

**Biodiversity Duty:
Vascular Plant Survey of Collections Centre, Nantgarw**



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Introduction

From 1 October 2006, all public authorities in England and Wales have a duty to have regard to the conservation of biodiversity in exercising their functions (Section 40 of the Natural Environment and Rural Communities Act 2006). As part of the Museum's response to this legislation, biodiversity audits are being carried out at all of its sites. In this report, a vascular plant list is presented from a survey of the grounds of the Collections Centre, Nantgarw in spring and summer 2009.

Methods

Surveys were carried out on 6 April, 5 May and 7 September 2009.

The area surveyed is shown in Figure 1. Surveys were carried out by walking around the grounds. A few specimens of taxa difficult to identify were collected for later determination. Obviously planted taxa such as the Ginkgo trees were usually not recorded, unless they were likely sources of seedlings and saplings. Nomenclature follows C.A. Stace (1997), *New Flora of the British Isles*, Cambridge University Press. *Taraxacum* vouchers were determined by A. J. Richards.

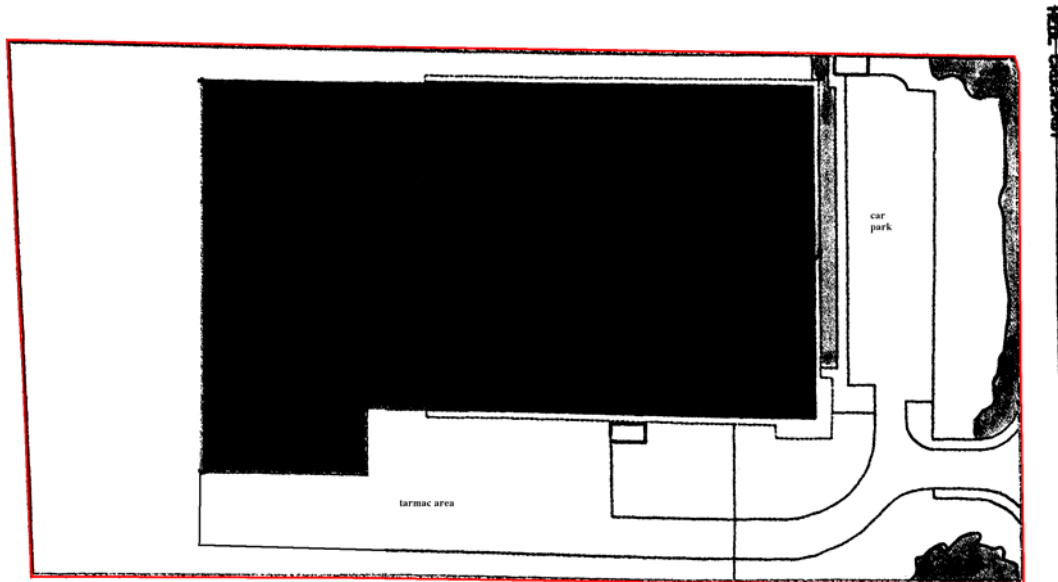


Figure 1. Boundary of area surveyed in red.

Results

The species recorded are listed in Table 1. The species list for the grasslands are likely to be incomplete due to regular mowing which makes vegetative grass identification difficult.

TABLE 1. VASCULAR PLANTS RECORDED AT NANTGARW.
Alien species not native in the British Isles are marked with an asterisk *.

Latin name	Vernacular Name	Notes
<i>Acer platanoides</i> *	Norway Maple	Planted tree
<i>Acer pseudoplatanus</i> *	Sycamore	Rare colonist, west end
<i>Achillea millefolium</i>	Yarrow	Frequent in mown grassland
<i>Agrostis canina</i>	Velvet Bent	Rare in damp patch
<i>Agrostis gigantea</i>	Black Bent	Frequent in grassland on north side
<i>Agrostis stolonifera</i>	Creeping Bent	Frequent in grazed or damp grassland
<i>Ajuga reptans</i>	Bugle	Frequent in mown grassland
<i>Alchemilla mollis</i>	Lady's Mantle	Rare in grass by reception
<i>Alnus viridis</i> *	Green Alder	Planted trees and saplings
<i>Anagallis arvensis</i>	Scarlet Pimpernel	Waste ground at rear
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	Occasional in grassland
<i>Arabidopsis thaliana</i>	Thale Cress	Weed in flower bed at front
<i>Arrhenatherum elatius</i>	False Oat-grass	Locally abundant on north side
<i>Athyrium filix-femina</i>	Lady Fern	Rare in grassland on north side
<i>Bellis perennis</i>	Daisy	Rare in grassland
<i>Betula pendula</i>	Pendulous Birch	Rare colonist, north side and planted at front
<i>Betula pubescens</i>	Downy Birch	Seedlings Frequent on south side
<i>Buddleia davidii</i> *	Butterfly Bush	Abundant along fence and as weed on storage areas
<i>Calystegia silvatica</i>	Bindweed	Fence along north side
<i>Cardamine flexuosa</i>	Wavy Bittercress	Rare in grassland
<i>Cardamine hirsuta</i>	Hairy Bittercress	Rare in open ground, occasional in car park
<i>Cardamine pratensis</i>	Cuckoo Flower	Rare in damp grassland
<i>Carex divulsa</i> subsp. <i>divulsa</i>	Grey Sedge	Occasional on north side
<i>Carex hirta</i>	Hairy Sedge	Damp ground on north side
<i>Carex otrubae</i>	False Fox-sedge	Rare, damp grassland
<i>Carex ovalis</i>	Brown Sedge	Mown grassland
<i>Carex panicea</i>	Carnation Sedge	Rare on north side, occasional in mown grass
<i>Carex pendula</i>	Pendulous Sedge	Locally abundant on north side
<i>Carex remota</i>	Remote Sedge	1 clump, waste ground at rear
<i>Carex sylvatica</i>	Wood Sedge	Rare, one clump
<i>Centaurea nigra</i>	Knapweed	Grassy southern edge
<i>Centaureum erythraea</i>	Common Centaury	Weed in flower bed at front and on waste ground at rear
<i>Cerastium fontanum</i>	Mouse-ear	Rare in grassland
<i>Cerastium glomeratum</i>	Sticky Mouse-ear	Weed in flower bed at front
<i>Chamerion angustifolium</i>	Rosebay Willowherb	Rare, amongst artifacts
<i>Cirsium arvense</i>	Creeping Thistle	Rare in grassland
<i>Cirsium palustre</i>	Marsh Thistle	Occasional in damp area
<i>Cirsium vulgare</i>	Spear Thistle	Frequent

<i>Clematis vitalba</i>	Old Man's-beard	Wooden fence at north end of car park
<i>Conyza canadensis</i> *	Canadian Fleabane	Frequent on waste ground at rear
<i>Cornus sericea</i> *	Red-osier Dogwood	Rare, saplings at rear in NW corner
<i>Corylus avellana</i>	Hazel	Rare, sapling on south side
<i>Cotoneaster conspicuus</i> *	Tibetan Cotoneaster	Bird sown along northern fence from shrubbery at front
<i>Cotoneaster salicifolius</i> cf. <i>repens</i> *	Willow-leaved Cotoneaster	Rare sapling
<i>Crataegus monogyna</i>	Hawthorn	By fence on west side, and small group planted on south side
<i>Crepis capillaris</i>	Smooth Hawk's-beard	Rare, sapling in grass on north side
<i>Crepis vesicaria</i>	Beaked Hawk's-bit	Rare in grassland
<i>Cymbalaria muralis</i> *	Ivy-leaved toadflax	Rare, in old truck and by wall
<i>Cynosurus cristatus</i>	Crested Dog's-tail	Waste ground at rear
<i>Dactylis glomerata</i>	Cock's-foot grass	Occasional in rank grass
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	Rare in grassland
<i>Digitalis purpurea</i>	Foxglove	Rare on north side
<i>Dryopteris filix-mas</i>	Male Fern	Grassland on north side, 2 plants
<i>Elytrigia repens</i>	Couch Grass	Locally frequent
<i>Epilobium ciliatum</i> *	American Willowherb	Locally frequent
<i>Epilobium hirsutum</i>	Great Willowherb	Frequent on north side and on waste ground
<i>Epilobium obscurum</i>	Short-fruited Willowherb	Damp grassland on north side
<i>Epilobium parviflorum</i>	Hairy Willowherb	Rare
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	Rare by building
<i>Equisetum arvense</i>	Field Horsetail	Rare on damp ground on north side
<i>Equisetum telmateia</i>	Greater Horsetail	Rare in grassland at rear by fence
<i>Erigeron acer</i>	Blue Fleabane	Rare on open ground
<i>Eupatorium cannabinum</i>	Hemp Agrimony	Rare on waste ground
<i>Euphorbia peplus</i>	Petty Spurge	Weed in shrubbery
<i>Festuca rubra</i>	Red Fescue	Occasional in grassland
<i>Fraxinus excelsior</i>	Ash	Rare, saplings behind artifacts
<i>Galium palustre</i>	Marsh Bedstraw	Damp grassland, north side
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	Rare in grassland
<i>Geranium robertianum</i>	Herb Robert	Rare, north side
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	Rare in damp hollow at back
<i>Hedera hibernica</i>	Irish Ivy	Rare in SW corner, and
<i>Hieracium</i> sp.	Hawkweed	Rare on shrubby edge in spring, not seen in autumn
<i>Hirschfeldia incana</i> *	Hoary Mustard	1 plant, Rare, open ground
<i>Holcus lanatus</i>	Yorkshire Fog	Frequent in grassland
<i>Hypericum</i> cf. <i>androsaemum</i>	Tutsan	1 young shoot in grassland at rear
<i>Hypericum humifusum</i>	Trailing St John's-wort	Eastern edge of front lawn
<i>Hypericum maculatum</i>	Imperforate St John's-wort	Rare on waste ground at rear
<i>Hypericum perforatum</i>	Perforate-leaved St John's-wort	Frequent in rabbit-grazed areas
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	Occasional on damp ground at rear
<i>Hypochaeris radicata</i>	Cat's-ear	Occasional in grassland
<i>Inula conyza</i>	Ploughman's Spikenard	Rare on limestone chippings
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	Damp grass on north side

<i>Juncus conglomeratus</i>	Clustered Rush	Rare by north face
<i>Juncus effusus</i>	Soft Rush	Occasional, north side, and in shrubbery
<i>Juncus inflexus</i>	Hard Rush	Locally abundant
<i>Juncus tenuis</i> *	Slender Rush	Rare in damp hollow
<i>Lapsana communis</i>	Nipplewort	Rare, by car park
<i>Leontodon saxatilis</i>	Lesser Hawkbit	Waste ground at rear
<i>Leucanthemum vulgare</i>	Ox-eye Daisy	Frequent in mown grassland
<i>Lolium perenne</i>	Rye Grass	Waste ground at rear
<i>Lotus corniculatus</i>	Bird's-foot-trefoil	Rare in grassland
<i>Lotus glaber</i>	Narrow-leaved Bird's-foot trefoil	One clump on waste ground
<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil	Rare in damp grassland
<i>Luzula campestris</i>	Field Woodrush	Abundant in mown grassland
<i>Lychnis flos-cuculi</i>	Ragged Robin	Rare in grassland at rear by fence
<i>Medicago lupulina</i>	Black Medick	Waste ground at rear
<i>Odontites verna</i>	Red Bartsia	Rare in grassland at rear
<i>Oenothera</i> sp. *	Evening Primrose	Weed in flower bed at front, removed before it could be identified
<i>Pastinaca sativa</i>	Wild Parsnip	North side
<i>Persicaria maculosa</i>	Redshank	Rare on damp ground at rear
<i>Phleum pretense</i>	Timothy	Rare by north face
<i>Picris echioides</i>	Bristly Ox-tongue	Grassland near picnic tables
<i>Plantago lanceolata</i>	Ribwort Plantain	Frequent
<i>Plantago major</i>	Greater Plantain	Grassland at rear
<i>Poa annua</i>	Annual Meadow-grass	Occasional on open ground
<i>Poa compressa</i>	Flattened Meadow-grass	Waste ground at rear on south side
<i>Polypodium interjectum</i>	Intermediate Polypody	Rare on object
<i>Populus alba</i> *	White Poplar	Planted tree spreading by suckers
<i>Potentilla anserina</i>	Silverweed	Rare in damp grassland
<i>Potentilla reptans</i>	Creeping cinquefoil	Occasional
<i>Potentilla sterilis</i>	Barren Strawberry	Rare in grassland
<i>Prunella vulgaris</i>	Self-heal	Occasional in grassland
<i>Pulicaria dysenterica</i>	Fleabane	Damp grassland near north-west corner
<i>Quercus robur</i>	Oak	1m sapling by fence in SW corner, 1 on north side
<i>Ranunculus acris</i>	Meadow Buttercup	Occasional on north side
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	Grassland at front, waste ground
<i>Ranunculus ficaria</i>	Lesser Celandine	Bramble patch in SW corner
<i>Ranunculus repens</i>	Creeping Buttercup	Frequent, especially in mown grassland
<i>Reseda luteola</i>	Weld	Rare on block paving on south side
<i>Rorippa islandica</i>	Northern Yellowcress	Rare in three damp hollows at back
<i>Rosa canina</i>	Dog Rose	Rare, saplings scattered
<i>Rubus fruticosus</i> agg.	Bramble	Locally abundant along fence; individual microspecies not investigated
<i>Rubus tricolor</i> *	Chinese Bramble	Rare in SW corner
<i>Rumex acetosa</i>	Sorrel	Grassland, north side
<i>Rumex conglomeratus</i>	Clustered Dock	Rare in grassland on north side

<i>Rumex crispus</i>	Curled Dock	Occasional
<i>Rumex obtusifolius</i>	Broad-leaved Dock	Locally frequent
<i>Rumex sanguineus</i>	Wood Dock	Occasional
<i>Sagina procumbens</i>	Pearlwort	Occasional
<i>Salix caprea</i>	Goat Willow	Rare colonist, north side
<i>Salix cinerea</i>	Grey-leaved Willow	Frequent colonist
<i>Salix fragilis</i>	Crack Willow	1 sapling near north-west corner
<i>Sambucus nigra</i>	Elder	Weed in shrubbery at front
<i>Scrophularia auriculata</i>	Water-figwort	Rare, amongst artifacts
<i>Scrophularia nodosa</i>	Figwort	Large clump on western fence, and scattered on waste ground
<i>Senecio jacobaea</i>	Ragwort	Locally abundant
<i>Senecio vulgaris</i>	Groundsel	Rare, open ground
[<i>Sison amomum</i>	Stone Parsley	One patch of leaves near south-west corner, not refound and requires rediscovery]
<i>Solanum dulcamara</i>	Bittersweet	Rare on waste ground
<i>Sonchus asper</i>	Prickly Sowthistle	Rare on waste ground
<i>Sonchus oleraceus</i>	Common Sow-thistle	Rare on stones
<i>Stachys sylvatica</i>	Hedge Woundwort	Rare
<i>Taraxacum aequilobum</i>	Dandelion	Occasional on front lawn (NMW)
<i>Taraxacum boeckmanii</i>	Dandelion	Rare at east end of north side(NMW)
<i>Taraxacum bracteatum</i>	Dandelion	Rare on south side (NMW)
<i>Taraxacum cf. latissimum</i>	Dandelion	Occasional on north side (NMW)
<i>Taraxacum cophocentrum</i>	Dandelion	Occasional on north side (NMW)
<i>Taraxacum pseudohamatum</i>	Dandelion	Rare in NW corner by gorse (specimen not retained)
<i>Taraxacum pulchrifolium</i>	Dandelion	Rare at east end of north side (NMW)
<i>Taraxacum stenacrum</i>	Dandelion	Occasional on front lawn (NMW)
<i>Taraxacum unguilobum</i>	Dandelion	Rare on front lawn (NMW)
<i>Taraxacum</i> spp.	Dandelion	Possible <i>tumentilobum</i> on front lawn, possible <i>expallidiforme</i> on north side, possible <i>pallidipes</i> in grassland
<i>Trifolium dubium</i>	Lesser Hop-trefoil	Rare in open grassland
<i>Trifolium pratense</i>	Red Clover	Occasional in mown grassland
<i>Trifolium repens</i>	White Clover	Occasional in rough grassland, frequent in mown grass
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	Frequent on stores at back; glands oval
<i>Ulex europaeus</i>	Gorse	Rare in NW corner and shrubberies at front
<i>Ulmus glabra</i>	Wych Elm	Rare, sapling in grass on north side
<i>Urtica dioica</i>	Nettle	Rare
<i>Verbascum cf. thapsus</i>	Woolly Mullein	2008 shoot present on waste ground probably this species, which did not reappear in 2009
<i>Veronica arvensis</i>	Field Speedwell	Weed in flower bed at front

<i>Veronica beccabunga</i>	Brooklime	Rare in damp ground
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	Rare in open ground, occasional in car park
<i>Vicia segetalis</i>	Common Vetch	Local on north side
<i>Viola riviniana</i>	Violet	Occasional in mown grass

Discussion

A total of 165 species were recorded to date, of which 15 (9%) were not native to the British Isles. The names of the *Taraxacum* species await confirmation. Staff at Nantgarw reported that an orchid (possibly common spotted orchid or southern marsh orchid) was seen on one of the lawns a few years ago, but did not survive mowing.

Virtually all of the plants are common and widespread and of little interest, but the *Rorippa islandica* – Northern Yellowcress is worthy of note. It is a small annual of damp, open ground. It was very rare in Britain 20 years ago, but has spread dramatically in recent years and is now widespread in South Wales (this is the fourth site in Cardiff I am aware of). It occurred in three seasonally inundated hollows on the waste ground at the rear at Nantgarw, and will be easy to maintain by keeping the habitats in similar condition.



Rorippa islandica – Northern Yellowcress on damp ground at Nantgarw.

Overall the site is moderately diverse, mainly due to the range of open habitats present. The most interesting area is the unimproved but mown grassland along the south and east sides of the building (see Phase 1 habitat survey report). At present there are indications that the rear of the is susceptible to scrub invasion (e.g. Butterfly Bush is very invasive around the objects stored outside at the rear) and would benefit from cutting at least once a year.

Acknowledgements

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