

Hedgerow Survey at Nonsuch Park by Derek Jones September 2015

The surveyed "Hedgerow" is partly hedgerow and partly woodland edge. It starts near the pedestrian gate between the North Plantation and Cheam Recreation Ground and runs approximately SW to the Balancing Pond near Ewell gate. It thus crosses the main path to the mansion at right angles.

I divided the total length into four sections for my own convenience.

- Section A From near Cheam rec gate to the main path - about 270m n.b. the north face of section A was studied whereas the south facing sides of the other three sections were recorded.
- Section B From path to "Blackthorn hedge" - about 380m
- Section C "Blackthorn Hedge" - a section of about 150m dominated by blackthorn. Ends near the balancing pond.
- Section D Alongside the pond. This section is barely a hedgerow now, being overshadowed by mature trees and heavily shaded on more than one side. The shrubs are of poor quality, spindly and with dead sections – about 145m.

I should stress there are some limitations of these surveys. This is particularly a consequence of the **sampling method used*** which was devised to get a simple picture of the shrubs and trees in the hedgerow. I have not recorded exhaustively and there may be species present that I have missed completely.

Results

In the approximately 1km of total "hedgerow", fourteen shrub and tree species were recorded plus three woody climbers/scramblers. Honeysuckle and clematis were not recorded this time although they are present. If they are included, that gives a total of nineteen trees, shrubs and woody climbers/scramblers species, this is a minimum estimate of the species present. Given that we are dealing with long-lived plants, it is not surprising that there were no dramatic changes in the community compared with 1999.

Horse Chestnut. Four individuals were recorded out of 190 samples. This is a very small increase since 1999. I was pleased to find little evidence that this species has encroached significantly into this relatively isolated hedgerow (unlike its apparent spread in some other parts of the park).

The one section where ground observation confirms a change found in this survey, regards the blackthorn-dominated length of hedge. In this section blackthorn seems to have pushed forward with its suckers at the expense of hawthorn and field maple. In one length of around 75m, blackthorn was the only species recorded at the front face.

Other species that appear to have changed are

English Elm frequency down 13% to 6%
Bramble (blackberry) up 1% to 6%

Whether these are meaningful changes is doubtful. Statistical analysis is not possible. As with the blackthorn, some brambles have expanded.

I hope this is of some interest. Please contact me if anything is unclear.

I would be pleased to receive comments, particularly regarding how such work could be usefully improved or extended.

Derek Jones, 5th October 2015

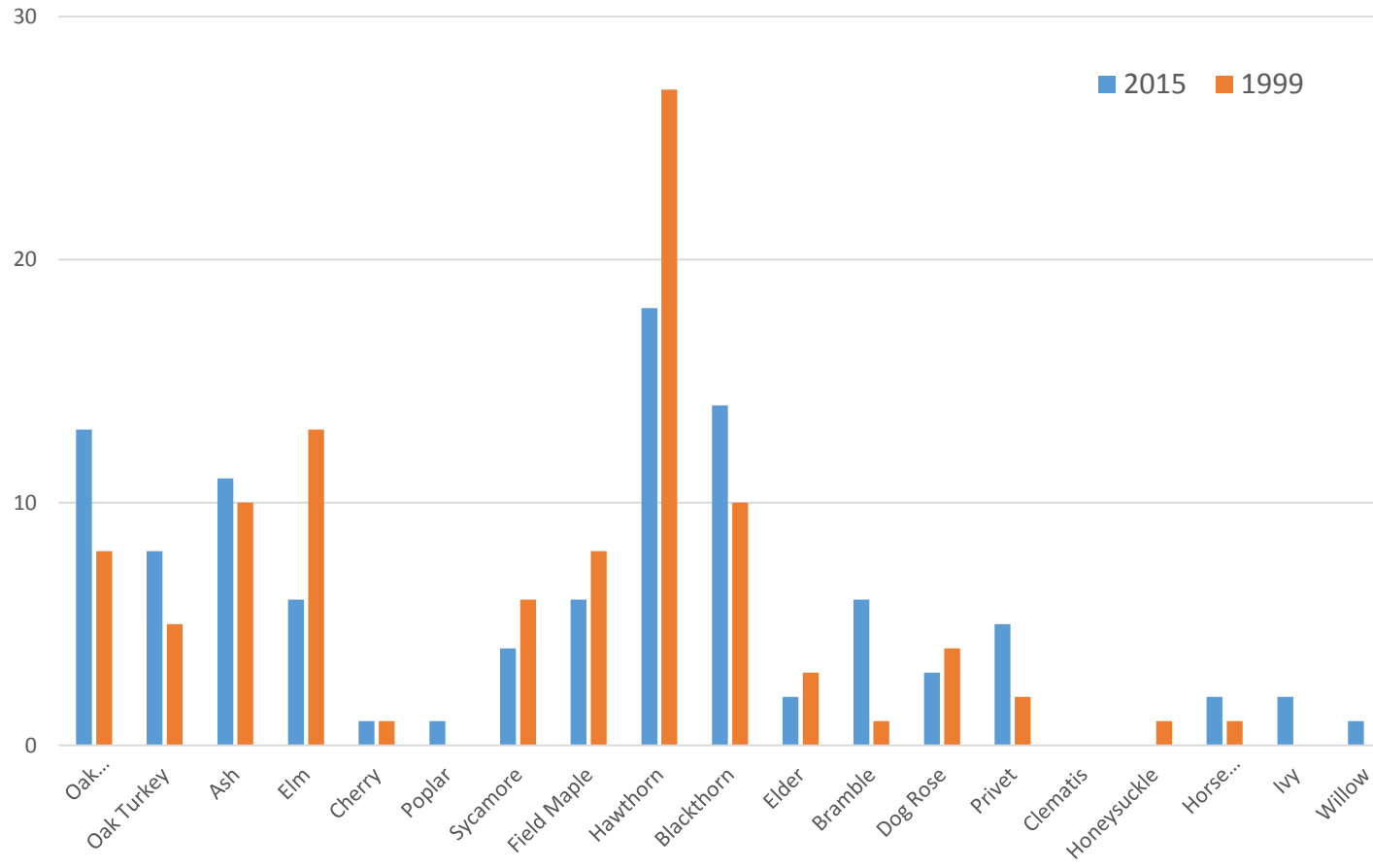
*Note from Frances Wright. Details of sampling method and colour charts supplied on request. The charts are in colour-print which is essential to show differences.

Species Frequency at 1.6m height in "Central Hedgerow" of Nonsuch Park

	Recorded Frequency (%)	
	2015	1999
Oak pedunculate	13	8
Oak Turkey	8	5
Ash	11	10
Elm	6	13
Cherry	1	1
Poplar	1	0
Sycamore	4	6
Field Maple	6	8
Hawthorn	18	27
Blackthorn	14	10
Elder	2	3
Bramble	6	1
Dog Rose	3	4
Privet	5	2
Clematis	0	0
Honeysuckle	0	1
Horse Chestnut	2	1
Ivy	2	0
Willow	1	0

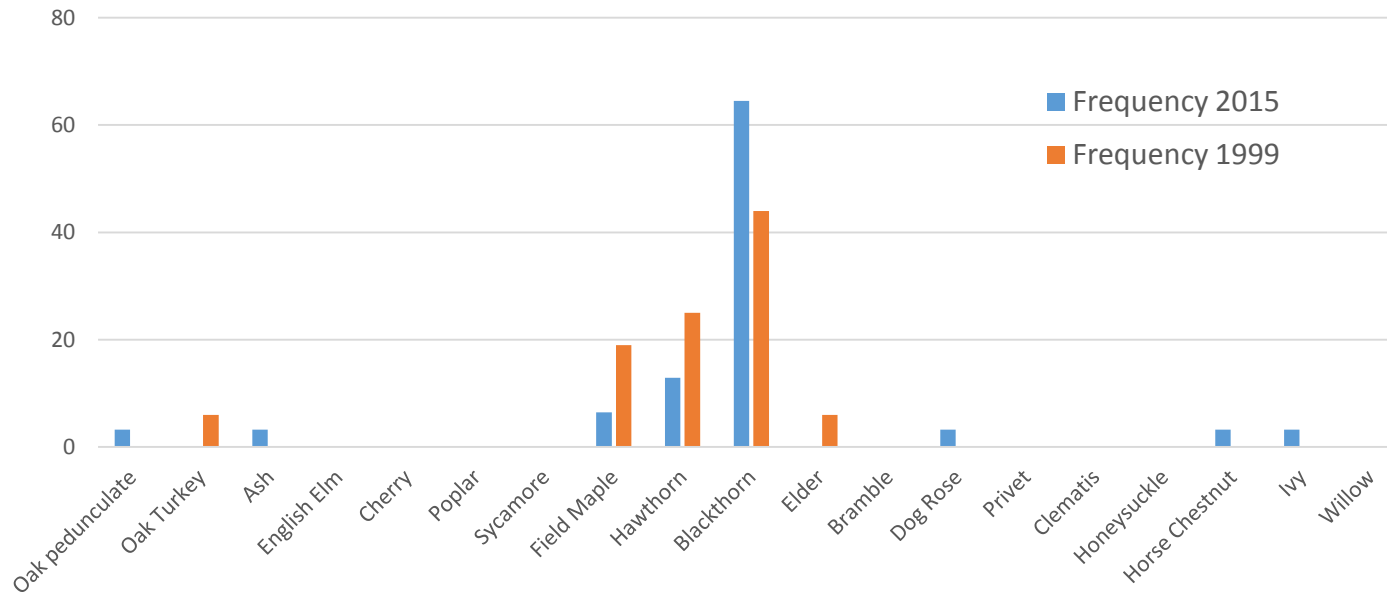
Figures represent the recorded presence of a species at 1.6m above ground.
 Samples were recorded every 5m along the hedgerow/woodland edge.
 Derek Jones 5.10.2015

Species Frequency (%) in Central Hedgerow 1999 and 2015



D. Jones 5.10.2015

Changes in Blackthorn Dominated Section of Hedgerow



Data represents species at 1.6m height along south-facing aspect of this section of the hedgerow

FULL RESULTS 29th September 2015

	East of central path		West of central path		"Blackthorn Hedge"		Balancing Pond		Total	
	count	frequency	count	frequency	count	frequency	count	frequency	count	frequency
Oak pedunculate	9	17	9	12	1	3	6	21	25	13
Oak Turkey	1	2	13	17	0	0	1	3	15	8
Ash	12	22	1	1	1	3	6	21	20	11
English Elm	7	13	5	7	0	0	0	0	12	6
Cherry	1	2	0	0	0	0	0	0	1	1
Poplar	0	0	2	3	0	0	0	0	2	1
Sycamore	0	0	6	8	0	0	1	3	7	4
Field Maple	2	4	6	8	2	6	1	3	11	6
Hawthorn	9	17	16	21	4	13	5	17	34	18
Blackthorn	0	0	6	8	20	65	1	3	27	14
Elder	1	2	1	1	0	0	1	3	3	2
Bramble	5	9	5	7	0	0	1	3	11	6
Dog Rose	2	4	2	3	1	3	0	0	5	3
Privet	3	6	4	5	0	0	2	7	9	5
Clematis	0	0	0	0	0	0	0	0	0	0
Honeysuckle	0	0	0	0	0	0	0	0	0	0
Horse Chestnut	1	2	0	0	1	3	2	7	4	2
Ivy	0	0	0	0	1	3	2	7	3	2
Willow	1	2	0	0	0	0	0	0	1	1
Total =	54	100	76	100	31	100	29	100	190	100

Derek Jones 5.10.2015

Report from Frances Wright, Secretary of Nonsuch Watch

Air Pollution and the Parks

I have been looking at articles concerning the risk of cancer and other illnesses from air pollution, following the recent broadcast of Channel 4's programme on this subject*. I think this matter has relevance to the future of the Nonsuch Open Space and Cheam Park partly because of the very busy roads which are next to these green areas. Both Cheam Village and Ewell Village have been declared areas of pollution concern in recent years, and more development for Sutton Borough is proposed in their new draft local plan.

An excerpt from one article is as follows:

"A panel of experts from the Royal College of Physicians and the Royal College of Paediatrics and Child Health have published a report into the lifelong impact of air pollution. The report called 'Every Breath We Take' looks at the effect of exposure to polluted air on the risk of a range of diseases including asthma, heart disease, diabetes and cancer. It estimates that about 40,000 deaths each year in the UK are linked to air pollution.

Over the past decades, evidence that air pollution is linked to a range of cancers has been mounting. A group of international experts looked into the results of all the research and concluded that air pollution causes cancer in humans, in particular lung cancer."

In past years, efforts have been made by both Epsom and Sutton Councils to persuade people to leave cars at home as much as possible and use public transport, bicycles or to travel short distances by walking. I have no idea how much this has helped; I only know that the London Road (A24), the Ewell Road (A232) and the Malden Road (A2043) are choking with cars on a daily basis. It might be many years before an impact can be made to significantly reduce the amount of traffic on these routes.

We should like it to be considered that Nonsuch Park, Cheam Park and other local parks should continue to be regarded as 'green lungs' for local people to breathe air that is largely pollution-free and that this principle should be integrated into the future plans for these areas, even to the detriment of development. A major part of this could be a policy of vegetation-screening at the boundaries of the parks, and so vegetation next to main roads would play a major part in reducing air pollution. Trees remove air pollution primarily by uptake of pollutants via leaf stomata (pores on the outer "skin" layers of the leaf). Some gaseous pollutants are also removed via the plant surface. The policy would mean that trees on the boundaries should probably not be coppiced in the same way as trees in the internal woodland (I am seeking further advice on this). The additional importance of scrub has been highlighted by biologists.

One of the issues described in the Channel 4 programme was that people walking beside a busy road were far more likely to pick up cancer and respiratory diseases than those people walking in a park. When considering future plans, for example those affecting The Avenue and Fir Walk in Nonsuch Park, can there be a firm commitment that our parks do not lose this precious advantage?

Frances Wright

*Channel 4 Dispatches 'Dirty Secrets – What's Really In our Air?' February 22nd 2016.