners & managers

Relevant Action Plans

Local Plans

Broadleaved woodland, Ancient parkland and veteran trees, Song thrush, Urban churchyards, cemeteries etc.

London Plans

Woodland; Private Gardens; Wasteland; Churchyards and Cemeteries; Parks, Amenity Grassland and City Squares; Black Poplar; Hedgerows Statement; Railway Linesides Audit; Open Landscapes with Ancient/Old Trees Audit; Ponds, Lakes and Reservoirs Audit.

National Plans

Lowland Wood Pasture and Parkland; Built-up areas and Gardens

References and Principle Sources of Information

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Abbreviations:

BP – Bushy Park

ECCS – Ecology and Conservation Studies Society

FoBHP – Friends of Bushy & Home parks

GIGL – Greenspace Information for Greater London

HHC – Hampton Horticultural Club

HRP – Historic Royal Palaces

LA – Local Authority (London Borough of Richmond upon Thames)

LBP – London Biodiversity Partnership

TRP – The Royal Parks

U3A – University of the Third Age

Contact

The Lead for this Species Action Plan is Tyrell Marris

Name: Tyrrell Marris

Tel: 020 8977 3600

Address: 50 Broom Close

Teddington

TW11 9RL

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