

Brent Island 5-yearly monitoring visit

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1. Introduction

Consistent with the 5 yearly review of the management plan, plant species on Brent Island were surveyed by Rodger Keedle in May 1994 and 1999 and by Ben Driver in 2004. The 2009 survey was undertaken by Naomi Scuffil, Assistant Ecologist for the Dartmoor National Park Authority, on 29 May 2009.

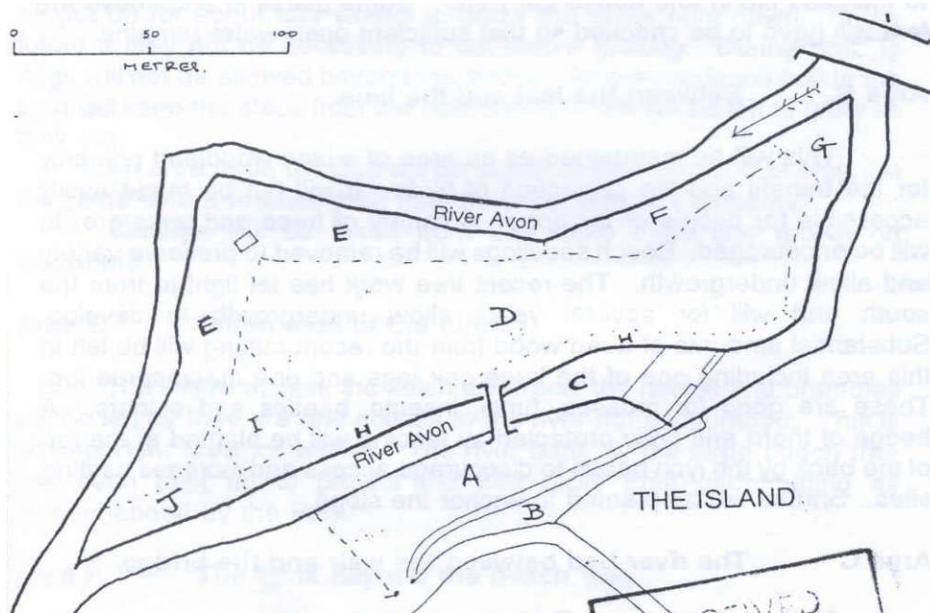
Good data already exists for plants, trees, shrubs and other wildlife, such as birds and invertebrates. As before, the survey focused on flowering plants, ferns, grasses, sedges and rushes and any changes in vegetation, particularly in the meadow area, are used to help inform the management process.

During the 1999 survey, quadrat based monitoring of herbaceous plants in the meadow area was set up and this was repeated in 2004. Quadrat-based recording was not repeated in 2009; instead the entire meadow was surveyed and the abundance of plant species noted in the DAFOR scale. The previous surveyors had carried out a whole site search for flowering plants, ferns, grasses, sedges and rushes during the 1994, 1999 and 2004 surveys; this was repeated in 2009 – although it must be noted here that as less time was spent on site in 2009, a number of the more rare plant species will have been missed. Photographic monitoring of fixed points was also set up in 1999, and repeated in 2004 and 2009; any visual changes in vegetation are discussed in this report.

2. Monitoring of the meadow

This was set up in 1999 and consists of a survey of 3 areas:

- Area 1 –the tussocky grassland, compartment I in the management plan
- Area 2 –western part of the meadow, compartment D in the management plan
- Area 3 –eastern part of the meadow, compartment D in the management plan
(a path across the middle of the meadow marks boundary between areas 2 and 3)



In 1999 and 2004, 25 quadrats (25 x 25cm in size) were randomly placed and any herbaceous plants rooted in the quadrat were recorded. Plants that occurred outside of quadrats were recorded, along with grass species and abundance. In 2009 the quadrat survey was not carried out; only a full species list for each area was undertaken and the abundance noted in the DAFOR scale. The delineation of Areas 1 and 2 was no longer very clear in 2009.

Results

Table 1 – Presence of herbaceous species in three monitoring areas:

Species	Area 1 -1999	Area 1 -2004	Area 1 - 2009	Area 2 – 1999	Area 2 - 2004	Area 2 - 2009	Area 3 - 1999	Area 3 – 2004	Area 3 - 2009
<i>Achillea millefolium</i>	♦	-	♦	♦	-	♦	-	♦	-
<i>Anthriscus sylvestris</i>	-	-	♦	-	-	-	-	-	-
<i>Centaurea nigra</i>	-	♦	-	♦	♦	-	♦	♦	-
<i>Cirsium arvense</i>	-	-	-	-	-	-	♦	♦	♦
<i>Conopodium majus</i>	-	♦	♦	-	♦	-	♦	♦	♦
<i>Digitalis purpurea</i>	-	-	♦	-	-	-	-	-	♦
<i>Galium aparine</i>	-	-	♦	-	-	-	-	♦	-
<i>Heracleum sphondylium</i>	♦	♦	♦	-	-	-	-	♦	♦
<i>Hieracium spp</i>	-	-	♦	-	-	-	-	-	♦
<i>Hyacinthoides non- scriptus</i>	-	-	♦	-	-	-	-	-	-
<i>Hypochaeris radicata</i>	-	-	-	♦	♦	-	-	♦	-
<i>Leontodon autumnalis</i>	-	-	-	♦	-	-	-	♦	♦
<i>Lotus corniculatus</i>	-	-	-	♦	♦	♦	-	-	-
<i>Oenanthe crocata</i>	-	-	-	-	-	-	-	♦	-
<i>Plantago lanceolata</i>	♦	♦	♦	♦	♦	♦	♦	♦	♦
<i>Plantago major</i>	-	-	-	-	-	♦	-	♦	♦
<i>Ranunculus acris</i>	-	-	-	♦	♦	-	♦	-	-
<i>Ranunculus bulbosus</i>	-	-	-	♦	-	-	-	-	-
<i>Ranunculus ficaria</i>	♦	♦	-	♦	♦	-	♦	♦	-
<i>Ranunculus repens</i>	♦	-	♦	♦	-	♦	♦	♦	♦
<i>Rumex acetosa</i>	♦	♦	♦	♦	♦	♦	♦	♦	♦
<i>Rumex obtusifolius</i>	-	♦	♦	-	-	-	-	-	♦
<i>Stellaria graminea</i>	♦	-	♦	♦	-	-	♦	♦	-
<i>Stellaria media</i>	-	-	♦	-	-	-	-	-	-
<i>Taraxacum officinale</i>	-	♦	-	♦	-	-	♦	♦	-
<i>Trifolium pratense</i>	-	-	-	-	-	♦	♦	♦	♦
<i>Trifolium repens</i>	-	-	-	♦	♦	♦	♦	♦	♦
<i>Urtica dioica</i>	-	-	♦	-	-	-	♦	♦	♦
<i>Veronica arvensis</i>	-	-	♦	-	-	-	-	-	-
<i>Veronica chamaedrys</i>	-	♦	♦	♦	♦	♦	♦	♦	♦
TOTAL	7	9	17	15	10	8	15	20	15

Table 1 shows that the total number of flowering plants on the meadow has fluctuated over the last ten years, with species numbers increasing in Area 1, decreasing in Area 2, and remaining stable in Area 3.

Table 2: Abundance of herbaceous plants on the meadow in 2009:

Species	Area 1	Area 2	Area 3
Flowering Plants			
<i>Achillea millefolium</i>	R	R	
<i>Anthriscus sylvestris</i>	R		
<i>Cirsium arvense</i>			R
<i>Conopodium majus</i>	O		O
<i>Digitalis purpurea</i>	R		R
<i>Galium aparine</i>	R		
<i>Heracleum sphondylium</i>	R	R	R
<i>Hieracium spp</i>	R		R
<i>Hyacinthoides non-scriptus</i>	O		
<i>Lotus corniculatus</i>		R	
<i>Plantago lanceolata</i>	O	O, LF	F
<i>Plantago major</i>		R	R
<i>Ranunculus repens</i>	A	A	A
<i>Rumex acetosa</i>	A	F	F
<i>Rumex obtusifolius</i>	O		O
<i>Stellaria graminea</i>	R		
<i>Stellaria media</i>	R		
<i>Trifolium pratense</i>		R	R
<i>Trifolium repens</i>		O	O
<i>Urtica dioica</i>	R		R
<i>Veronica arvensis</i>	O		
<i>Veronica chamaedrys</i>	LF	LF	LF

Table 3: Abundance of grasses on the meadow in 2004 and 2009:

Species	Area 1 2004	Area 1 2009	Area 2 2004	Area 2 2009	Area 3 2004	Area 3 2009
<i>Agrostis capillaris</i>	A	O	A		A	
<i>Alopecurus pratense</i>	O		R		R	
<i>Anthoxanthum odoratum</i>	O	F	A	A	A	A
<i>Cynosaurus cristatus</i>		R				
<i>Dactylis glomerata</i>	F	A, LD	O	O-F	O	A
<i>Festuca rubra</i>		O		O		O
<i>Holcus lanatus</i>	A	A, LD	F	A	F	A
<i>Lolium perenne</i>			F	R, LD	O	R, LD
<i>Phleum pratense</i>	R					
<i>Poa pratense</i>					R	
<i>Poa annua</i>		F		F		F
<i>Poa trivialis</i>			R			O

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare, L = Locally

Tables 2 and 3 show that on the meadow overall, sweet vernal grass *Anthoxanthum odoratum*, Yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis glomerata*, annual meadow grass *Poa annua*, creeping buttercup *Ranunculus repens* and common sorrel *Rumex acetosa* are the most abundant species, with clusters of ribwort plantain *Plantago lanceolata* and Germander speedwell *Veronica chamaedrys* present throughout the meadow. A comparison with the data from 1999 and 2004 shows that these species have been the most abundant throughout the survey time. Species that appear to have declined in numbers are lesser celandine *Ranunculus ficaria*, hogweed *Heracleum sphondylium* and lesser stitchwort *Stellaria graminea*. Some species, such as common knapweed *Centaurea nigra* and autumn hawkbit *Leontodon autumnalis* were not found at all in the 2009 survey. In contrast, several additional species, such as bluebell, *Hyacinthoides non-scriptus*, wall speedwell *Veronica arvensis* and hawkweed *Hieracium spp* were surveyed for the first time in 2009.

Discussion

The results show a mixed picture, with some species increasing in numbers, and others decreasing. Some of this is probably a factor of seasonal variation, and possibly also an unclear delineation of where Area 1 ends and Area 2 starts, as the term 'tussocky area' as a description for Area 1 was not a clear description any longer in 2009.

In general, the condition of the meadow is fairly stable, although there has been a small increase in ruderal plants, such as nettle *Urtica dioica*, hogweed and creeping thistle *Cirsium arvense*. The proportion of Yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis glomerata* and creeping buttercup *Ranunculus repens* is quite large, all of which are indicators of nutrient-rich conditions; however, the abundance of sweet vernal grass *Anthoxanthum odoratum*, a positive indicator for meadows, has remained in good numbers in the sward.

3. Whole site search for flowering plants, ferns, grasses, sedges and rushes

The whole site was walked slowly and species seen were recorded. Most were recorded in the field and a few samples were removed for later identification. Approximately 1 hour was spent on this part of the survey, which is less than was spent in previous years – hence the reduced numbers of species recorded is probably a reflection of this, rather than a real decrease in plant species.

Discussion

The results appear in full in the appendix and are discussed in the following section:

Two additional plant species were found during the whole site search, bringing the total number on site to 144 species. These were garlic mustard *Alliaria petiolata* and a cultivated avens species (*Geum spp*). These species could have recently established or might have occurred at very low abundances for some time, being overlooked during the previous surveys.

The ‘missing’ flowers, grasses and ferns had perhaps been overlooked on this occasion. Only one ecologically significant grass, Crested dogs-tail, *Cynosurus cristatus*, was not readily apparent in the meadow, but this can be difficult to find in early summer prior to flowering. Many of the missing plants are ‘exotics’ or garden escapes, such as hellebores, bellflowers, cultivated snowdrops, daffodils etc. which perhaps grow casually, not occurring every year and some might no longer exist on site.

Some species losses might be attributed to the change of surveyor or perhaps changes in survey effort (time spent searching for new species). The site is complex, encompassing a number of different habitats and species and the vegetation by the river is difficult to access due to brambles, nettles etc. Therefore, plants could be easily overlooked during the survey, especially as the new surveyor had no prior knowledge of the site.

Overall it is not apparent that there have been any significant changes during the last five, or even ten years, i.e. no ecologically important species have been lost or gained.

4. Fixed point photographic monitoring

Colour photographs have been regularly taken from 11 fixed points since May 1999. The map of the locations from 1999 was not found; hence the locations were re-found using just the pictures as a guide (only eight points were found; a map of these locations is attached). Overall, there is very little change between 1999, 2004 and 2009, as these selected photos show:

2004



2009



1999



2009



5. Conclusions and management recommendations

Currently, the meadow is in good condition, despite some apparent decrease in species diversity. Species diversity can vary on an annual basis; furthermore, slight changes in survey methodology, and more importantly, the amount of time spent on site, will invariably lead to a perceived change in species abundance. Overall, the condition of the meadow has been stable, with no large increases or decreases of certain species.

In particular, the abundance of the coarser grasses, such as Yorkshire fog *Holcus lanatus* and cocksfoot *Dactylis glomerata* have remained stable, as has the abundance of the positive indicator species sweet vernal grass, *Anthoxanthum odoratum*. This stability can be seen on the photographs.

The current management regime, with an annual cut in September, after the majority of herbs have seeded, is appropriate and can remain the same. Moving to an earlier cut would unlikely to be of benefit, as the herbaceous plants currently present are 'summer' meadow species which will continue to flower into September. If cutting, it is important to remove the arisings, to help encourage diversity. Late summer grazing would be advantageous, but I understand this is not a feasible option for the site.

In terms of managing for increased species diversity, it might be advantageous to bring in seed from a Dartmoor haymeadow to spread onto the site in late summer. The best thing to do would be to select a fairly small area of the site, with the lowest species diversity, and highest amount of coarse grasses. At the moment there is not much difference between Areas 1,2 and 3, so any one of these is suitable. You will need to remove the turf, and sow seeds from an existing Dartmoor haymeadow by spreading hay from one of these meadows. You can repeat this process over the years on bigger areas to increase the size of the meadow. The best time to do this is early September, and I have enclosed a leaflet on haymeadow creation, which lists contacts from where good quality hay can be obtained.

The scrub and rough grassland around the edge of the meadow provide good cover for a range of wildlife. No further control of scrub is needed at present, but it is advisable to continue the photographic monitoring so that changes can be observed.

At present there is a small population Himalayan balsam in Area H. This can be a troublesome species and should be removed as quickly as possible. The easiest way to remove the plant is by pulling or cutting it before it flowers and sets seeds. Due to the proximity to a watercourse I would not recommend chemical control.

Appendix –results of the whole site search

Scientific Name	Common Name	1994-99	2004	2009
Ferns				
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	♦	♦	♦
<i>Asplenium ruta-muraria</i>	Wall Rue	♦		
<i>Athyrium filix-femina</i>	Lady Fern	♦	♦	♦
<i>Dryopteris affinis</i>	Scaly Male Fern	♦	♦	
<i>Dryopteris dilatata</i>	Broad Buckler Fern	♦	♦	♦
<i>Dryopteris felix-max</i>	Male Fern	♦		♦
<i>Equisetum fluviatile</i>	Water Horsetail	♦		
<i>Phyllitis scolopendrium</i>	Hart's-tongue Fern	♦	♦	♦
<i>Polypodium vulgare</i>	Common polypody	♦	♦	♦
<i>Polydichum setiferum</i>	Soft Shield Fern		♦	
<i>Pteridium aquilinum</i>	Bracken	♦	♦	♦
		10	8	7
Grasses				
<i>Agrostis capillaries</i>	Common Bent	♦	♦	♦
<i>Alopecurus pratense</i>	Meadow Foxtail	♦	♦	♦
<i>Anthroxanthum odoratum</i>	Sweet Vernal Grass	♦	♦	♦
<i>Brachypodium sylvaticum</i>	Wood False-Brome	♦	♦	
<i>Cynosurus cristatus</i>	Crested Dogs-tail	♦		♦
<i>Dactylis glomerata</i>	Cock's-foot	♦	♦	♦
<i>Deschampsia caespitosa</i>	Tufted Hair-grass	♦		
<i>Festuca gigantea</i>	Giant Fescue		♦	
<i>Festuca rubra</i>	Red Fescue	♦	♦	♦
<i>Glyceria fluitans</i>	Flote Grass	♦		
<i>Holcus lanatus</i>	Yorkshire Fog	♦	♦	♦
<i>Lolium perenne</i>	Perennial Rye grass	♦	♦	♦
<i>Melica uniflora</i>	Wood mellick	♦	♦	
<i>Poa annua</i>	Annual Meadow Grass	♦	♦	♦
<i>Poa nemoralis</i>	Wood Meadow Grass	♦	♦	
<i>Poa pratense</i>	Smooth Meadow Grass	♦	♦	
<i>Poa trivialis</i>	Rough Meadow Grass	♦	♦	♦
<i>Phleum pratense</i>	Timothy Grass	♦	♦	♦
		17	15	11
Sedges and rushes				
<i>Carex remota</i>		♦	♦	♦
<i>Juncus effuses</i>	Soft rush	♦	♦	
<i>Luzula campestris</i>	Field woodrush	♦	♦	♦
<i>Luzula sylvatica</i>	Greater woodrush	♦	♦	♦
		4	4	3
Flowering Plants				
<i>Achillea millefolium</i>	Yarrow	♦	♦	♦
<i>Aegopodium podagraria</i>	Ground Elder	♦	♦	♦
<i>Ajuga reptans</i>	Bugle	♦	♦	

Scientific Name	Common Name	1994-99	2004	2009
<i>Alliaria petiolata</i>	Garlic Mustard			♦
<i>Allium ursinum</i>	Wild Garlic or Ramsons	♦	♦	♦
<i>Anemone nemorosa</i>	Wood anemone	♦	♦	
<i>Anemone nemorosa 'vestal'</i>	Cultivated Wood Anemone	♦		♦
<i>Angelica sylvestris</i>	Angelica	♦	♦	
<i>Anthriscus sylvestris</i>	Cow Parsley	♦	♦	♦
<i>Aquilegia vulgaris</i>	Cultivated Columbine	♦	♦	
<i>Arctium minus</i>	Lesser Burdock	♦	♦	♦
<i>Arum maculatum</i>	Wild Arum	♦	♦	
<i>Bellis Perennis</i>	Daisy	♦		
<i>Campanula spp</i>	Cultivated Creeping Bellflower	♦		
<i>Campanula spp</i>	Cultivated Giant Bellflower	♦		
<i>Cardamine flexulosa</i>	Wavy Bittercress	♦	♦	
<i>Cardamine pratensis</i>	Lady's Smock	♦	♦	
<i>Centaurea nigra</i>	Black Knapweed	♦	♦	
<i>Cerastium fontanum</i>	Common Mouse-ear	♦	♦	
<i>Chaerpphyllum temulum</i>	Rough Chervil	♦	♦	
<i>Chrysosplenium oppositifolium</i>	Opposite-leaved Golden-saxifrage	♦		
<i>Circaea luteriana</i>	Enchanters Nightshade	♦	♦	♦
<i>Cirsium arvense</i>	Creeping Thistle	♦	♦	♦
<i>Cirsium vulgare</i>	Spear Thistle	♦	♦	
<i>Conopodium majus</i>	Pignut	♦	♦	♦
<i>Coronopus didymus</i>	Lesser Swinecress		♦	
<i>Crocosmia crocosmifolia</i>	Montbretia	♦	♦	♦
<i>Cymbalaria murais</i>	Ivy-leaved Toadflax	♦	♦	♦
<i>Digitalis purpurea</i>	Foxglove	♦	♦	♦
<i>Dipsacus fullonum</i>	Teasel	♦	♦	♦
<i>Doronicum spp</i>	Leopards-bane	♦		
<i>Epilobium hirsutum</i>	Great Willowherb	♦		
<i>Epilobium montanum</i>	Broad-leaved Willowherb	♦	♦	
<i>Eupatorium cannabinum</i>	Hemp Agrimony	♦		
<i>Euphorbia uranlensis</i>	Twiggy Spurge		♦	
<i>Fallopia spp</i>	Cultivated Knotweed	♦		
<i>Fragaria vesca</i>	Wild Strawberry	♦		
<i>Galanthus spp</i>	Cultivated Snowdrop	♦		
<i>Galium aparine</i>	Goosegrass or Cleavers	♦	♦	♦
<i>Galium odoratum</i>	Sweet Woodruff	♦	♦	
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	♦	♦	
<i>Geranium phaeum</i>	Dusky Cranesbill	♦	♦	
<i>Geranium robertianum</i>	Herb Robert	♦	♦	♦
<i>Geum urbanum</i>	Wood Avens	♦	♦	♦
<i>Geum ssp</i>	Cultivated Avens			♦
<i>Gladiolus byzantinus</i>	Eastern Gladiolus	♦		
<i>Glechoma hederacea</i>	Ground Ivy	♦	♦	♦
<i>Hedera helix</i>	Ivy	♦	♦	♦
<i>Heleborus foetidus</i>	Cultivated Stinking Hellebore	♦		
<i>Heleborus viridis</i>	Cultivated Green Hellebore	♦		

Scientific Name	Scientific Name	1994-99	2004	2009
<i>Heracleum sphondylium</i>	Hogweed	♦	♦	♦
<i>Hieracium spp</i>	Hawkweed	♦		
<i>Hyacinthoides non-scriptus</i>	Bluebell	♦	♦	♦
<i>Hyacinthoides hispanica</i>	Spanish Bluebell	♦		♦
<i>Hypericum androsaemum</i>	Tutsan	♦	♦	
<i>Hypochaeris radicata</i>	Common Cats-ear	♦	♦	♦
<i>Impatiens glandulifera</i>	Himalayan Balsam	♦		♦
<i>Lamiaeum galeobdolon</i>	Yellow Archangel	♦	♦	
<i>Lamium Purpurea</i>	Red Dead-nettle	♦	♦	♦
<i>Lapsana communis</i>	Nipplewort	♦		
<i>Lathyrus montanus</i>	Bitter Vetch	♦		
<i>Lenontodon autumnalis</i>	Autumn Hawkbit	♦	♦	
<i>Leontodon hispidus</i>	Rough Hawkbit	♦	♦	♦
<i>Linaria purpurea</i>	Purple Toadflax	♦		
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	♦	♦	♦
<i>Lysichiton americanus</i>	Skunk Cabbage	♦		♦
<i>Lysimachia nemorum</i>	Yellow Pimpernel	♦	♦	♦
<i>Meconopsis pcambrica</i>	Welsh Poppy	♦	♦	
<i>Mentha spp</i>	A lemon scented garden mint		♦	
<i>Mercurialis perennis</i>	Dog's Mercury	♦	♦	♦
<i>Montia sibirica</i>	Pink Purslane	♦	♦	♦
<i>Myosotis laxa</i>	Water Forget-me-not	♦		
<i>Myosotis sylvatica</i>	Wood Forget-me-not	♦	♦	
<i>Narcissus spp</i>	Cultivated daffodil	♦	♦	
<i>Oenanthe crocata</i>	Hemlock Water Dropwort	♦	♦	♦
<i>Oxalis acetosella</i>	Wood Sorrel	♦	♦	
<i>Petasites hybridus</i>	Butterbur	♦	♦	
<i>Plantago lanceolata</i>	Ribwort Plantain	♦	♦	♦
<i>Plantago major</i>	Greater Plantain	♦	♦	♦
<i>Primula vulgaris</i>	Primrose	♦	♦	♦
<i>Prunella vulgaris</i>	Self-heal	♦	♦	
<i>Ranunculus acris</i>	Meadow Buttercup	♦	♦	♦
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	♦		
<i>Ranunculus ficaria</i>	Lesser Celendine	♦	♦	
<i>Ranunculus repens</i>	Creeping Buttercup	♦	♦	♦
<i>Rubus fruticosus</i>	Bramble			♦
<i>Rumex acetosa</i>	Common Sorrel	♦	♦	♦
<i>Rumex crispus</i>	Curled Dock	♦	♦	♦
<i>Rumex obtusifolius</i>	Broad-leaved Dock	♦	♦	♦
<i>Scrophularia nodosa</i>	Figwort	♦	♦	♦
<i>Silene dioica</i>	Red Campion	♦	♦	♦
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	♦		
<i>Stachys sylvatica</i>	Hedge Woundwort	♦	♦	
<i>Stellaria graminea</i>	Lesser Stitchwort			♦
<i>Stellaria media</i>	Chickweed	♦	♦	♦
<i>Taraxacum officinalis agg.</i>	Dandelion	♦	♦	♦
<i>Teucrium scorodonia</i>	Wood Sage	♦	♦	

Scientific Name	Common Name	1994-99	2004	2009
<i>Torilis japonica</i>	Hedge Parsley	♦	♦	
<i>Trifolium pratense</i>	Red Clover	♦	♦	♦
<i>Trifolium repens</i>	White Clover	♦	♦	♦
<i>Umbilicus rupestris</i>	Wall Pennywort	♦	♦	
<i>Urtica dioica</i>	Nettle	♦	♦	♦
<i>Valeriana officinalis</i>	Red Valerian	♦		
<i>Veronica arvensis</i>	Wall Speedwell	♦		♦
<i>Veronica Chamaedrys</i>	Germander Speedwell	♦	♦	♦
<i>Veronica montanum</i>	Wood Speedwell	♦	♦	♦
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	♦		
<i>Viola palustre</i>	Marsh Violet	♦		
<i>Viola riviniana</i>	Common-dog Violet	♦	♦	
	Bamboo	♦		
	Cultivated Snakeweed	♦		
		106	77	53

Table 3 -grass species abundance in each area (measured on the DAFOR scale)

Species	Area 1	Area 2	Area 3
<i>Agrostis capillaris</i>	A	A	A
<i>Alopecurus pratense</i>	O	R	R
<i>Anthroxanthum odoratum</i>	O	A	A
<i>Dactylis glomerata</i>	F	O	O
<i>Holcus lanatus</i>	A	F	F
<i>Lolium Perenne</i>		F	O
<i>Phleum pratense</i>	R		
<i>Poa pratense</i>			R
<i>Poa trivialis</i>		R	

D=dominant, A=abundant, F=frequent, O=Occasional, R=rare.