

Flora of Whiteknights Park

A survey of the plants of the University of Reading Whiteknights campus

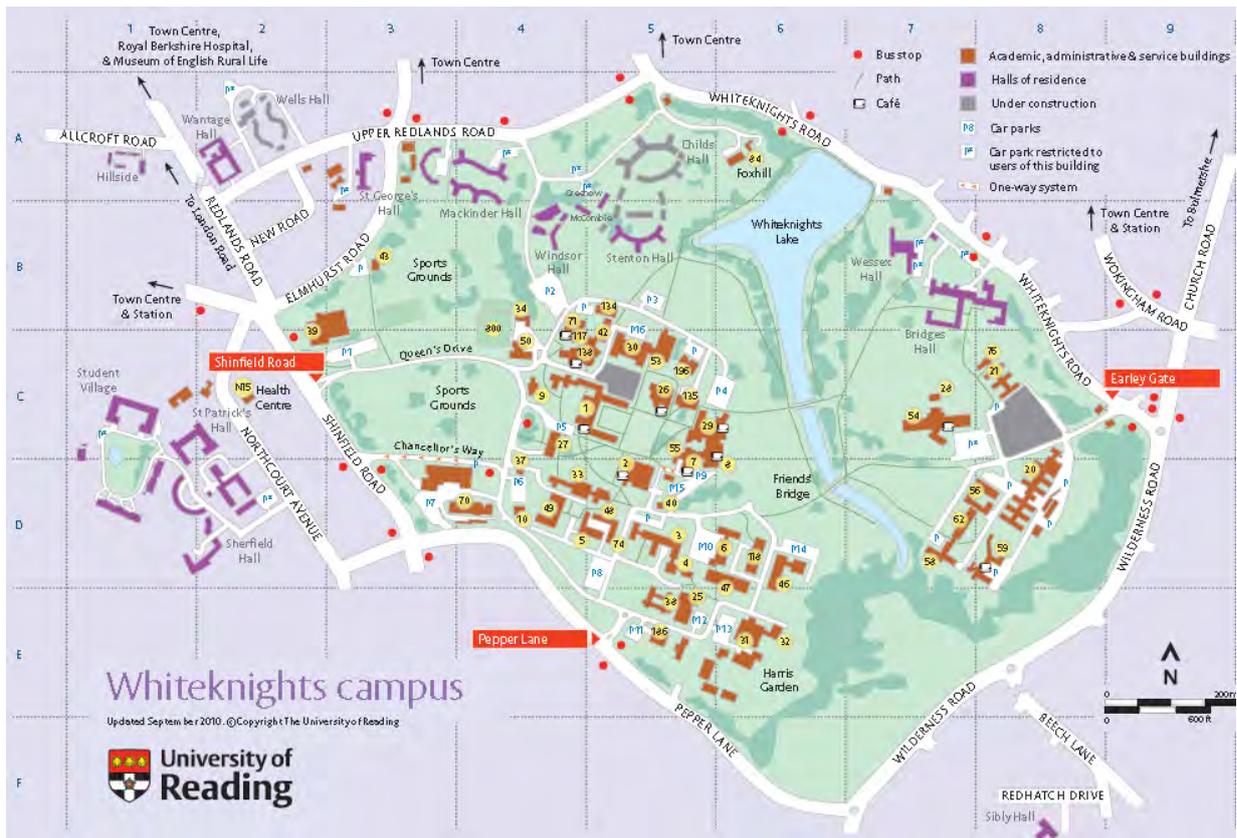
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Based on the earlier record cards compiled by the late Carol Hora, with contributions from Ronald W. Rutherford, Jonathan Mitchley and Michael Keith-Lucas

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Introduction

Whiteknights is the main 123 hectare campus of the University of Reading (see Figure on title page). A survey of the flora of the native and naturalized species was carried out June to November 2009, updating an earlier 1986—1988 card index system. A number of identifications have been checked by comparing samples with herbarium specimens from the Reading collections. This work not only provides an annotated plant list for the park, but also shows how the flora has changed over the past two decades.

The history of Whiteknights

In the 12th century, Whiteknights was “Arley” or “Erley White Knights”, a house attached to the Hospital of Lepers and founded by Aucherius, the second Abbot of Reading Abbey. This became a manor which between 1606 and 1783 was in the ownership of the Englefield family. In 1783, the estate was bought by a Richard Byam Martin who sold it in 1798 to George Spencer, the 4th Duke of Marlborough who leased it to his son George Spencer-Churchill, Marquis of Blandford and the future 5th Duke of Marlborough. A detailed description of the Marquis’s estate can be found in a book that he commissioned from Barbara Hofland (1819) and the biography of Mary Soames (1987).

Whiteknights Park was extensively developed by the Marquis of Blandford and in 1817, the Whiteknights Estate consisted of:

The Botanic Gardens (situated approximately in the area which the University Library, the Square (restaurant), Black Horse House, Whiteknights House and Humanities and Social Sciences currently occupy);

The Wilderness (more or less the same area as at present);

The Sheep Walk (on the north-west of the campus);

The Park (which was where the meadows in the centre of the campus now are and which continued eastwards);

The New Gardens (in the north-east);

The Chantilly Gardens (in the area where the Harris Garden is), and

The Lake.

The Marquis also had a belt of trees planted around his estate (Thompson, 1986).

Soames (1987) reported that the path leading from the east entrance to the Botanic Gardens is surrounded by various trees including Cedars of Lebanon, Scarlet Thorns, Stone Pines and Tulip Trees. Plants grown in the Botanic Gardens included: *Kerria japonica* ‘Planiflora’ and Jasmine at the entrance, Begonias and Scarlet Sage grown in containers, *Magnolia virginiana*, the Tree Peony *Paeonia fruticosa*, an *Erica* species thought to have been *Erica vagans*, Scarlet Azalea, Honeysuckle *Lonicera sp.* and “Jessamine”, *Magnolia fraseri*, *Juniperus oxycedrus*, *Ailanthus altissima* and *Nyssa aquatica* in an American border, a Laurel hedge, Dahlias, Rhododendrons and Azaleas, and *Magnolia grandiflora*.

In the New Gardens, there was a woodland walk through Elms, Oaks, Red Cedars, Ash, Birch, Larch, Chestnut, Laurel, Holly and Rhododendrons. Around the lake Weeping Willows and Poplars were planted (Soames, 1987).

Along with pre-existing trees, a number of forest trees were planted in the Wilderness along with *Arbutus* sp., flowering Ash, Evergreen Oak *Quercus ilex*, Snowy Mespilus *Amelanchier*, red-berried Elder, Catalpas; and Laburnum planted around a bower. Also contained in the original woods that were to become the Wilderness were Ash, Chestnut, Oak and Hazel (Soames, 1987).

In the Chantilly Gardens, there was a vineyard, surrounded by a laurel hedge (presumably *Prunus* sp. but possibly *Laurus* sp.), an American border containing Azaleas, White Cedars, Fern-leafed Beeches and *Magnolia virginiana* (Soames, 1987).

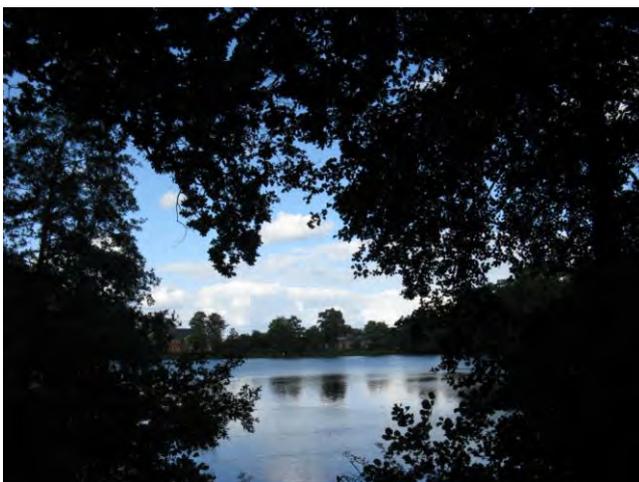
The Marquis of Blandford went bankrupt and left for the Blenheim Estates (Thompson 1986; Soames 1987). Whiteknights House later pulled down and the Whiteknights Estate was then split up into five leaseholds, and eventually into six. The houses were: Whiteknights Park (also known as Park House), Whiteknights, Blandford Lodge, Foxhill, The Wilderness (or Wilderness House) and Erleigh Park (or Erleigh Whiteknights) (Thompson, 1986).

In 1947, each plot of land making up Whiteknights Park was purchased by the University of Reading, which later began relocating here from the London Road campus with the construction of many buildings in the process (Thompson, 1986).

Areas of botanical interest



The Wilderness: This is an area of woodland situated in the south-west. Some of the trees here were planted by the Marquis, though parts of it are taken over by the invasive Rhododendrons, *Prunus lusitanica* and *Prunus laurocerasus*. Nevertheless, it is by far the largest area of woodland on campus and contains a number of typical native woodland trees and herbs, including *Taxus baccata*, *Ilex aquifolium*, *Circaea lutetiana* (pictured left), *Impatiens parviflora*, *Dryopteris dilatata*, etc.



Around the Lake: This consists of a lower lake to the north (pictured left) and an upper lake to the south, the latter narrowing to the grotto, once with the original spring. Around the lake grow a number of plants associated with water margins and banks, including *Persicaria amphibia*, *Iris pseudacorus*, *Myosotis scorpioides* and *Scutellarioa galericulata*. Also, there are some areas around the lake that are shaded either by *Alnus glutinosa* and willows and or by wooded areas.



The Meadows and Grasslands: These take up large areas straddling the lake; they contain a range of grasses and broadleaved species typical of grasslands. There is also some degree of variation between the different areas of grassland: to the west of the lake the grassland is generally at a low elevation and damper, especially near the lake, where *Silaum silaus* and *Sanguisorba officinalis* (pictured left) occur, while to the east, the grassland slopes upwards relatively rapidly with *Ranunculus bulbosus* and *Pimpinella saxifraga* in the drier areas.

The Card Index

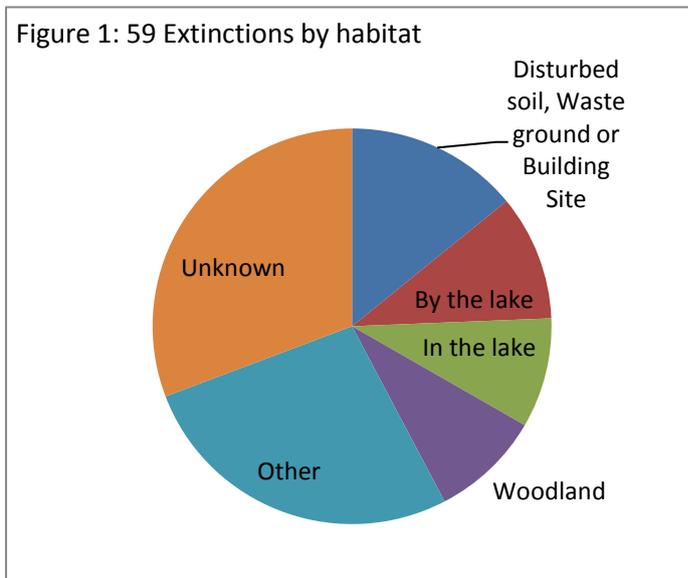
The information on the 1986—1988 card index was chiefly compiled by Mrs Carol Hora, widow of the late Dr Bayard Hora (1908—1984), sometime lecturer in plant physiology and celebrated ‘amateur’ mycologist, whilst other recorders were Dr S L Jury, Dr D M Keith-Lucas and Mr R W Rutherford.

The index cards contain the following information: genus, species, authority, common name, family. Most cards also include the initials of the recorder, distribution (a specific location or an area of campus) and or ecology, (simply the habitats in which the plant was found) and some cards include the date that the plant was recorded.

There are 490 cards with 85 families represented.

Extinctions in the flora

Figure 1: 59 Extinctions by habitat



As can be seen from Table 1 and Figure 1 the largest number of extinctions occurred for species found in disturbed soil, waste ground or on building sites with 10 extinctions. As shown in Table 1 the main reason given for this is plants having only been casual (5 extinctions) followed by changes in or loss of habitat as there are believed to be fewer disturbed sites and building sites than there once were (4 extinctions). The habitat second most affected by extinctions is the area around the lake. The gardening carried out here by the University Grounds Maintenance Department in the past may have affected this flora adversely. The area

third most affected by extinctions is the lake itself in which seven aquatic species have gone extinct. It has been suggested that most of these have gone extinct because of pollution, possibly in the form of a change in the ph of the lake caused by rainwater runoff from the roofs of buildings leeching copper into the lake. The fourth most affected habitat is woodland for which the main reason for extinction is plants having only occurred there casually.

As shown by Table 1 the biggest cause of extinctions generally is a loss of or change in habitat. This mainly applies to the lake and disturbed soil as has previously been mentioned. The next two main reasons are gardening by the University Grounds Maintenance Department and plants only having been casuals these mainly affecting the area round the lake and disturbed soil respectively. Whilst various habitats have lost species to gardening by the maintenance department and possibly by others, the area around the lake was probably more greatly affected because it was and still is more diverse than most such areas and has more species to lose as a result of such activity. More casual species were lost from disturbed soil than elsewhere this is because it is the most likely habitat for such species to occur as plants can easily seed themselves in it. Also such sites are usually converted or built upon so species that occur in them may be more likely to be casuals simply because they may not be able to establish themselves there. It should also be noted that as casual species can come and go, some of them may eventually reappear; a similar thing might also be said for other species that have been lost from disturbed habitat.

Table 1: Reasons for extinction

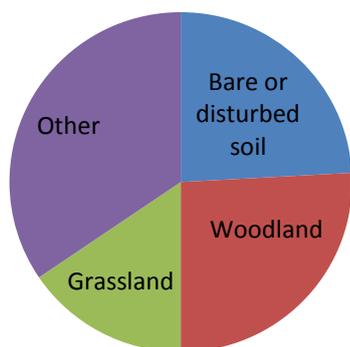
Habitat	No. of extinctions	Previously thought extinct	Casual	Gardened out	Eaten by Canada geese	Escape	Planted and not persisted	Loss or change of habitat	Unknown
Bonfire site	2	0	1	1	0	0	0	0	0
By the lake	8	0	1	5	2	0	1	1	0
Disturbed soil, Waste ground or Building Site	10	0	5	2	0	0	0	4	0
Foxhill drive	2	0	1	1	0	0	0	0	0
Grass verges	2	0	1	0	0	0	0	1	0
Grassland	2	0	0	0	0	0	0	2	0
Gravel	1	0	0	0	0	0	0	1	0
In the lake	7	0	0	0	0	0	1	6	0
Lawns	1	0	0	0	0	0	0	1	0
Near the A327	1	0	0	0	0	0	0	0	1
Near the Tate and Lyle building	1	0	1	0	0	0	0	0	0
Near the path to IFR	1	0	0	0	0	1	0	0	0
Parasite on Ivy	1	0	0	1	0	0	0	0	0
Plant beds	4	1	0	2	0	0	0	0	1
Scrub	1	0	0	0	0	0	0	0	1
Under a tree	1	0	0	0	0	0	0	0	1
Where water stands in winter	1	0	0	0	0	0	0	1	0
Woodland	7	0	3	1	0	1	0	1	1
Unknown	24	12	2	0	0	6	1	0	3
Duplications	9	0	4	1	0	0	0	1	0
Total	68	8	11	12	2	4	3	17	8

Table 2: Flora which are believed to be extinct

<i>Aconitum napellus</i>	<i>Erysimum cheiri</i> var. <i>Allionii</i>	<i>Poa chaixii</i>
<i>Alcea rosea</i>	<i>Foeniculum vulgare</i>	<i>Polemonium caeruleum</i>
<i>Alisma plantago-aquatica</i>	<i>Galium palustre</i>	<i>Potamogeton crispus</i>
<i>Amaranthus retroflexus</i>	<i>Geranium phaeum</i>	<i>Potamogeton natans</i>
<i>Apium nodiflorum</i>	<i>Guizotia abyssinica</i>	<i>Potamogeton pectinatus</i>
<i>Armoracia rusticana</i>	<i>Hypericum humifusum</i>	<i>Primula x polythana</i>
<i>Atropa belladonna</i>	<i>Iris germanica</i>	<i>Ranunculus scleratus</i>
<i>Bidens cernua</i>	<i>Lactuca sativa</i>	<i>Rorippa palustris</i>
<i>Bidens tripartita</i>	<i>Lemna trisulca</i>	<i>Salvia verbenaca</i>
<i>Brassica napus</i>	<i>Lepidium draba</i>	<i>Scleranthus annuus</i>
<i>Brassica nigra</i>	<i>Linaria purpurea</i>	<i>Scrophularia vernalis</i>
<i>Carex vesicaria</i>	<i>Lupinus polyphyllus</i>	<i>Sedum telephium</i>
<i>Carex x pseudoxillaris</i>	<i>Lycopersicon esculentum</i>	<i>Sherardia arvensis</i>
<i>Centaurea cyanus</i>	<i>Medicago arabica</i>	<i>Silybum marianum</i>
<i>Cichorium intybus</i>	<i>Mimulus moschatus</i>	<i>Sisymbrium austriacum</i>
<i>Conium maculatum</i>	<i>Montia Fontana</i>	<i>Solanum pseudocapsicum</i>
<i>Cruciata laevipes</i>	<i>Muscari neglectum</i>	<i>Solidago virgaurea</i>
<i>Daphne laureola</i>	<i>Myosurus minimus</i>	<i>Spergula arvensis</i>
<i>Datura stramonium</i>	<i>Nymphoides peltata</i>	<i>Spergularia rubra</i>
<i>Descurainia sophia</i>	<i>Oenothera cambrica</i>	<i>Spirodela polyrhiza</i>
<i>Diploxaxis muralis</i>	<i>Onopordium acanthium</i>	<i>Vicia villosa</i>
<i>Dipsacus fullonum</i>	<i>Ophioglossum vulgatum</i>	<i>Zannichellia palustris</i>
<i>Echium vulgare</i>	<i>Orobanche hederarum</i>	

Species recently recorded

Figure 2: Newly recorded flora per habitat



As shown in Table 3 and by Figure 2 the largest numbers of newly found plants were found in bare or disturbed soil closely followed by woodland, followed by grassland. As shown in Table 4 the most common reason for new records was that they had been previously overlooked when the card index was being created. This is thought to apply to eighteen of the new records and for a further five it is less certain as to if they were new arrivals or had been overlooked so the number of plants that were previously overlooked could be as much as twenty four. It is therefore worth considering the numbers

of new records in each habitat that were not thought to be new arrivals or at least may be new arrival. Bare and disturbed soil still contains the largest number of new plants with between eight and eleven new and between four and seven that are thought to have been overlooked. This is followed by woodland with between seven and nine new plants and between six and eight that were overlooked previously, though it should be noted that two woodland plants which may be new or overlooked may have been planted. Grassland despite being amongst the most significant areas for

new records and indeed for its diversity of flora generally in relation to other areas of the campus, contained between one and two newly arrived plants and with between six and seven that had been previously overlooked.

The largest number of overlooked species was in the grasslands. This is likely to be because their size makes it easy to miss species and the relatively large number of species that grow here means that there is more to overlook. Lawns by comparison take up a large proportion of the campus but due to the frequency of mowing will contain fewer species than grassland. In addition, the mowing of the grasslands means that it is a difficult area to survey as each area would need to be surveyed prior to mowing otherwise it becomes very difficult to identify everything that grows there. The relatively low number of species in the grasslands that are thought to be new could be due to the mowing of the grasslands which may restrict the reproductive capabilities of a plant that seeds itself there and would restrict the range of species that can grow there to those that can survive being mown every year or reproduce prior to or possibly after the time at which their area is mown.

The large numbers of newly arrived plants in bare or disturbed soil is generally likely to be because of the ease with which new plants can seed themselves in such habitat. Those species that have been overlooked here are generally likely to have been overlooked due to the diversity of such habitat, because disturbed or bare soil can occur in a variety of places often in small patches, and disturbed soil at least, tends to come and go; in other words, after being created it does not persist, particularly as grass is often sown on top of it.

The large number of new arrivals in the woodland is likely to be due to the size of the campus that such areas take up combined with a management regime that seems to largely consist only of removing old and unstable trees and planting new ones so new species can move in without being dug up or cut down. The large number of overlooked species here is probably due to its size and diversity making it easier to miss plants and the difficulty of traversing and looking around woodland due to the large number of trees.

As shown in Table 4, other than having being overlooked before the main reason for occurrence of new flora is having escaped cultivation; this is likely to mainly be due to the large numbers of plants both past and present that have been planted around campus and maybe even those in the gardens of nearby homes and it seems reasonable to assume that a number of them will have been able to seed themselves. Cultivation escapes also account for most of the new flora to occur in woodland with most of these being found in the wilderness. This may be due to the relative size of the wilderness but it may also be due to its proximity to the Harris Garden in which there is a wide variety of cultivated plants.

Table 3: New flora by habitat

Habitat	Number of new records	Thought to be overlooked	Newly arrived	Unsure whether overlooked or newly arrived	Max overlooked	Max newly arrived
Bare or disturbed soil	14(1)	4	8 (1)		2	7
Beside or in a bush/hedge	2 (1)	2 (1)	0		0	2 (1)
By the lake	2	2	0		0	2
Cracks	2	0	2		0	0
Dam across the Lake	1	0	1		0	0
Lawns and mown verges	3 (1)	1 (1)	1		1	2 (1)
Grassland	9	6(1)	1		2	8
Gravel	3 (1)	2 (1)	1		0	2 (1)
Plant beds	3	0	3		0	0
Under a tree	3	2	1		0	2
Wood chip	1 (1)	1 (1)	0		0	1 (1)
Woodland	15 (1)	6 (1)	7		2	8 (1)
Duplications	11 (1)	7(2)	2		2	9
Total	47 (5)	19 (5)	23 (1)		5	24 (5)

() denotes subspecies and varieties which are also included in the main figures e.g. 3 (1) would mean 2 sp. and 1 subsp or var.

Table 4: Reasons for arrival

Habitat	Spreading in the UK	Invasive	Escape from cultivation	Other Alien	Salting Roads	Possibly Planted
Bare or disturbed soil		3	4	4 (1)	1	0
Beside or in a bush/hedge		0	0	0	0	0
By the lake		0	0	0	0	1
Cracks		0	1	1	0	0
Dam across the Lake		0	0	1	0	0
Mown grass		0	0	0	0	1
Grassland		0	0	1	0	1
Gravel		0	1	0	0	0
Plant beds		1	2	0	1	0
Under a tree		0	0	1	0	0
Wood chip		0	0	0	0	0
Woodland		1	0	7	0	0
Duplications		1	2	1	0	1
Total		4	6	14 (1)	2	1

() denotes subspecies and varieties which are also included in the main figures e.g. 3 (1) would mean 2 sp. and 1 subsp or var.

Table 4: Newly recorded flora

<i>Acer platanoides</i>	<i>Galium mollugo</i>	<i>Prunus cerasifera</i> var. <i>pissardii</i>
<i>Allium ursinum</i>	<i>Geranium lucidum</i>	<i>Ribes rubrum</i>
<i>Anacamptis pyramidalis</i>	<i>Hirschfeldia incana</i>	<i>Rosa pimpinellifolia</i>
<i>Avena sativa</i>	<i>Hordeum distichon</i>	<i>Salix cinerea</i> L. subsp. <i>cinerea</i>
<i>Bryonia dioica</i>	<i>Hordeum secalinum</i>	<i>Salix x multinervis</i>
<i>Buddleja davidii</i>	<i>Humulus lupulus</i>	<i>Salix x sepulcralis</i>
<i>Calamagrostis epigejos</i>	<i>Hypericum tetrapterum</i>	<i>Sorbus intermedia</i>
<i>Cerastium fontanum</i> subsp. <i>vulgare</i>	<i>Leycesteria Formosa</i>	<i>Tilia platyphyllos</i>
<i>Conyza sumatrensis</i>	<i>Misopates orontium</i>	<i>Tanacetum parthenium</i>
<i>Crepis biennis</i>	<i>Ophrys apifera</i>	<i>Tellima grandiflora</i>
<i>Crocus speciosus</i>	<i>Oxalis corniculata</i>	<i>Ulmus minor</i>
<i>Cyclamen hederifolium</i>	<i>Parthenocissus quinquefolia</i>	<i>Verbena bonariensis</i>
<i>Dryopteris affinis</i>	<i>Plantago coronopus</i>	<i>Vicia faba</i>
<i>Dryopteris affinis</i> subsp. <i>borreri</i>	<i>Polypogon monspeliensis</i>	<i>Vicia sativa</i> subsp. <i>segetalis</i>
<i>Elymus caninus</i>	<i>Potentilla anglica</i>	<i>Viola reichenbachiana</i>
<i>Euphorbia lathyris</i>	<i>Prunus cerasifera</i>	

Species believed to be less common

Table 6 shows that eleven species are believed to be less common than previously. Whilst explanations cannot be found for most of them *Fallopia japonica* plants are likely to have been removed deliberately due to being a pernicious invasive. The *Dactylorhiza fuchsii* near the lake may have been removed by gardening as other species have been. The plants by Geography may also have been gardened out, but may have been overlooked. *Lemna minor* was not seen by the lake, possibly due to pollution. *Lychnis flos-cuculii* may be less common as it prefers wet conditions and the campus is much drier than it used to be, possibly due to the construction of buildings having interfered with drainage.

Table 6: Species believed to be less common

Name	Notes
<i>Leucanthemum vulgare</i>	Does not grow all over campus any more. Locally common in a few places.
<i>Senecio jacobea</i>	Was frequent, now less common.
<i>Senecio squalidus</i>	Was frequent, now less common.
<i>Sonchus arvensis</i>	Was frequent, now rare or occasional.
<i>Lychnis flos-cuculii</i>	Only one plant found.
<i>Silene alba</i>	Was not seen in woodland edges; appears restricted to disturbed soil now.
<i>Mercurialis perennis</i>	Not abundant in many parts of the Wilderness any more.
<i>Dactylorhiza fuchsii</i>	Used to grow by the lake in 1977 and was in a border by Geography.
<i>Fallopia japonica</i>	No longer near the mid lake and does not form thickets in the wilderness.
<i>Lamium album</i>	Was common all over campus, now occasional or frequent.
<i>Lemna minor</i>	Not seen in the upper lake, only in the URS building pond.

Flora not found in the survey and of uncertain status

There are forty six species which were recorded in the card index but were not found during the survey or seen recently by those contributing their knowledge to the flora list for which their extinction or continued presence has not been decided upon; they are listed in Table 5.

Table 5: Flora not found in the survey and of uncertain status

<i>Alopecurus myosuroides</i>	<i>Cyperus longus</i>	<i>Poa humilis</i>
<i>Anthemis cotula</i>	<i>Fallopia convolvulus</i>	<i>Polygonatum multiflorum</i>
<i>Arenaria serpyllifolia</i>	<i>Festuca heterophylla</i>	<i>Polygonatum odoratum</i>
<i>Atriplex hortensis</i>	<i>Fumaria muralis</i>	<i>Polygonatum x hybridum</i>
<i>Berberis vulgaris</i>	<i>Galega officinalis</i>	<i>Prunus domestica</i>
<i>Bromus racemosus</i>	<i>Galeopsis tetrahit</i>	<i>Rosa virginiana</i>
<i>Callitriche platycarpa</i>	<i>Galinsoga quadriradiata</i>	<i>Rumex x pratensis</i>
<i>Campanula latifolia</i>	<i>Glyceria fluitans</i>	<i>Trisetum flavescens</i>
<i>Campanula persicifolia</i>	<i>Hieracium Sabaudum</i> agg.	<i>Verbascum phlomoides</i>
<i>Campanula rapunculoides</i>	<i>Lysimachia vulgaris</i>	<i>Vinca major</i>
<i>Campanula rotundifolia</i>	<i>Meconopsis cambrica</i>	<i>Viola arvensis</i>
<i>Carex flacca</i>	<i>Medicago sativa</i>	<i>Viola tricolor</i>
<i>Carex viridula</i>	<i>Milium effusum</i>	<i>Viola x wittrockiana</i>
<i>Cerastium arvense</i>	<i>Ornithogalum umbellatum</i>	<i>Vulpia bromoides</i>
<i>Chenopodium murale</i>	<i>Persicaria lapathifolia</i>	
<i>Chenopodium rubrum</i>	<i>Plantago media</i>	

Species of interest



Ophrys apifera (Bee Orchid)

Buxus sempervivens is a near threatened species (Wiggaton 1999). It grows in the wilderness and used to be more common in Berkshire, possibly being the origin of Berkshire's name (Crawley 2005). It now mostly grows as an introduced species which is almost certainly the case at Whiteknights.

Fritillaria meleagris, *Pinus silvestris* and *Tilia platyphyllos* are all listed as scarce by Stewart and co-workers (1994). *Fritillaria meleagris* was once thought to be native to Whiteknights, but the only plants currently present have been planted. *Pinus silvestris* is not native to Berkshire and will have been planted. *Tilia platyphyllos* is not native to Berkshire and grows as an introduced species though it has not been determined as to whether any of it is

naturalised on campus or whether it has all been planted; neither Whiteknights, nor Reading, nor Earley are listed as sites in which it grows in the Flora of Berkshire (Crawley 2005).

Also worth noting are the orchids, *Anacamptis pyramidalis*, *Dactylorhiza fuchsii* and *Ophrys apifera* (pictured above). One spike of each of the former was found in the grasslands south of the Friends Bridge and in 2011 the last in the grass in front of the Lord Zuckerman Research Centre. *Anacamptis pyramidalis* and *Ophrys apifera* have not been recorded at Whiteknights before. All three are known to occur in Berkshire; in numerous cases only one spike of *Anacamptis pyramidalis* is found. The Flora of Berkshire does not mention Whiteknights, Reading or Earley as sites where either *Anacamptis pyramidalis* or *Dactylorhiza fuchsii* are known to grow (Crawley 2005).

Whilst most of the alien species found in Whiteknights Park are either escaped ornamentals, widely cultivated crop species or common invasive species, one alien species that was found in several places and does not quite fit into these categories is *Solanum vernei*, the purple potato, native to South America (Stace 1997). It can reproduce by its tubers and allegedly by seed though none of the plants found during the survey appeared to have produced fruit. It is thought that it was originally brought to the campus for crop research and has since spread through dumped soil; it has been recorded in 6 locations, usually amongst shrubs and short hedges in plant beds and borders. Whiteknights is probably the only place in the British isles in which it has naturalised though there is a possibility of it spreading if soil containing its tubers gets excavated from the campus and dumped elsewhere.

Overall change

There are 537 records in total of which 531 are species with the rest accounting for multiple subspecies microspecies and varieties having been recorded for a few species. Forty seven records are new of which forty one are species. 489 species (in addition to one microspecies) were recorded previously of which sixty eight have gone extinct and for forty six it is uncertain as to whether they are extinct or not. This means that there are currently 417-463 species present in Whiteknights Park making for a net loss of twenty seven to seventy three species. However only twenty two to twenty seven species (in addition to one variety) are thought to be new arrivals with the rest having been overlooked in the past and thirteen extinct species had been extinct previously; therefore the real net change is a loss of twenty eight to seventy nine species.

Prospects for the future

There has been a recent change in management practices used at Whiteknights towards the increased use of wood or bark chip mulch on plant beds and numerous areas have been mulched since the survey began in June 2009. The result may be a reduction in the frequency of certain weed species.

The gravel car park behind the Animal and Microbial Sciences (AMS) has recently (spring 2010) been dug up. Whilst most species that were found here were not unique to this site and include a number which grew in the surrounding grassland, it was the only place where *Salix cinerea* subsp. *cinerea* was found, although it may grow elsewhere. It was also one of the sites at which *Solanum vernei* was found. It is possible that the species that were found here will continue to grow around the edges.

It should be noted that five of the newly arrived flora that have escaped cultivation (*Hordeum distichon*, *Prunus cerasifera* var. *pissardii*, *Verbena bonariensis*, *Avena sativa* and *Vicia faba*) appear to be casual and may not persist, although as they were able to seed themselves in Whiteknights Park some of them may eventually manage to seed themselves somewhere in which they can become established. Indeed given the large number of cultivated species in and around the park more such species will likely seed and for at least some, establish themselves in Whiteknights Park.

The flora list

This section is arranged with Pteridophytes listed first, followed by Pinophytes, followed by Magnoliophytes. Within these taxa, families, genera and species are arranged alphabetically. The records have been updated so that species are placed into the plant families currently recognised by the new classification system which the Angiosperm Phylogeny Group has produced (APGIII, 2009).

Species not recorded in the original card index are marked with an asterisk (*), whilst species that are believed to be extinct in Whiteknights Park are marked with a dagger (†). Species which have not been found in the recent survey, for which it is uncertain as to whether they are present or not, are marked with a double-dagger (‡).

The format in which the species are recorded here is as follows:

Scientific name Author - Common name.

A description of where the plant grows if known and if appropriate and can be given confidently, its commonality. For some particularly rare species a date is given for when they were found.

The meanings of place name abbreviations are as follows: PSL = Plant Sciences Laboratories (Harbourne), AMS = Animal and Microbiological Sciences and URS = Urban and Regional Studies.

Pteridophyta

Aspleniaceae

Phyllitis scolopendrium (L.) Newman - Harts-tongue.
In the Wilderness.

Dennstaedtiaceae

Pteridium aquilinum (L.) Kohn - Bracken.
Seen by Ronald W. Rutherford in the Wilderness.

Dryopteridaceae

**Dryopteris affinis* (Lowe) Fraser-Jenk. - Scaly male-fern.
Grows in a wooded area by the west bank of the lake near the point where it widens. It was previously over looked.

**Dryopteris affinis* (Lowe) subsp. *Borreri* (Newman) Fraser-Jenk - Scaly male-fern.
Found in Wilderness by both the east bank and base of the lake. It was previously over looked.

Dryopteris dilatata (Hoffm.) A.Gray - Broad Buckler-fern.
In the Wilderness.

Dryopteris felix-mas (L.) Schott - Male-fern.
In the Wilderness.

Polystichum setiferum (Forssk.) T. Moore ex Woyn. - Soft Shield-fern.
Seen by Michael Keith-Lucas.

Equisetaceae

Equisetum arvense L. - Common Horsetail.
Grows in the western grassland and around the lake.

Equisetum palustre L. - Marsh Horsetail.
Seen by Michael Keith-Lucas.

Ophioglossaceae

†*Ophioglossum vulgatum* L. - Adder's tongue
Occurred in the grassland near Cadbury Schweppes; this has since become a mown lawn.

Woodsiaceae

Athyrium filix-femina (L.) Roth - Lady-fern.
Seen by Michael Keith-Lucas.

Pinophyta

Pinaceae

Pinus sylvestris L. - Scots Pine
Seen by Ronald W. Rutherford.

Taxaceae

Taxus baccata L. - Yew.
In the Wilderness and other woodland.

Magnoliophyta

Acoraceae

Acorus calamus L. - Sweet-flag.
Grows at the northern edge of the lake.

Adoxaceae

Sambucus nigra L. - Elder.
Grows amongst trees including in the Wilderness and beside the lake.

Viburnum opulus L. - Guelder-rose.
Found growing beside west bank of the lake.

Alismataceae

†*Alisma plantago-aquatica* L. - Water Plantain.

Thought to be extinct. Used to grow by the lake and has probably gone as a result of gardening.

Amaranthaceae

†*Amaranthus retroflexus* L. - Common Amaranth.

It was only ever casual.

‡*Atriplex hortensis* L. - Common Orache.

Atriplex patula L. - Common Orache

Seen by Ronald W. Rutherford.

Atriplex prostrata Boucher ex DC. - Spear leaved Orache.

Grows in bare and disturbed soil.

Chenopodium album L. - Fat Hen.

In disturbed and bare soil.

Chenopodium ficifolium Sm. - Fig-leaved Goosefoot.

Confirmed present by Jonathan Mitchley. Was seen outside PSL.

Chenopodium polyspermum L. - Many-seeded goosefoot.

In disturbed soil near PSL.

‡*Chenopodium murale* L. - Nettle-leaved Goosefoot.

‡*Chenopodium rubrum* L. - Red Goosefoot.

Was previously seen in the wilderness and in disturbed ground.

Amaryllidaceae

**Allium ursinum* L. - Ramsons.

A small number of plants have been seen in the wooded area that runs up to Upper Redlands road just north of Windsor and McCombie halls and in the wilderness.

Leucojum aestivum L. - Summer Snowflake.

It has been planted at the top of the lake according to Stephen L. Jury.

Apiaceae

Aegopodium podagraria L. - Ground-Elder.

In the Wilderness. In the North West section of grassland. Also growing as a weed in woodchip behind Food Biosciences and as a weed in a bed next to what may be a disused building by the bus stop near soil sciences. It could occur as a weed elsewhere.

Aethusa cynapium L. - Fool's Parsley.

Found in disturbed soil near PSL and in a gravel car park behind AMS.

Angelica sylvestris L. - Wild Angelica.

Seen by Stephen L. Jury in the Wilderness.

Anthriscus sylvestris (L.) Hoffm. - Cow Parsley.

Grows in the shade of trees in various places and in the grasslands.

†*Apium nodiflorum* (L.) Lag. - Fool's-Water-cress.

Used to grow by the lake and has probably gone as a result of gardening.

†*Conium maculatum* L. - Hemlock.

Used to occur by the lake and in disturbed soil near Foxhill and may be gone due to gardening by the lake and a loss of ruderal habitat.

Conopodium majus (Gouan) Loret - Pignut.

Seen by Ronald W. Rutherford in the Harris garden.

Daucus carota L. subsp. *Carota* - Wild Carrot.

Found in a large patch of disturbed soil near the early gate entrance.

†*Foeniculum vulgare* Mill. - Fennel.

It has previously been found in plant beds near the library and around other buildings. It may originally have come from plantings and ceased to persist.

Heracleum sphondylium L. - Hogweed.

In the grasslands and the Wilderness.

Oenanthe crocata L. - Hemlock Water-Dropwort.

Grows on the banks of the lake and in grassland near the lake.

Pastinica sativa L. - Wild Parsnip.

Seen by Ronald W. Rutherford in meadows.

Pimpinella saxifrage L. - Burnet-saxifrage.

On the slope on the East side of the eastern grassland.

Silaum silaus (L.) Schinz & Thell.- Pepper-saxifrage.

In the grasslands.

Torilis japonica (Houtt.) DC. - Upright Hedge-Parsley

Seen by Stephen L. Jury in the Wilderness.

Apocynaceae

‡*Vinca major* L. - Greater Periwinkle.

Vinca minor L. - Lesser Periwinkle.

Grows in one patch in the shade by the west bank of the lake just north of the dam.

Aquifoliaceae

Ilex x altaclarensis (Loudon) Dallim. - Highclere Holly.

It has been Planted in the Wilderness according to Stephen L. Jury.

Ilex aquifolium L. - Holly.

In the Wilderness and other wooded areas; young plants have been found seeded in a plant bed next to the Wilderness behind PSL and in wood chip by food biosciences.

Araceae

Arum maculatum L. - Lords-and-Ladies.

Seen in the Wilderness by Ronald W. Rutherford. Seen in spring 2010 in sheltered places all over campus.

Lemna minor L. - Duckweed.

In the pond outside URS.

†*Lemna trisulca* L. - Ivy-leaved Duckweed.

Used to occur in the upper lake. It may be gone due to a change in its habitat possibly a change in PH caused by pollution.

†*Spirodela polyrhiza* (L.) Schleid. - Greater Duckweed.

Used to occur in the lower lake. It may be gone due to a change in its habitat possibly a change in PH caused by pollution.

Araliaceae

Hedera helix L. - Ivy.

Widespread, grows in shaded areas grows in shaded areas including woodland and underneath or on trees. It has also been found growing out of the shade in a gravel car park behind AMS.

Asparagaceae

Hyacinthoides hispanica (Mill.) Rothm. - Spanish Bluebell.

Seen by Ronald W. Rutherford.

Hyacinthoides non-scripta (L.) Chouard ex. Rothm. - Bluebell.

Found on the edge of the Wilderness near the Zuckerman building.

†*Muscari neglectum* Guss. Ex Ten. - Grape Hyacinth.

It was already stated in the card index that this was thought to be extinct.

‡*Ornithogalum umbellatum* L. - Star-of-Bethlehem.

‡*Polygonatum multiflorum* (L.) All. - Solomon's-seal.
Was previously seen in the wilderness.

‡*Polygonatum odoratum* (Mill.) Druce. - Angular Solomon's-seal.

‡*Polygonatum x hybridum* Bruggen - Garden Solomon's-seal.
Was previously seen in the wilderness although it was acknowledged on the index card that this might be a mistake.

Ruscus aculeatus L. - Butcher's Broom.

Seen by Ronald W. Rutherford & Stephen L. Jury in the Wilderness and the Harris Garden.

Asteraceae

Achillea millefolium L. - Yarrow.

Grows in grassland and lawns and has also been found in some disturbed soil near PSL and in the gravel car park behind AMS.

Achillea ptarmica L. - Sneezewort.

Locally common across most if not all of the western grasslands.

‡*Anthemis cotula* L. - Stinking Chamomile.

Was previously seen in waste places.

Arctium lappa L. - Greater Burdock.

It has been found amongst the trees dividing the north western area of the grassland.

Arctium minus (Hill) Bernh. - Lesser Burdock.

Grows in the Wilderness and beside the lake.

Artemisia vulgaris L. - Mugwort.

Grows where there is grass that isn't mown or is only mown late in the year including by paths in the Wilderness, around the lower lake and in the southern most area of the eastern grasslands. It is also found in disturbed soil and in the gravel car park behind AMS.

Aster cf. *novi-belgii* L. - Confused Michaelmas daisy.

One patch was found amongst the trees dividing the north western area of the grassland. There is a chance that it is actually a hybrid.

Bellis perennis L. - Daisy.

Grows in lawns, cracks in tarmac/paving and has been found in disturbed ground.

†*Bidens cernua* L. - Nodding Bur-marigold.

It may have been eaten by Canada Geese or gardened out.

†*Bidens tripartita* L. - Trifid Bur-marigold.

It may have been eaten by Canada Geese or gardened out.

†*Centaurea cyanus* L. - Cornflower.

It had once been seen near the path to the Food Biosciences building. According to Stephen L. Jury it has been planted in Harris garden and elsewhere it will have been an escape which did not persist.

Centaurea nigra L. - Common Knapweed

Grows in the grasslands and next to the lower lake.

†*Cichorium intybus* L. - Chicory.

Was previously thought to be extinct since 1981.

Cirsium arvense (L.) Scop. - Creeping Thistle.

Grows in the grasslands. Also found in some disturbed ground near PSL and in the gravel car park behind AMS and around the lake.

Cirsium vulgare (Sarvi) Ten. - Spear Thistle.

Has been found growing in wood chip by Food BSC, in disturbed ground near PSL, in the gravel car park behind AMS, by the bank of the lake south of Friends Bridge by the grassland and under the trees dividing the north western area of the grassland in shaded bare soil behind Foxhill house.

Conyza canadensis (L.) Cronquist - Canadian Fleabane.

Common. Grows in lawns, bare and disturbed soil, cracks in paving/tarmac and in the gravel car park behind AMS.

**Conyza sumatrensis* (Retz.) E. Walker - Guernsey Fleabane.

Found growing in bare soil on the north side of Fox Hill House. Thought to be newly arrived as it is spreading in the UK.

Crepis capillaris (L.) Wallr. - Smooth Hawk's-beard.

Grows in lawns, in the north western and north eastern grasslands and in the gravel car park behind AMS.

**Crepis biennis* L. - Rough Hawk's-beard.

Found growing in bare soil by Fox Hill car park. Possibly overlooked before or newly arrived.

Crepis vesicaria L. subsp. *taraxacifolia* (Thuill.) Thell. ex Shinz & R. Keller - Beaked Hawk's-beard.

Seen by Ronald W. Rutherford.

Eupatorium cannabinum L. - Hemp-agrimony.

Grows beside the lake.

Galinsoga parviflora Cav. - Gallant-Soldier.

Seen by Ronald W. Rutherford.

‡*Galinsoga quadriradiata* Ruiz & Pav. - Shaggy-soldier.

Was previously seen in grass by the lake and near foxhill.

Gnaphalium uliginosum L. - Marsh cudweed.

Seen by Ronald W. Rutherford.

†*Guizotia abyssinica* (L.f.) Cass. - Niger.

Was probably only casual.

‡*Hieracium sabaudum* L. agg.

Was previously seen by Foxhill car park and near the North east side of the lake.

Hypochaeris radicata L. - Cat's-ears.

Grows in the grasslands and the gravel car park behind AMS.

†*Lactuca sativa* L. - Garden Lettuce.

The index card states that it had not been seen since 1970.

Lactuca serriola L. - Prickly Lettuce.

Grows in bare soil, in cracks in tarmac/paving near PSL and in disturbed soil near PSL.

Lactuca virosa L. - Great Lettuce.

Seen by Ronald W. Rutherford.

Lapsana communis L. - Nipplewort.

Grows in various shaded places including in the Wilderness, a shaded plant bed near PSL and the by the dam that crosses the lake.

Leontodon autumnalis L. - Autumn Hawkbit.

In grassy areas; mainly in grassland and lawns but has been found by the lower lake.

Leontodon saxatilis Lam. - Lesser Hawkbit.

Grows in lawns.

Leucanthemum vulgare Lam. - Oxeye Daisy.

Locally common in the grasslands, where it has been found in the southern most area of the eastern grassland and in the western grassland near the trees close to the lake. It has also been found in the Wilderness at the edge near Phillip Lyle.

Matricaria discoidea DC. - Pineappleweed.

Has been found growing cracks in tarmac/paving, in bare soil on the Earleygate side of campus and in some disturbed ground near PSL.

Matricaria recutita L. - Scented Mayweed.

Found growing in disturbed ground near PSL and in a bare patch of ground in the north western grassland.

Petasites Hybridus (L.) P. Gaertner, B.Mey & Scherb. - Butterbur.

In the Wilderness by the east side of lake.

Picris echioides L. - Bristly Oxtongue.

Has been found in some disturbed ground near PSL, the western area of grassland and by the lower lake.

Pilosella officinarum F.W. Schultz & Sch. Bip. - Mouse-ear Hawkweed.

Seen by Michael Keith-Lucas.

Pulicaria dysenterica (L.) Bernh. - Common Fleabane.

Grows beside the lake and in a small patch near the lake in the western grassland.

Senecio erucifolius L. - Hoary Ragwort.

Grows by west bank of lake and in the grasslands.

Senecio jacobaea L. - Common Ragwort.

Scattered, grows in various places including the gravel car park behind AMS, in the south eastern grassland, in bare shaded soil by the pepper lane entrance, bare under a tree in the Childs hall lawn.

Senecio squalidus L. - Oxford Ragwort.

Seen by Ronald W. Rutherford, it is widespread but is now less common.

Senecio sylvaticus L. - Heath Groundsel.

Seen by Ronald W. Rutherford.

Senecio viscosus L. - Sticky Groundsel.

Seen by Ronald W. Rutherford, it is scattered throughout the campus.

Senecio vulgaris L. - Groundsel.

It grows in cracks in paving/tarmac, in disturbed soil and in the gravel car park behind AMS.

†*Silybum marianum* (L.) Gaertner. - Milk Thistle

Previously seen in the wilderness, on grass verges, by Foxhill drive and on a bonfire site. It was only casual.

Solidago canadensis L. - Canadian Goldenrod.

Grows by the east and west banks of the lower lake.

Solidago gigantea Aiton - Early Goldenrod.

Seen by Ronald W. Rutherford.

†*Solidago virgaurea* L. - Goldenrod.

It is not known as to where it occurred or why it has gone.

Sonchus arvensis L. - Perennial Sow-thistle.

Has been found on the north bank the lake and again on the east bank.

Sonchus asper (L.) Hill - Prickly Sow-thistle.

Found in some disturbed soil near PSL.

Sonchus oleraceus L. - Smooth Sow-thistle.

Found in cracks in paving/tarmac and on the dam that crosses the lake.

**Tanacetum parthenium* (L.) Sch. - Bip. Feverfew.

Found growing in disturbed soil near Earley Gate and as a weed in the Harris Garden. Invasive and maybe increasing in the UK.

Tanacetum vulgare L. - Tansy.

Grows by the east bank of the lake.

Taraxacum officinale Wigg. agg. - Dandelion.

Very common, grows in most if not all terrestrial habitats and places including the grasslands, lawns, wood chip, disturbed and bare soil and in cracks in paving/tarmac.

Tragopogon pratensis L. - Goat's-beard.

Common in the grasslands, it has also been found in a plant bed near PSL and in disturbed soil near PSL.

Tripleurospermum inodorum (L.) Sch. Bip. - Scentless Mayweed.

Grows in disturbed soil.

Tussilago farfara L. - Colt's-foot.

Grows beside the lake.

Balsaminaceae

Impatiens glandulifera Royle - Indian Balsam.

In the Wilderness by paths.

Impatiens parviflora DC. - Small Balsam.

Grows in the Wilderness.

Berberidaceae

Mahonia aquifolium (Pursh) Nutt.- Oregon Grape.

Seen by Ronald W. Rutherford in the Wilderness.

Betulaceae

Alnus glutinosa (L) Gaertner. - Alder.

Found around lake and has produced many saplings from seeds and or suckers.

Betula pendula Roth. - Silverbirch.

Grows in the Wilderness.

Betula pubescens Ehrh. - Downy Birch.

Grows in the Wilderness.

Carpinus betulus L. - Hornbeam.

Grows in woodland including the Wilderness and near Foxhill.

Corylus avellana L. - Hazel.

Found in the Wilderness.

Boraginaceae

†*Echium vulgare* L. - Viper's-bugloss

Its index card states that it may have gone extinct after 1985 and that if found near PSL then it will have seeded from the Harris Garden.

Myosotis arvensis (L.) Hill. - Field Forget-me-not.
Seen by Ronald W. Rutherford.

Myosotis scorpioides L. - Water Forget-me-not.
Grows at the margins of the lake.

Myosotis sylvatica Hoffm. - Wood Forget-me-not.
Seen by Ronald W. Rutherford.

Pentaglottis sempervirens (L.) Tausch ex L.H. Bailey - Green Alkanet.
Found in a shaded bed behind PSL, some areas of disturbed soil particularly one near the Early gate entrance and at either end of the path to Whiteknights Crescent by the playing fields.

Symphytum officinale L. - Common Comfrey.
Seen by Ronald W. Rutherford.

Symphytum orientale L. - White Comfrey.
Seen by Ronald W. Rutherford.

Symphytum x uplandicum Nyman - Russian Comfrey.
Found near the lake on either side.

Brassicaceae.

Alliaria petiolata (M. Bieb.) Cavara & Grande - Garlic Mustard.
Common in shaded soil. Sites it grows in include shaded beds near PSL, under trees near the lake at the Wilderness edge near the Zuckerman building and in the woodchip by Food Biosciences.

Arabidopsis thaliana (L.) Heynh. - Thale Cress.
Grows in cracks in paving/tarmac and in disturbed soil near PSL and in bare soil on the Earley Gate side of campus.

†*Armoracia rusticana* P. Gaertner, B. Meyer & Scherb. - Horse-radish.
Believed to be extinct. It was previously seen in grass verges near early gate by TOBs and "similar places". Thought to be gone due to a loss of habitat.

†*Brassica napus* L. - Rape.
It was previously seen in waste places and was only casual.

†*Brassica nigra* (L.) Koch. - Black Mustard.
It was previously seen by the lake but was only casual.

Capsella bursa-pastoris (L.) Medik. - Shepherd's-purse.
Found in cracks in tarmac/paving, in some bare soil on Earley Gate side of campus and in a patch of disturbed ground near PSL.

Cardamine flexuosa With. - Wavy Bitter-cress.

Seen by Stephen L. Jury in the wetter places in the Wilderness.

Cardamine hirsuta L. - Hairy Bitter-cress

Found as a weed in soil which is left bare and in cracks in the pavement/tarmac around PSL.

Cardamine pratensis L. - Cuckooflower.

Rare in lawns, probably grows in grassland as well.

Coronopus didymus (L.) Sm. - Lesser Swine-cress

Has been found in lawns, in soil which is left bare and in some disturbed ground near PSL.

Coronopus squamatus (Forsskål) Ascherson. - Swine-cress.

Seen by Ronald W. Rutherford.

†*Descurainia sophia* (L.) Prantl. - Flixweed

Appeared in imported soil in plant beds near Cadbury Schweppes and did not persist.

†*Diplotaxis muralis* (L.) DC. - Wall Rocket

Was previously seen in disturbed ground near AMS and was only casual.

Erysimum cheiranthoides L. - Treacle Mustard

Grows in disturbed soil and has also been found in a bare patch of previously waterlogged soil in the south western area of grassland.

†*Erysimum cheiri* (L.) Crantz. var. *allionii*. - Siberian Wallflower.

It was originally planted and persisted as an escape for some years but no longer.

**Hirschfeldia incana* (L.) Lagr.-Foss. - Hoary Mustard.

Grows in disturbed ground in which it has been found near PSL and near Earley Gate. Recently arrived due to its invasiveness.

†*Lepidium draba* L. - Hoary Cress

Was previously seen in the woodland behind the Foxhill stable-block but was only casual.

Lunaria annua L. - Honesty

Seen by Ronald W. Rutherford.

Rorippa nasturtium-aquaticum (L.) Hayek - Water-cress

Seen by Ronald W. Rutherford.

Raphanus raphanistrum L. - Wild Radish.

Seen by Stephen L. Jury in the Harris Garden.

†*Rorippa palustris* (L.) Besser - Marsh Yellow-cress

Used to grow where water stands in winter, this probably in being in the grassland. Thought to be gone due to a change in its habitat as the grassland is drier than it once was.

Rorippa sylvestris (L.) Besser. - Creeping Yellow-cress.

Seen by Ronald W. Rutherford.

Sinapsis arvensis L. - Charlock.

It has been found on some disturbed ground near PSL.

†*Sisymbrium austriacum* Jacq. - Jewelled Rocket.

It used to grow near the Tate and Lyle building but was only ever casual.

Sisymbrium officinale (L.) Scop. - Hedge Mustard.

It grows in cracks in paving/tarmac, in bare soil and in the gravel car park behind AMS.

Thlaspi arvense L. - Field Penny-cress.

Has been found in disturbed ground near PSL.

Buxaceae

Buxus sempervivens L. - Box.

Seen by Ronald W. Rutherford in the Wilderness.

Campanulaceae

‡*Campanula latifolia* L. - Giant Bellflower.

Was previously seen in the wilderness.

‡*Campanula persicifolia* L. - Peach-leaved Bellflower.

Its card states that it was seen in 1973 though it does not say that it hadn't been seen since.

‡*Campanula rapunculoides* L. - Creeping Bellflower.

Was previously seen near Earley Gate.

‡*Campanula rotundifolia* L. - Harebell.

Was previously seen in waste ground.

Campanula trachelium L. - Nettle-leaved Bellflower.

Seen by Jonathan Mitchley in the wilderness.

Cannabaceae

**Humulus lupulus* L. - Hop.

Found climbing a yew tree on the URS/Library lawn. Probably escaped from plantings.

Caprifoliaceae

†*Dipsacus fullonum* L. - Teasel.

Used to occur in scrub, woodland margins and waste places. It has probably gone due to a loss of habitat and in woodland margins it was only casual.

**Leycesteri formosa* Wall. - Himalayan Honeysuckle.

In the Wilderness by the path between the lake and agriculture. Escaped from cultivation.

Lonicera periclymenum L. - Honeysuckle.
Found in the Wilderness.

Symphoricarpos albus (L.) S.F. Blake - Snowberry.
Grows on west bank of the lake between the northern most bridge and where the lake widens in the shade of the trees and amongst the trees beside Foxhill drive.

Caryophyllaceae

Agrostemma githago L. - Corncockle
It has been found in strip of grassland by the path that runs beside the north western edge of the grasslands; the soil looked as though it had been disturbed earlier in the year or in the previous year. It is not known whether it will persist.

‡*Arenaria serpyllifolia* L. - Thyme-leaved Sandwort.
Was previously seen on walls and in dry places.

‡*Cerastium arvense* L. - Field Mouse-ear.

**Cerastium fontanum* Baumg. subsp. *vulgare* (Hartm.) Greuter & Burdet - Mouse Ears.
Grows in grassy places in which it has been identified growing in the grass by the lake and in the grasslands. Thought to have been overlooked previously.

Cerastium fontanum Baumg. subsp. *holosteoides* (Fr.) - Common Mouse-ear.
In grassland.

Cerastium glomeratum Thuill. - Sticky Mouse-ear.
Has been found growing in cracks in paving/tarmac near PSL and in bare soil on the Earley Gate side of campus.

Cerastium tomentosum L. - Snow-in-summer.
Seen by Michael Keith-Lucas.

Lychnis flos-cuculi L. - Ragged Robin.
A plant was seen in the Wilderness on the east bank of the lake by the bridge.

Moehringia trinervia (L.) Clairv. - Three-nerved Sandwort.
Seen by Ronald W. Rutherford in the Wilderness.

Sagina apetala Ard. - Annual Pearlwort.
Found in bare soil on the Earley Gate side of campus.

Sagina procumbens L. - Procumbent Pearlwort.
Seen by Ronald W. Rutherford.

†*Scleranthus annuus* L. - Annual Knawel.
Its index card says it has not been seen since 1978 possibly due to loss of habitat.

Silene dioica (L.) Clairv. - Red Champion.
Found in Wilderness and in shaded areas by the lower lake.

Silene latifolia x dioica. - Pink Campion.
Seen by Ronald W. Rutherford by the lake.

Silene latifolia Poir. - White Campion.
Has been found in disturbed soil near the Earley Gate entrance and near PSL.

†*Spergula arvensis* L. - Corn Spurey.
Used to occur in disturbed soil and is thought to have gone done to a loss of habitat.

†*Spergularia rubra* (L.) J & C Presl - Sand Spurrey.
It is not known as to where it occurred or why it has gone.

Stellaria graminea L. - Lesser Stitchwort.
Grows in the grasslands.

Stellaria holostea L. - Greater Stitchwort.
Seen by Ronald W. Rutherford by the lake.

Stellaria media (L.) Vill. - Chickweed.
Grows in lawns, disturbed soil near PSL and often in bare soil which includes path sides in the Wilderness.

Celastraceae

Euonymus europeus L. - Spindle.
Grows in the Wilderness near the east bank of the lake and agriculture.

Convolvulaceae

Calystegia sepium (L.) R. Br. - Hedge Bindweed.
Found in woodchip by Food biosciences, in disturbed ground near PSL, by the bank of the lake, and in the gravel car park behind AMS

Calystegia silvatica (Kit.) Griseb - Large Bindweed.
Seen by Ronald W. Rutherford, widespread.

Convolvulus arvensis L. - Field Bindweed.
Grows in grassland and as a weed.

Cornaceae

Cornus sanguinea L. - Dogwood.
Planted by the lake.

Crassulaceae

Sedum acre L. - Biting stonecrop.
Seen by Ronald W. Rutherford.

†*Sedum telephium* L. - Orpine
Was previously seen near the A327. The reason for its extinction is unknown.

Cucurbitaceae

**Bryonia dioica* Jacq. - White Bryony.
A large amount grows in the hedge by the path to by Whiteknights Crescent by the north most playing field and has also been under the yew in front of the library and in bare soil on the East side of campus. It was previously overlooked.

Cyperaceae

Carex acutiformis Ernh. - Lesser Pond-sedge.
Seen by Michael Keith-Lucas.

Carex divulsa Stokes - Grey Sedge.
Seen by Michael Keith-Lucas.

‡*Carex flacca* Schreb. - Glaucous Sedge.
Was previously seen in damp woodland.

Carex hirta L. - Hairy Sedge.
Grows in the grassland and beside the lake.

Carex muricata L. - Prickly Sedge.
Found beside the lake.

Carex otrubae L.Podp. - False Fox-sedge.
Seen by Ronald W. Rutherford.

Carex ovalis Gooden - Oval Sedge.
Seen by Michael Keith-Lucas.

Carex pendula Huds. - Pendulous Sedge.
It has been found on the south west bank of the lake by the grassland and the south east bank in the Wilderness. It was previously thought to be extinct.

†*Carex x pseudoxillaris* K. Richt
The card index states that it was thought to be extinct.

Carex riparia Curtis - Greater Pond-sedge.
Seen by Michael Keith-Lucas.

Carex spicata Huds. - Spikedn Sedge.
Seen by Michael Keith-Lucas.

Carex sylvatica Huds. - Wood Sedge.

Grows amongst trees. It has been found by the lake and by Foxhill drive.

†*Carex vesicaria* L - Baladder-sedge.

The card index states that it was thought to be extinct.

‡*Carex viridula* Michx. subsp. *oedocarpa* (Andersson) B. Schmid - Yellow-sedge.

‡*Cyperus longus* L. - Galingale.

Was previously seen by the lake where it was planted and in the Harris Garden.

Dioscoreaceae

Tamus communis L. - Black Bryony.

Grows mainly in the Wilderness but has also been found, in the wood chip by Food biosciences and in disturbed ground near PSL.

Elaeagnaceae

Hippophae rhamnoides L. - Sea-buckthorn.

Planted by the lake according to Stephen L. Jury.

Ericaceae

Arbutus unedo L. - Strawberry-tree.

Planted near park house.

Calluna vulgaris (L.) Hull - Heather.

Seen by Stephen L. Jury in the Wilderness.

Rhododendron ponticum hybrids - Rhododendron.

Wilderness and woods by Foxhill House

Euphorbiaceae

**Euphorbia lathyris* L. - Caper Spurge.

Grows in bare and disturbed soil in which has been found near Earley Gate by the TOBs and near PSL. An invasive garden escape.

Euphorbia helioscopia L. - Sun Spurge.

Grows as a weed in plant beds Near PSL

Euphorbia peplus L. - Petty Spurge.

In cracks in tarmac/paving, as a weed in soil which is left bare and in some disturbed soil near PSL.

Mercurialis perennis L. - Dogs Mercury.

Grows in the wilderness on the side near Earley gate.

Fabaceae

Cytisus Scoparius (L.) Link - Broom.

Found near the lake near west side of the lower by the Foxhill lawn.

‡*Galega officinalis* L. - Goat's-rue.

Was previously seen in disturbed ground and by the lake.

Lathyrus pratensis L. - Meadow Vetchling.

Grows in the grasslands.

Lotus corniculatus L. - Common Bird's-foot-trefoil.

Grows in grassland and lawns and has been found in some disturbed soil near PSL.

Lotus Pedunculatus Cav. - Greater Bird's-foot-trefoil.

In the western grasslands.

†*Lupinus polyphyllus* Lindl. - Garden Lupin.

Its card states that it was seen in 1973 though it does not say that it hadn't been seen since. It will have been a garden escape and has not persisted.

†*Medicago arabica* (L.) Huds. - Spotted Medick.

Used to grow outside PSL. Possibly escaped from use in experiments and persisted.

Medicago lupulina L. - Black Meddick.

Common, found in the grasslands, in cracks in tarmac/paving, in disturbed soil near PSL, and in some bare soil on the early gate side of campus.

‡*Medicago sativa* L. - Lucerne.

Was previously seen south of Cadbury Schweppes and in long grass.

Melilotus albus Medik. - White Melilot.

Seen by Ronald W. Rutherford.

Melilotus officinalis Desr. - Common Melilot.

Seen by Ronald W. Rutherford.

Robinia psuedoacacia L. - False-acacia.

A number of saplings grow in the Wilderness, particularly on the side near PSL.

Trifolium campestre Schreber. - Hop Trefoil.

Seen by Ronald W. Rutherford.

Trifolium dubium Sibth. - Lesser Trefoil.

A very large plant was found on bare soil next to the electricity substation near the base of the lower lake.

Trifolium pratense L. - Red Clover.

Grows in grassland and lawns.

Trifolium micranthum Vir. - Slender Trefoil.
Has been found in cracks in the paving/tarmac near PSL.

Trifolium repens L. - White Clover.
Grows in grassland and lawns and has been found in cracks in the paving/tarmac near PSL.

Ulex europaeus L. - Gorse.
Seen by Ronald W. Rutherford.

Vicia cracca L. - Tufted Vetch.
Common in the western grasslands.

**Vicia faba* L. - Broad Bean.
Found growing in a plant bed near PSL next to the gate to area where the greenhouses are. An alien escape, possibly from spilled seed.

Vicia hirsuta (L.) S.F. Gray - Hairy Tare.
Has been found in some disturbed soil near PSL and in the south eastern grassland.

Vicia sativa L. subsp. *nigra* (L.) Ehrh.
Seen by Ronald W. Rutherford.

Vicia sativa L. subsp. *sativa*. - Common Vetch.
Seen by Ronald W. Rutherford.

**Vicia sativa* L. subsp. *segetalis* (Thuill.) Gaudin. - Common Vetch.
Found growing in the woodchip by Food Biosciences and by some bushes on the west bank of the lake near Friends bridge. Possibly overlooked before.

Vicia sepium L. - Bush Vetch.
Seen by Ronald W. Rutherford .

Vicia tetrasperma (L.) Schreber. - Smooth Tare.
Seen by Ronald W. Rutherford.

†*Vicia villosa* Roth - Fodder Vetch.
The card index states that it was in 1967 but thought to be extinct.

Fagaceae

Castanea sativa Mill. - Sweet chestnut.
In the Wilderness.

Fagus sylvatica L. - Beech.
In the Wilderness.

Quercus Ilex L. - Evergreen Oak

Has been planted in various places but there appear to be some younger naturalized trees between Earley Gate and bridges hall. It has also seeded itself in the underneath various other trees in the grassland and possibly elsewhere.

Quercus cerris L. - Turkey Oak.

Has been planted in various places but there appear to be some naturalized trees in the Wilderness. It produces seedlings /very young saplings in various places with one found in the plant bed behind Phillip Lyle, another in the western grassland another by the lower lake and another found in disturbed soil near PSL.

Quercus robur L. - Pedunculate Oak.

In Wilderness and other woodland along with various trees elsewhere though some may be planted. It often seeds itself in various places with seedlings/saplings found in grassland and plant beds. There is a specimen of the cultivar 'Fastigiata' in the large clearing near the Grotto in the wilderness which has seeded from a very old parent that used to grow nearby.

Gentianaceae

Centaureum erythraea Rafn - Common Centaury.

Seen by Michael Keith-Lucas.

Geraniaceae

Erodium cicutarium (L.) L'Hér. - Common Storks-bill.

Has been found in bare soil on the early gate side of campus and disturbed soil near PSL.

Geranium dissectum L. - Meadow Cranes-bill.

Grows in the grasslands and has also been found in the woodchip by Food biosciences and in disturbed ground near PSL.

**Geranium lucidum* L. - Shining Crane's-bill.

Found under a tree on the Childs Hall & Foxhill House lawn and in bare soil by the agriculture car park. Possibly overlooked before.

Geranium molle L. - Dove's-foot Cranesbill.

Seen by Michael Keith-Lucas.

†*Geranium phaeum* L. -Dusky Crane's-bill.

Garden escape that did not persist.

Geranium pratense L. - Meadow Cranes-bill.

Seen by Ronald W. Rutherford.

Geranium pusillum L. - Small-flowered Cranes-bill.

Grows in lawns and in cracks in tarmac/paving and has also been found in bare soil on the Early Gate side of campus and in some disturbed soil near PSL.

Geranium pyrenaicum fil. - Hedgrow Cranes-bill.

Has been found growing in a grass verge near where Foxhill drive and the road to Childs hall join up.

Geranium rotundifolium L. - Round-leaved Cranse-bill.
Has been found in disturbed soil near PSL and near Earley Gate.

Geranium robertianum L. - Herb Robert.
In shade particularly in wooded areas but has also been found in a shaded bed near PSL.

Grossulaceae

Ribes nigrum L. - Black Currant.
Seen by Michael Keith-Lucas.

**Ribes rubrum* L. - Red Currant.
A large patch grows in the Wilderness by the path that runs between Agriculture and the path next to the Harris Garden. It is a garden escape.

Ribes uva-crispa - L. - Gooseberry.
Seen by Michael Keith-Lucas.

Hypericaceae

†*Hypericum humifusum* L. - Trailing St. John's-wort.
Used to grow in plant beds in the Harris Garden. The reason for its extinction is unknown.

Hypericum perforatum L. - Perforate St. John's-wort.
Grows in the grassland around the edges of wooded areas and in the open in the southern most area of the eastern grassland.

**Hypericum tetrapterum* Fr. - Square-stalked St. John's -wort.
Has been found near the west bank of the middle section of the lake and in the Wilderness on the east bank of the lake near the grotto. Thought to have been overlooked previously.

Iridaceae

**Crocus speciosus* M. Bieb. - Bieberstein's Crocus.
Found 16/10/2009 in one small patch on the edge of the grassland near Chemistry. Had disappeared by 19/10/2009. It has escaped cultivation.

†*Iris germanica* L. - Flag Iris.
Extinct except where it is planted. It was a relic of plantings and has not persisted.

Iris pseudoacorus L. - Yellow Flag.
Around the lake.

Juncaceae

Juncus bufonius L. - Toad Rush.

Seen by Ronald W. Rutherford.

Juncus conglomeratus L. - Compact Rush.
Grows in the grassland.

Juncus inflexus L. - Hard Rush.
On the bank of the upper lake by the grassland and in the grasslands.

Juncus effusus L. - Soft Rush.
In the Wilderness.

Luzula campestris (L.) DC. - Field Wood-rush.
Seen by Ronald W. Rutherford.

Luzula multiflora (Ehrh.) Lej. - Heath Wood-rush.
Seen by Michael Keith-Lucas.

Lamiaceae

Ajuga reptans L. - Bugle.
By the west bank of the lake in the shade and on the east bank in the Wilderness.

Ballota nigra L. - Black Horehound.
Grows in certain places under trees where it has been found in bare shaded soil by Foxhill carpark, by some trees near the east bank of the lower lake and the grasslands and under a tree near Windsor hall and the playing fields. It has also been found in disturbed soil near Earley Gate.

Lamium galeobdolon (L.) Ehrend. & Polatschek - Yellow Archangel.
Seen by Michael Keith-Lucas.

Lamium album L. - White Dead-nettle.
Has been found in the gravel car park behind AMS and beside the northern edge of the lake.

Lamium amplexicaule L. - Henbit Dead-nettle.
Found in a barish patch on the edge of the lawn between the chaplaincy and the path that leads towards the Cedar food court.

Lamium maculatum L. - spotted Dead-nettle.
In the Wilderness by the path that runs beside the Harris Garden and in the Harris garden in a clearing in the woods beside Wilderness Road. It is still grown in the Harris garden and has no doubt spread from plantings there.

Lamium purpurium L. - Red Dead-nettle.
Found in a patch of bare soil under the cedar of Lebanon near the Cedar food court.

Lycopus europaeus L. - Gipsywort.
Grows around the lake.

‡*Galeopsis tetrahit* L. - Common Hemp-nettle.
Was previously seen in the wilderness.

Glechoma hederacea L. - Ground Ivy.

Grows in large abundance in certain shaded places including those beside the lake and in the Wilderness.

Prunella vulgaris L. - Selfheal.

Grows in lawns, beside the lake in the shade and the north western grasslands.

Melissa officinalis L. - Balm.

Near Agriculture by the trees near the bank of the lake, it was previously thought that it might be extinct.

Mentha aquatica L. - Water mint.

Grows around the lake.

Mentha spicata L. - Spear Mint.

Seen by Michael Keith-Lucas.

†*Salvia verbenaca* L. - Wild Clary.

Its index card states that one plant was seen and was possibly a Harris Garden escape that failed to persist.

Scutellaria galericulata. - Scullcap.

Grows beside the lower lake.

Stachys sylvatica L. - Hedge woundwort.

Grows in the Wilderness and other wooded areas.

Liliaceae

Fritillaria meleagris L. - Fritillary.

Originally thought to be native in the vicinity of the Zucherman Research Centre and now extinct there but was planted recently both at its original site and near the strawberry-tree in front of Park House.

Lythraceae

Lythrum salicaria L. - Purple loosestrife.

Grows in the north west area of the grasslands to the north east of the nursery.

Malvaceae

†*Alcea rosea* L. - Hollyhock.

Probably a Garden escape that did not persist.

Malva moschata L. - Musk Mallow.

One plant/clump found in the southernmost area of Eastern grasslands near Agriculture.

Malva sylvestris L. - Common Mallow.

Seen by Michael Keith-Lucas.

Tilia x europaea L. - Lime.
Seen by Ronald W. Rutherford.

**Tilia platyphyllos* Scop. Large-leaved Lime
Grows in the wilderness and the *tilia sp.* which grows in the woods between foxhill and the lake may also be this. At least some of the trees will have been planted and whether any of these have reproduced has not been ascertained. It may have been overlooked in the past or may be slightly more recent.

Menyanthaceae

†*Nymphoides peltata* (S.G. Gmelin) O. Kuntze. - Fringed Water-lily.
Used to grow in the lower lake but was not native. It previously died out about 1982 but was reintroduced but was not very successful.

Montiaceae

Claytonia perfoliata Donn ex Willd. - Spring Beauty.
Grows under trees including the Mock Acacia in front of the Library and URS and under the Cedar in front of Windsor Hall near the corner of the playing fields.

†*Montia Fontana* L. subsp. *Chondrosperma* - Blinks.
Used to grow under a tree near Wessex hall tennis court. The reason for its extinction is unknown.

Nymphaeaceae

Nuphar lutea (L.) Sm. - Yellow Water-lily.
Seen by Ronald W. Rutherford.

Nymphaea alba L. - White Water-lily.
Seen by Ronald W. Rutherford.

Oleaceae

Fraxinus excelsior L. - Ash.
In the Wilderness, amongst the trees by the lower lake, and has been found seeded under a tree in the north western grassland.

Ligustrum vulgare L. - Privet.
Found in the Wilderness.

Onagraceae

Circaea lutetiana L. - Enchanter's Nightshade.
Grows in the Wilderness

Chamerion angustifolium (L.) Holub - Rosebay Willowherb.

Found beside lake, on the south-west grassland edge growing next to the Wilderness and in the Wilderness near Philip Lyle.

Epilobium hirsutum L.- Great Hairy Willowherb

Found on the banks of the lake, in the north western grasslands and on the gravel car park behind AMS.

Epilobium montanum L. - Broad-leaved Willowherb

Found in bare soil and cracks in tarmac/paving.

Epilobium palustre L. - Marsh Willowherb.

Seen by Ronald W. Rutherford.

Epilobium parviflorum Schreber - Hoary Willowherb.

Seen by Ronald W. Rutherford.

Epilobium obscurum Schreber - Short-fruited Willowherb.

Seen by Ronald W. Rutherford.

Epilobium roseum Schreber - Pale Willowherb.

Seen by Ronald W. Rutherford.

Epilobium tetragonum L. - Square-stalked Willowherb.

Seen by Ronald W. Rutherford.

†*Oenothera cambrica* Rost. - Small-flowered Evening-primrose.

The card index states that it was thought to be extinct.

Orchidaceae

**Anacamptis pyramidalis* (L.) Rich. - Pyramidal Orchid.

Very rare. One plant was found in the south west of the grasslands on 18/06/2009 and another was seen in 2012 by the northeast corner of the Chemistry and Pharmacy building. It may have been overlooked in the past or recently arrived.

Dactylorhiza fuchsii (Druce) Soó - Common Spotted-orchid.

Very rare. One plant was found on 18/06/2009 in the south west of the grasslands.

**Ophrys apifera* huds. - Bee Orchid.

Several spikes were seen in 2012 in the grass verge on the west side of the Lord Zuckerman research centre.

Orobanchaceae

Odontites vernus (Bellardi) Durmort. - Red Bartsia.

Seen by Ronald W. Rutherford.

†*Orobanche hederæ* Duby - Ivy Broomrape.

Was previously rare and had been introduced to ivy near the library which has now been removed.

Oxalidaceae

Oxalis acetosella L. - Wood-sorrel.
Seen by Ronald W. Rutherford.

**Oxalis corniculata* L. - Procumbent Yellow-sorrel.
Grows as a weed in the Harris Garden. An invasive that comes in with introduced plants from garden centres.

Oxalis stricta L. - Upright Yellow-sorrel.
Grows as a weed in the Harris Garden.

Papaveraceae

Chelidonium majus L. - Greater celandine.
Grows as a weed in the Harris Garden and has also been found on a soil heap behind the brambles at the back of Bridges hall.

‡*Fumaria muralis* Sond. ex W.D.J. Koch - Common Ramping-fumitory.
Was previously seen in plant beds and waste places.

Fumaria officinalis L. subsp. *wirtgenii* (W.D.J. Koch) Arcang - Common Fumitory.
Has been found in disturbed soil near PSL.

Papaver dubium L. - Long-headed Poppy.
Found in disturbed ground near PSL.

Papaver rhoeas L. - Common Poppy.
Found in disturbed ground near PSL and in the woodchip by Food biosciences.

Papaver somniferum L. - Opium poppy.
Found in disturbed ground near PSL.

‡*Meconopsis cambrica* (L.) Vig. - Welsh Poppy.
Its index card states that two were seen near the walled garden, it was planted on the sandbanks by the lower lake, and that it also grew by the track around the lake.

Phrymaceae

†*Mimulus moschatus* Douglas ex Lindl. - Musk
Used to grow in the wilderness. It was previously rare and now extinct due to change in its habitat.

Plantaginaceae

‡*Callitriche platycarpa* Kütz. - Various-leaved Water-starwort.

Was previously seen in the lake and including near the rustic bridge.

Callitriche stagnalis Scop.- Common Water-starwort.
Seen by Michael Keith-Lucas.

Cymbalaria muralis P.Gaertner, B.Meyer & Scherb. - Ivy-leaved Toadflax.
Grows on walls, it has been found on the wall beside the chaplaincy and the wall in front of Physics.

Digitalis purpurea L. - Foxglove.
Grows in the Wilderness.

†*Linaria purpurea* (L.) Miller - Purple Toadflax.
Was previously seen in the wilderness the reason for its extinction is unknown.

**Misopates orontium* (L.) Raf. - Weasel's-snout.
Found in disturbed soil near PSL. Possibly increasing in the UK due to climate change.

**Plantago coronopus* L. - Buck's-horn Plantain.
Grows on the edge of the sports field near Soil Sciences and in the partially bare grassland edge near Chemistry. May have been overlooked in the past or recently arrived with the salting of roads.

Plantago lanceolata L. - Ribwort Plantain.
Grows in the grassland and lawns. It has also been found in cracks in paving/tarmac near PSL and in disturbed soil.

Plantago major L. - Greater Plantain.
Grows in the grassland and lawns. It has also been found in cracks in paving/tarmac near PSL and in disturbed soil.

‡*Plantago media* L. - Hoary Plantain.

Veronica agrestis L. - Green Field-speedwell.
Found on some disturbed soil near Early Gate.

Veronica arvensis L. - Wall Speedwell.
Found on some disturbed soil near PSL.

Veronica beccabunga L. - Brooklime.
By the edge of the lower lake.

Veronica chamaedrys L. - Germander Speedwell.
Grows in lawns and beside the lake.

Veronica filiformis Sm. - Slender Speedwell.
Seen by Ronald W. Rutherford.

Veronica hederifolia L. - Ivy-leaved Speedwell.
Found in some disturbed ground near PSL.

Veronica Montana L. - Wood Speedwell.
Seen by Michael Keith-Lucas.

Veronica persica Poir. - Common Field-speedwell.
Grows in disturbed in which it has been found near PSL and near Earley Gate, and in the bare soil beside Foxhill drive.

Veronica polita Fr. - Grey Field-speedwell.
Seen by Michael Keith-Lucas.

Veronica serpyllifolia L. - Thyme-leaved Speedwell.
Found in the Wilderness.

Poaceae

Agrostis capillaris L. - Common Bent.
Has been identified in the eastern grasslands, may well grow in other grassy areas.

Agrostis canina L. - Velvet Bent.
Seen by Michael Keith-Lucas.

Agrostis stolonifera L. - Creeping Bent.
Grows in the grasslands and has been found beside the lake.

Alopecurus geniculatus L. - Marsh Foxtail.
Seen by Michael Keith-Lucas.

‡*Alopecurus myosuroides* Huds. - Black-grass.
Was previously seen in the wilderness.

Alopecurus pratensis L. - Meadow Foxtail.
Grows in the grassland.

Anisantha sterilis (L.) Nevski - Barren Brome.
Found in a shady bed by PSL and in the Wilderness.

Anthoxanthum odoratum L. - Sweet Vernal-grass.
Grows in grassland.

Arrhenatherum elatius (L.)P.Beauv. ex J. & C .Presl - False Oat-grass.
Very common in the grasslands and will grow elsewhere.

**Avena sativa* L. - Oat.
Found on the dam that crosses the lake. Possibly escaped from use in experiments.

Pseudosasa japonica Makino ex Nakai - Arrow Bamboo.
Found by the lake on the west side amongst trees by the path.

Brachypodium sylvaticum (Hudson) P. Beauv. - False Brome.
Found in Wilderness and in grassland around trees near the west bank of the lake.

Bromus hordeaceus L. - Soft-brome.

Found in disturbed ground near PSL.

‡*Bromus racemosus* L. - Smooth Brome.

Was previously seen in meadows and on verges.

Bromus ramosus Huds. - Hairy-brome.

Seen by Michael Keith-Lucas.

**Calamagrostis epigejos* (L.) Roth. - Wood Small-reed.

Found in the south west of the grassland. It was previously over looked.

Cynosurus cristatus L. - Crested Dog's-tail.

Seen by Ronald W. Rutherford.

Dactylis glomerata L. - Cock's- foot.

Very common in grassland and elsewhere.

Deschampsia cespitosa (L.) P. Beauv. - Tufted Hair-grass.

Grows in grassland and has been found by the lake.

Deschampsia flexuosa (L.) Trin. - Wavy Hair-grass.

Seen by Michael Keith-Lucas.

**Elymus caninus* (L.) L. - Bearded Couch

Found in the wilderness. It was previously over looked.

Elytrigia repens (L.) Desv. Ex Nevski - Common Couch.

Grows in grassland.

Festuca arundinacea Schreber - Tall Fescue.

Found in western the grassland near the lake.

Festuca gigantea (L.) Vill - Giant Fescue.

Found beside the lake.

‡*Festuca heterophylla* Lam. - Various-leaved Fescue.

Was previously seen in grassland and considered rare.

Festuca ovina L. - Sheep's-fescue.

Seen by Michael Keith-Lucas.

Festuca pratensis Huds. - Meadow Fescue.

Seen by Michael Keith-Lucas.

Festuca rubra L. - Red Fescue.

Found in disturbed ground near PSL.

‡*Glyceria fluitans* (L.) R. Br. Floating - Sweet-grass.

Glyceria maxima (Hartman) Holmberg - Reed Sweet-grass.

Seen by Ronald W. Rutherford.

Glyceria notata Chevall. - Plicate Sweet-grass.
Seen by Michael Keith-Lucas.

Helictotrichon pubescens (Hudson) Dumort. - Downy Oat-grass.
Found in the eastern grassland on the slope.

Holcus lanatus L. - Yorkshire-fog.
Grows in grassland.

Holcus mollis L. - Creeping Soft-grass.
Presence confirmed by Jonathan Mitchley.

**Hordeum distichon* L. - Two-rowed Barley.
Found in disturbed soil near PSL. It is a cultivation escape.

Hordeum murinum L. - Wall Barley.
Has been found in lawns, in a plant bed behind PSL and in disturbed ground near PSL.

**Hordeum secalinum* Schreb. - Meadow Barley.
Was seen on the south west edge of the grassland. It was previously over looked.

Lolium multiflorum Lam. - Italian Rye-grass.
Seen by Ronald W. Rutherford, though it is equally likely to be *Lolium x boucheanum*.

Lolium perenne L. - Perennial Rye-grass.
Grows in grassland, by the lake and in lawns.

Melica uniflora Retz. - Wood Melick.
Grows amongst trees. It has been found by the lake and by Foxhill drive.

‡*Milium effusum* L. - Wood Millet.

Phalaris canariensis L. - Canary-grass.
Seen by Michael Keith-Lucas.

Phleum pratense L. - Timothy.
Grows in grassland.

Phleum bertolonii DC. - Smaller Cat's-tail.
Grows in grassland and has also been found in disturbed ground near PSL.

Poa annua L. - Annual Meadow-grass.
Found in cracks in tarmac/paving, and in lawns.

†*Poa chaixii* Vill. - Broad-leaved Meadow-grass.
Its index card states that it was not seen since 1974.

‡*Poa humulis* Ehrh. ex Hoffm. - Spreading Meadow-grass.
Was previously seen near the lake.

Poa nemoralis L. - Wood Meadow-grass.
Seen by Michael Keith-Lucas.

Poa pratensis L. - Smooth Meadow-grass.
Grows in grassland.

Poa trivialis L. - Rough Meadow-grass.
Grows in grassland.

**Polypogon monspeliensis* (L.) Desf. - Annual Beard-grass.
Grows in disturbed soil in which it has been found near PSL and in the north east edge of the grasslands where the soil had been disturbed. It is an introduced alien.

Phalaris arundinacea L. - Reed Canary-grass.
Grows beside the lake and in grassland near the lake.

Phragmites australis (Cav.) Trin. Ex Steud - Common Reed.
Grows in the shallow edges of the lower lake.

‡*Trisetum flavescens* (L.) P. Beauv. - Yellow Oat-grass.
Was previously seen in meadows and on verges.

‡*Vulpia bromoides* (L.) Gray - Squirreltail Fescue.
Was previously seen in meadows, on verges and in waste places.

Polemoniaceae

†*Polemonium caeruleum* L. - Jacob's-Ladder.
Its index card says it has not been seen since 1978 and was originally planted according to Stephen L. Jury.

Polygonaceae

‡*Fallopia convolvulus* (L.) Á. Löve - Black-bindweed.
Was previously seen in disturbed soil in the wilderness, in borders and on bare soil.

Fallopia japonica (Houtt.) Ronse Decr. - Japanese Knotweed.
Grows in the Wilderness particularly on the banks of the lake not far from the lake enters the grassland.

Persicaria amphibia (L.) Gray - Amphibious Bistort.
Grows on the lake bank by the grassland and also in parts of low lying grassland near the lake.

Persicaria hydropiper (L.) Spach - Water-pepper.
Seen by Michael Keith-Lucas

‡*Persicaria lapathifolia* (L.) Delarbre - Pale Persicaria.
Was previously seen on a soil heap when the maintenance department was built.

Persicaria maculosa Gray - Redshank.

Found in a largely bare and probably formally waterlogged patch of soil in the south western grassland and will grow in bare soil elsewhere .

Polygonum arenastrum Boreau - Equal-leaved Knotgrass.

Grows in lawns, cracks in tarmac/paving and disturbed soil and as a weed in soil which is left bare.

Polygonum aviculare L. - Knotgrass.

Has been identified growing on a small patch of bare soil by the north bank of the lake.

Rumex acetosa L. - Common Sorrel.

Very common throughout much of the grassland, it also occurs in lawns and has been found in a plant bed behind PSL and on a soil heap next to Foxhill house.

Rumex acetosella L. - Sheep's Sorrel.

Grows in some places at the edge of grassland. It has been found at the edge between the gravel car park behind AMS and the grassland and in the east in a patch by the path to Earley Gate.

Rumex conglomeratus Murray - Clustered Dock.

Grows beside the lower lake and in the west of the south eastern grassland where the ground is lower and wetter.

Rumex crispus L. - Curled dock.

Grows in the grasslands and has been found in the gravel car park behind AMS.

‡*Rumex x pratensis* Mert. & W.D.J. Koch

Was previously seen on waysides as a ruderal weed.

Rumex obtusifolius L. - Broad-leaved Dock

Grows in the grasslands, in the gravel car park behind AMS and around the lower lake.

Rumex sanguineus L. - Wood Dock

Grows in the Wilderness, the grassland and around the lake.

Potamogetonaceae.

†*Potamogeton crispus* L. - Curled Pond Weed.

Used to occur in the lower lake. It may be gone due to a change in its habitat possibly a change in PH caused by pollution.

†*Potamogeton natans* L. - Broad Leaved Pond Weed.

Used to occur in the lower lake. It may be gone due to a change in its habitat possibly a change in PH caused by pollution.

†*Potamogeton pectinatus* L. - Fennel Pond Weed.

Used to occur in the middle section of the lake. It may be gone due to a change in its habitat possibly a change in PH caused by pollution.

Primulaceae.

Anagallis arvensis L. - Scarlet Pimpernel.

Found in cracks in tarmac /paving near PSL and in disturbed ground near PSL.

**Cyclamen hederifolium* Aiton - Sowbread.

Found growing next to Foxhill, in the woods between Foxhill house and the lake and in the wilderness in large patch at the entrance near PSL and a few growing further along. It is a garden escape.

Lysimachia nummularia L. - Creeping-Jenny.

Seen by Michael Keith-Lucas.

Lysimachia punctata L. - Dotted Loosestrife.

Seen by Michael Keith-Lucas.

‡*Lysimachia vulgaris* L. - Yellow Loosestrife.

Was previously seen near the lake.

†*Primula x polythana* Mill.

Its card says it hasn't been seen since 1972.

Primula veris L. - Cowslip.

Grows in the southern most area of the eastern grassland near agriculture.

Primula vulgaris Hudson - Primrose.

Grows in the Wilderness.

Ranunculaceae

†*Aconitum napellus* L. - Monks-hood.

Used to grow by the lake. Stephen L. Jury says it may have been a remnant from a planting and has now died out

Anemone nemorosa L. - Wood Anemone.

Seen by Ronald W. Rutherford.

Caltha palustris L. - Marsh-marigold.

Seen by Ronald W. Rutherford.

Clematis vitalba L. - Travellers Joy.

Seen by Ronald W. Rutherford.

†*Myosurus minimus* L. - Mousetail.

Used to grow in disturbed soil as well as in gravel outside PSL. Its extinction is thought to be due to loss of habitat as a result of mulching outside PSL.

Ranunculus acris L. - Meadow Buttercup.

Grows in the grassland.

Ranunculus auricomus L. - Goldilocks Buttercup.

Seen by Ronald W. Rutherford.

Ranunculus bulbosus L. - Bulbous Buttercup.

Grows in the grassland. It is known to be more common on the raised grassland east of the lake where it is drier.

Ranunculus ficaria L. subsp. *Ficaria* - Lesser celandine.

Seen by Ronald W. Rutherford in the Wilderness.

Ranunculus repens L. - Creeping Buttercup.

Very common. Grows in the grassland, in lawns, by paths and lake banks in the Wilderness, in disturbed soil and in cracks in tarmac/paving.

†*Ranunculus Scleratus* L. - Celery-leaved Buttercup.

Used to grow by the lake as well as on a building site. Thought to be gone as a result of gardening by the lake and possibly fewer building sites and similar habitats.

Resedaceae

Reseda luteola L. - Weld.

Grows in disturbed soil.

Rosaceae

Agrimonia eupatoria L. - Agrimony.

Grows in the grassland particularly in the north western grassland where the young trees have been planted and beside the lake in the south west. Some plants grow in the Wilderness near the western grassland.

Aphanes arvensis L. - Parsley-piert.

Seen by Michael Keith-Lucas.

Crataegus monogyna Jacq. - Hawthorn.

Grows amongst other trees including in woodland, and under lone trees in the grasslands. Some trees may have been planted but certainly not all.

Filipendula ulmaria (L.) Maxim. - Meadowsweet.

It grows in one dense patch in the middle section of the western grassland next to the student union building. It also grows less densely by the east bank of the lower lake.

Fragaria vesca L. - Wild Strawberry.

Found by the path that runs between the western part of the Wilderness, where the trees are older, and the eastern part where the trees are younger and there is more light.

Geum urbanum L. - Wood Avens.

Very common throughout the campus. It will grow in many habitats especially when there is shade including woodland, lawns, cracks, wood chip, disturbed soil.

**Potentilla anglica* Laichard. - Trailing Tormentil.

Grows in the north west of the grasslands and in the gravel car park behind AMS. Was previously overlooked and perhaps confused with *P. Reptans*.

Potentilla anserina L. - Silverweed.
Seen by Ronald W. Rutherford.

Potentilla erecta (L.) Raeusch. - Tormentil.
Seen by Ronald W. Rutherford.

Potentilla reptans L. - Creeping Cinquefoil.
Found mainly in the grasslands and in lawns but also in cracks in paving/tarmac near PSL, disturbed soil near PSL and by the bank of the lake.

Potentilla sterilis (L.) Garcke - Barren Strawberry.
Found by the path that runs between the western part of the Wilderness, where the trees are older, and the eastern part where the trees are younger and there is more light. One plant was also found on the edge of the lawn opposite the Pepper Lane entrance.

Prunus avium (L.) L. - Wild Cherry.
Grows in the Wilderness.

**Prunus cerasifera* Ernh. - Cherry Plum.
Has been found in the Wilderness in and as a very young sapling near PSL disturbed soil near PSL. It was previously overlooked.

**Prunus cerasifera* Ernh. var. *pissardii*. - Purple Cherry Plum.
Found in disturbed soil near PSL. It has spread from cultivation.

‡*Prunus domestica* L. - Wild Plum.
Was previously seen amongst hedges and scrub.

Prunus laurocerasus L. - Cherry Laurel.
Grows in the Wilderness and some other wooded areas.

Prunus lusitanica L. - Portugal Laurel.
Grows in the Wilderness.

Rosa canina group. - Dog Rose.
Found climbing small trees in the large clearing in the Wilderness.

**Rosa pimpinellifolia* L. - Burnet Rose.
Grows by the wooded area near the southern bank of the lower lake. Possibly spread from cultivation.

‡*Rosa virginiana* Herrm. - Virginian Rose.
Its index card says that it may have been planted.

Rubus caesius L. - Dewberry.
Found in the Wilderness.

Rubus fruticosus L. agg. - Bramble.

Very common, it generally grows where the ground is not cultivated or mown although it was found in the south west area of grassland prior to mowing. It is often found under trees and in woodland. Other areas it grows include the woodchip by food biosciences and the gravel car park behind AMS.

Rubus idaeus L. - Raspberry.

Found in the shade either side of the lake and in the Wilderness.

Rubus ulmifolius Schott - Blackberry.

Common according to Stephen L. Jury.

Sanguisorba minor subsp. *minor* Scop. - Salad Burnet.

Seen by Michael Keith-Lucas.

Sanguisorba officianalis L. - Great Burnet.

Grows in a patch in the grassland near the middle lake.

Sorbus aria (L.) Crantz - Common Whitebeam.

Seen by Ronald W. Rutherford. Not native to Whiteknights and probably planted.

Sorbus aucuparia L. - Rowan, Mountain Ash.

Grows in the Wilderness.

**Sorbus intermedia*. - Swedish Whitebeam.

Has been found in the Wilderness, probably not far from the Harris Graden. It is possible that it was planted. It may have been overlooked during the last survey but could have arrived slightly after; if the tree(s) could be rechecked this may become clearer.

Sorbus torminalis (L.) Crantz - Wild Service-tree

Seeded or suckered from plantings by the west bank of the lower lake.

Rubiaceae

†*Cruciata laevipes* Opiz - Crosswort.

Used to grow in the wilderness. The reason for its extinction is unknown though it only grew on one site.

Galium aparine L. - Cleavers.

Common, locations include the Wilderness, grassland and also disturbed ground near PSL.

**Galium mollugo* L. - Hedge Bedstraw.

Rare. Grows in just one small area in the western grassland near the bank of the lake. Possibly overlooked before.

†*Galium palustre* L. - Common Marsh-bedstraw.

Used to grow in the grassland and has most likely gone because the grassland has drained and dried to some extent since it was recorded.

Galium verum L. - Lady's Bedstraw.

Grows in the eastern grassland.

†*Sherardia arvensis* L. - Field Madder.

Used to occur in the lawn near PSL and near agriculture. It may be gone due to a loss of habitat as a result of gardening activity such as mulching.

Salicaceae

Populus x canescens (Aiton) Sm. - Grey Poplar.

Grows beside the lake. A number of old trees near Friends Bridge have also produced suckers in the grassland nearby. Carol hora had noted that they appear in a pre-Blandord etching of the park which can be seen in Soames's 1987 biography of the marquis.

Populus tremula L. - Aspen.

Grows by the lake and has been found in the Wilderness.

Salix alba L. - White Willow.

Seen by Ronald W. Rutherford by the lake.

Salix caprea L. - Goat Willow.

Found in the gravel car park behind AMS next to the north western grassland and in the north western grassland. According to Ronald W. Rutherford it will grow anywhere.

**Salix cinerea* L. subsp. *cinerea*. - Common Willow.

Grows in the gravel car park behind AMS. It was previously overlooked or its identity was not confirmed.

Salix cinerea L. subsp. *oleifolia* Macreight - Rusty Willow.

A sapling was found amongst the trees dividing the north western area of the grassland.

Salix fragilis L. - Crack Willow.

Seen by Ronald W. Rutherford.

**Salix x multinervis* Döll.

Grows in the south east grassland. It was previously overlooked or its identity was not confirmed.

Salix purpurea L. - Purple Willow.

Seen by Ronald W. Rutherford.

**Salix x sepulcralis* Simonk. - Weeping Willow.

Grows beside the lake. It was previously overlooked or planted subsequently.

Salix viminalis L. - Osier.

Seen by Ronald W. Rutherford.

Sapindaceae

Acer campestre L. - Field Maple.

In the Wilderness and other wooded areas. Has also been found seeded in a plant bed near the Wilderness behind PSL.

**Acer platanoides* L. - Norway Maple.

Found growing in the Wilderness and as a seedling/ sapling on disturbed soil near PSL. Previously overlooked, it has been planted extensively and is now spreading.

Acer psuedoplatanus L. - Sycamore.

Grows in the Wilderness; planted trees have produced seedlings/young saplings in various places around the campus including in cracks in the pavement/tarmac, the grassland and beside the lower lake.

Aesculus hippocastanum L. - Horse-chestnut.

Naturalised in the Wilderness and possibly elsewhere; saplings have been found in a woodchip bed near PSL and amongst the trees by Foxhill drive.

Saxifragaceae

**Tellima grandiflora* (Pursh) Douglas ex Lindl. - Fingercups.

Found growing near edge of the Wilderness near the western grassland lake by a ditch amongst a patch of *Agrimonia*. A garden escape.

Scrophulariaceae

**Buddleja davidii* Franch. - Butterfly Bush.

Grows on the edge of the gravel car park behind AMS and has also been found in cracks in tarmac/paving near PSL. Invasive and maybe present due to lack of maintenance.

Verbascum nigrum L. - Dark Mullein.

Found in the western grassland near the mid section of the lake.

‡*Verbascum phlomoides* L. - Orange Mullein.

Was previously seen on a soil heap.

Verbascum thapsus L. - Great Mullein.

It has been found in disturbed soil near the Earley Gate entrance.

Scrophularia auriculata L. - Water figwort.

Found on the banks of the lake.

Scrophularia nodosa L. - Common Figwort.

Grows in the Wilderness and has also been found in a shaded bed behind the PSL and in bare soil by the electricity substation near the lake.

†*Scrophularia vernalis* L. - Yellow Figwort.

Was previously seen on a bonfire site. Thought to have been gardened out.

Solanaceae

†*Atropa belladonna* L. - Deadly Nightshade

Planted in the Harris garden (Stephen L. Jury) but Extinct elsewhere. It used to grow in the wilderness near the head of the lake and could have been originally a Harris Garden escape. It may have cleared by grounds department.

†*Datura stramonium* L. - Thorn-apple

Used to grow in disturbed ground near Chemistry and PSL and sometimes elsewhere as well as in plant beds near Chemistry. It was only casual.

†*Lycopersicon esculentum* Mill - Tomato.

Previously only casual.

Solanum dulcamara L. - Bittersweet.

Grows mostly in shaded areas, it has been found in the shade around and at the northern edge of the lake, under the trees dividing the north western area of the grassland and in the Wilderness.

Solanum nigrum L. - Black Nightshade.

A weed on bare soil.

†*Solanum pseudocapsicum* L. - Jerusalem Cherry.

Used to grow in waste ground but was only casual.

Solanum vernei Bitter & Wittm. - Purple Potato.

Found in the gravel car park behind the AMS building, under a group of birches near the northern edge of the eastern grasslands, under certain hedges near the west side of Windsor hall. It grows in plant beds in front of the library, on the north and south sides of Physics, and by the east entrance to the student union building .

Thymelaeaceae

†*Daphne laureola* L. - Spurge-laurel.

Used to grow by Foxhill drive.

Typhaceae

Sparganium erectum L. - Branched Bur-reed.

Seen by Michael Keith-Lucas.

Typha latifolia L. - Bulrush.

Grows at the edges of the lower lake.

Ulmaceae

Ulmus glabra. Hudson - Wych Elm.

Found growing from epicormic shoots on the north eastern bank of the lake, in the wooded area by Foxhill drive and in the Wilderness where it can grow into a small tree.

**Ulmus minor* Mill.

Found amongst the trees by Foxhill Drive. Was previously overlooked.

Ulmus procera Salisb - English Elm.

Found growing from epicormic shoots or suckers by the western bank of the lake and in the wooded area by Foxhill drive.

Urticaceae

Urtica dioica L. - Common Nettle.

Very common often grows in shade but also elsewhere. Places that it grows include cracks in tarmac/paving, on the lake banks, in disturbed ground, under trees in the grassland, by lake and path sides in the Wilderness and the in gravel car park behind the AMS building.

Urtica urens L. - Small Nettle.

Found growing in bare disturbed or possibly dumped soil on the north side of HUMSS.

Verbenaceae

**Verbena bonariensis* L. - Argentinian Vervain.

Found growing in cracks in tarmac /paving by PSL. Has escaped cultivation.

Violaceae

‡*Viola arvensis* Murray - Field Pansy.

Was previously seen on soil heaps.

Viola odorata L. - Sweet Violet.

Found behind Bridges Hall under a tree.

**Viola reichenbachiana* Jord. Ex Boreau - Early Dog-violet.

Found in bare shaded soil by Foxhill car park and also behind Foxhill House. Overlooked previously as it flowers early.

Viola riviniana Reichenb. - Common Dog-violet.

Found next to the Pepper Lane entrance in the grass, shaded by trees.

‡*Viola tricolor* L. - Wild Pansy.

Was previously seen on a soil heap near the maintenance department and in the Harris Garden.

‡*Viola x wittrockiana* Gamms ex Kappert - Garden Pansy.

Vitacea

**Parthenocissus quinquefolia*. (L.) Planch. - Virginia-creeper.

Found growing up trees and along the ground in the Wilderness near the red currants by path that runs between Agriculture and the path next to the Harris Garden. Has escaped cultivation and is spreading.

Zannichelliaceae

†*Zannichellia palustris* L. - Horned pondweed.

Used to grow in the lake. It may be gone due to a change in its habitat possibly a change in PH caused by pollution.

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<i>Mahonia</i>	21	<i>Petasites</i>	19	<i>Rubus</i>	46	<i>Taxus</i>	13
<i>Malva</i>	34	<i>Phalaris</i>	41, 42	<i>Rumex</i>	43	<i>Tellima</i>	49
<i>Matricaria</i>	19	<i>Phyllitis</i>	12	<i>Ruscus</i>	17	<i>Thlaspi</i>	24
<i>Meconopsis</i>	37	<i>Phleum</i>	41	<i>Sagina</i>	25	<i>Tilia</i>	35
<i>Medicago</i>	29	<i>Phragmites</i>	42	<i>Salix</i>	48	<i>Torilis</i>	15
<i>Melica</i>	41	<i>Picris</i>	19	<i>Salvia</i>	34	<i>Tragopogon</i>	21
<i>Melilotus</i>	29	<i>Pilosella</i>	19	<i>Sambucus</i>	13	<i>Trifolium</i>	29
<i>Melissa</i>	34	<i>Pimpinella</i>	15	<i>Sanguisorba</i>	47	<i>Tripleurospermum</i>	21
<i>Mentha</i>	34	<i>Pinus</i>	13	<i>Scleranthus</i>	25	<i>Trisetum</i>	42
<i>Mercurialis</i>	28	<i>Plantago</i>	38	<i>Scophularia</i>	49	<i>Tussilago</i>	21
<i>Milium</i>	41	<i>Poa</i>	41	<i>Scutellaria</i>	34	<i>Typha</i>	50
<i>Mimulus</i>	37	<i>Polemonium</i>	42	<i>Sedum</i>	27	<i>Ulex</i>	30
<i>Misopates</i>	38	<i>Polygonatum</i>	17	<i>Senecio</i>	20	<i>Ulmus</i>	50
<i>Moehringia</i>	25	<i>Polygonum</i>	43	<i>Sherardia</i>	48	<i>Urtica</i>	51
<i>Montia</i>	35	<i>Polypogon</i>	42	<i>Silaum</i>	15	<i>Verbascum</i>	49
<i>Muscari</i>	16	<i>Polystichum</i>	12	<i>Silene</i>	25	<i>Verbena</i>	51
<i>Myosotis</i>	22	<i>Populus</i>	48	<i>Silybum</i>	20	<i>Veronica</i>	38
<i>Myosurus</i>	44	<i>Potamogeton</i>	43	<i>Sinapsis</i>	23	<i>Viburnum</i>	13
<i>Nuphar</i>	35	<i>Potentilla</i>	45	<i>Sisymbrium</i>	24	<i>Vicia</i>	30
<i>Nymphaea</i>	35	<i>Primula</i>	44	<i>Solanum</i>	50	<i>Vinca</i>	16
<i>Nymphoides</i>	35	<i>Prunella</i>	34	<i>Solidago</i>	20	<i>Viola</i>	51
<i>Odontites</i>	36	<i>Prunus</i>	46	<i>Sonchus</i>	20	<i>Vulpia</i>	42
<i>Oenanthe</i>	15	<i>Pseudosasa</i>	39	<i>Sorbus</i>	47	<i>Zannichellia</i>	52
<i>Oenothera</i>	36	<i>Pteridium</i>	12	<i>Sparganium</i>	50		
<i>Ophioglossum</i>	13	<i>Pulicaria</i>	20	<i>Spergula</i>	26		
<i>Ophrys</i>	36	<i>Quercus</i>	30	<i>Spergularia</i>	26		

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