

Box Hill Common

Conservation Management Plan

1998 - 2002



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Box Hill Common - Conservation Management Plan - 1988-2002

1. Introduction

Box Hill Common (grid ref: ST834692) is situated north-east of Box village (see Map 1). It is approximately 4.8 hectares (11.9 acres) in size, consisting of a relatively flat, upper area (Top Common) and a steeply sloping, lower area (Bottom Common). It encompasses a range of habitats including limestone grassland, improved / amenity grassland, scrub and woodland, and is recognised as a County Wildlife Site - due to the species-rich limestone grassland.

The site is owned and managed by Box Parish Council. The Council wish to review the management of Box Hill Common because significant changes in habitat have occurred since the 1970's, and they have commissioned this conservation management plan from Chalkhill Environmental Consultants (the environmental consultancy arm of the Wiltshire Wildlife Trust) with funding from Rural Action. The aim of the plan is to summarise the main habitats, flora and fauna to be found - highlighting aspects of particular conservation interest - discuss management policies and priorities, and layout specific management objectives and prescriptions, including a work programme.

Box Hill Common appears well used by local people, with several public footpaths crossing. It has potential as an educational resource for local schools and youth groups, and for community involvement in practical work parties.

2. Habitats, flora and fauna.

Box Hill Common has an underlying geology of Jurassic clay with brown calcareous soils, producing characteristic vegetation types.

The Top Common is influenced by underlying spoil heaps from the construction of Brunel's Box Tunnel in the 1840's. Part of this, east of the dividing road, was levelled in the early 1970's and allowed to re-vegetate naturally; whilst the area west of the dividing road is still hilly.

2.1. Limestone grassland.

A significant proportion of Box Hill Common is agriculturally unimproved, species-rich limestone grassland, of high conservation value. This includes parts of the Top Common east of the dividing road (section A - see Map 2), most of the Top Common west of the dividing road (section B), and

parts of the Bottom Common (section C), totalling c. 1.8 ha. These different patches are similar in character, with upright brome (*Bromopsis erecta*) the dominant grass, and other wild grasses and herbs found in abundance e.g. red fescue (*Festuca rubra*), quaking grass (*Briza media*), salad burnet (*Sanguisorba minor*), lady's bedstraw (*Galium verum*), harebell (*Campanula rotundifolia*) and small scabious (*Scabiosa columbaria*). Less common species, in a county context, include eyebright (*Euphrasia nemorosa*) and autumn gentian (*Gentianella amerella*), although these two species have not been recorded recently. Overall, at least 90 plant species were recorded in this grassland in 1981.

Such limestone grassland is likely to support a diverse invertebrate fauna including snails, grasshoppers, moths and butterflies, although little information has so far been collected. Butterfly species recorded include small skipper, large skipper, common blue and marbled white. The latter is fairly specific to chalk and limestone grasslands, and therefore less common.

The condition of the limestone grassland on the Common varies. Unmanaged areas are tussocky with plant litter build-up, and upright brome increasingly predominating. In places, particularly on section B, patches of false-oat grass and great willowherb occur, indicating soil enrichment. Also, scrub has built up to the stage where grassland is being lost and fairly urgent work is needed, especially on section C. The annually mown areas are in better condition, with a more typical species-richness, although there is an unusual predominance of melilot (*Melilotus sp.*) in parts. It is important, where the grassland is mown, that the cuttings are removed otherwise they will smother the flowering plants below and cause enrichment of the sward.

2.2. Scrub.

Scrub, as a habitat in itself, is valuable. It provides refuges and creates sheltered conditions in adjacent grassland for insects, birds and small mammals. On Box Hill Common a number of typical native species occur including hawthorn (*Crateagus monogyna*), hazel (*Corylus avellana*), wild privet (*Ligustrum vulgare*) and wayfaring tree (*Viburnum lantana*); and an introduced / naturalised Cotoneaster (*Cotoneaster spp.*).

2.3. Improved / amenity grassland.

The remaining grassland (all on section A) is comparatively species-poor and currently managed by regular mowing for access and recreational purposes. A patch of Japanese knotweed and various garden escapes occur towards the northern side.

2.4. Woodland.

The woodland has not yet been surveyed in detail - spring being the most appropriate time for this activity - although a general description can be made.

The beech woodland at the south-eastern edge of the Top Common (c. 0.9 ha) contains primarily beech (*Fagus sylvatica*), plus occasional understorey shrubs and saplings including holly (*Ilex aquifolium*), hawthorn, elder (*Sambucus nigra*) and ash (*Fraxinus excelsior*). The ground flora has not yet been assessed. Age classes present include saplings (especially along the outer edge), young trees (mostly planted in 1980) and mature trees, valuable in conservation terms and will become increasingly so, providing for deadwood invertebrates, woodpeckers and bats. Old / over-mature trees and dead standing trees are largely lacking.

The structure is typical of beech woodland with a comparatively open understorey. A small glade occurs at the northern end. At the northern end of the Bottom Common, the secondary mixed woodland (c. 0.7 ha) contains an assortment of Scot's pine (*Pinus sylvestris*), beech, birch (*Betula pendula*), ash, oak (*Quercus robur*) and sycamore (*Acer pseudoplatanus*), plus understorey shrubs including hazel, hawthorn, holly and wild privet. The ground flora has not been assessed.

At the southern end of the Bottom Common the small patch of secondary broadleaved woodland (0.1 ha) contains mainly sycamore and ash, with a few elder and hawthorn. To the east of this, previous grassland is now enriched and covered with dense nettles, brambles and cleavers.

2.5. Rank grassland and tall herb.

The remainder of the site can be classified as rank grassland and tall herb, including species like false oat-grass (*Arrhenatherum elatius*), nettles (*Urtica dioica*) and great willowherb (*Epilobium hirsutum*).

2.6. Summary of conservation interest.

Box Hill Common is a small to moderate-sized site (when compared with other County Wildlife Sites). It has varied habitats, the most valuable in nature conservation terms being the unimproved species-rich limestone grassland.

Limestone grassland, on Box Hill Common and elsewhere, is a product of soil and climatic factors, and traditional farming methods over a long period. It is rich in plant and animal species, with as many as 40 plant species per metre square. It is highly vulnerable to damage including use of artificial fertilisers and other agricultural chemicals, and neglect, and has declined dramatically in

extent since the 1950's. On Box Hill Common such grassland comprises a comparatively small area but is typically species-rich and includes some less common species (in a county context) e.g. eyebright and autumn gentian, although these species have not been recorded recently. For this reason the Common is recognised as a County Wildlife Site.

Box Mines are directly adjacent to the Common. These are a Site of Special Scientific Interest and proposed Special Area of Conservation (under European legislation), for the large numbers of hibernating bats, including the endangered lesser and greater horseshoe. It is likely that Box Hill Common provides an important area for bats foraging, both during the winter (when bats awake temporarily during warmer periods and leave the mines) and summer.

3. Management policy

Whilst parts of the site e.g. woodland may require little or no management for maintaining wildlife and conservation interest, other parts e.g. limestone grassland require annual management. It is the aim of this plan to highlight priorities and suggest an achievable work programme over the next five years.

Limestone grassland should ideally be grazed by sheep or cattle, or failing that, mown once a year (and the cuttings removed), for maintaining and promoting a species-rich sward. Without such management botanical interest is likely to decline over the years, with more vigorous species predominating e.g. upright brome and delicate species being lost e.g. eyebright. At the same time, tall, tussocky neglected swards can provide good habitat for other groups, including shelter for insects e.g. grasshoppers and butterflies, and small mammals e.g. field voles. Although such habitat should not take priority over shorter, species - rich turf.

As Box Hill Common is not suitable for livestock (being unfenced), parts of the area are currently mown annually. This is likely to be beneficial in terms of removing litter build-up and producing a short sward that may then be nibbled by rabbits. Ideally such management should be extended elsewhere, although the terrain is rather difficult. One option may be to do small patches of mowing or strimming each year on rotation, eg 1/4 - 1/3 of the top common one year and another 1/4 the next, although this would need some degree of commitment on the part of the strimmer operator. All cuttings should be raked up by hand and removed to avoid smothering and enrichment - the lower the fertility, the more wild flowers there are likely to be.

In terms of timing, mowing in late summer / early autumn is ideal for allowing plants to flower and set seed, and insect populations to thrive.

Scrub removal and management is relatively easily achieved and beneficial to limestone grassland. On Box Hill Common such management is needed urgently - although it is generally best to avoid doing too much too quickly, possibly harming associated invertebrate populations. As a general principle, scattered, younger scrub should be targeted for removal, but leaving occasional bushes to provide resting places for butterflies and other insects. At the same time, large, established clumps of scrub can be cut back around the edges, encouraging species-rich grassland to re-colonise bare soil. Ideally cut stumps should be treated with an appropriate herbicide - a trained and certificated operator will be needed.

In terms of managing the scrub itself, sections or whole clumps can be coppiced (cut to ground level and allowed to re-sprout i.e. leaving cut stumps untreated) on a 15-30 year rotation, to promote a varied age structure and prevent excessive shading of adjacent grassland.

Large, inappropriate trees on limestone grassland e.g. sycamore on section B, are perhaps worse than scrub for creating heavy shade and casting leaf litter, and should be removed as soon as possible by felling and treating the cut stump.

Amenity grassland (section A) needs regular mowing for access and recreational purposes, although there may be opportunities for reducing the frequency of mowing in places, allowing rough, tussocky grassland and tall herb to grow e.g. a 1-2 metre strip around the perimeter of scrub clumps, creating an 'ecotone' - a gradation of habitats.

The woodlands on Box Hill Common are less of a priority for management, certainly in the short term and probably outside the 5 year timescale of this management plan. Probably the main priority is at some point to thin the planted beech on the Top Common, allowing favoured trees room to expand and mature. Also, some tree planting might be done to the east of the small wood at the southern end of the Bottom Common, where nettles, brambles and cleavers predominate (away from any species-rich limestone grassland). For the rest of the woodland, some thinning or group felling might be an option in the long term, for promoting mature trees, regenerating the understorey and diversifying the age structure.

Keeping public footpaths clear and doing tree safety checks are other potential tasks - the latter is beyond the scope of this plan.

4. Management objectives and prescriptions, by compartment.

Box Hill Common has been divided into compartments, according to habitat and type of management, as shown on Map 2. The table below identifies specific management objectives and prescriptions, by compartment.

A1 - species-rich limestone grassland

Objectives

Manage limestone grassland to maintain / enhance botanical richness.

Management Prescriptions

Continue mowing once a year, in late summer / early autumn - once late-flowering species have seeded. Rake cuttings off and remove by hand to avoid smothering and enrichment.

A2 - amenity grassland

1) Objectives

Manage amenity grassland. Where opportunities occur reduce mowing frequency, increasing the amount of taller, tussocky grassland of value for insects, butterflies and small mammals - and perhaps allowing adjacent limestone grassland to expand.

Management Prescriptions

Continue mowing regularly, as necessary for access and recreation purposes, but avoid mowing too closely around patches of limestone grassland. Where opportunities occur e.g. a 1-2 metre width around scrub patches, reduce mowing frequency, during spring or summer or both. Paths are mown across the top common to facilitate access, these should be kept as narrow as possible, ideally no more than 1m wide.

2) Objectives

Prevent the spread of Japanese knotweed.

Management Prescriptions

Use repeated cutting to prevent it spreading any further. If complete control is required a suitable method would be or a glyphosate-based herbicide (using a certificated operator) - herbicide works well if injected by syringe into 1 in 4 cut, hollow stems.

A3 - scrub

Objectives

Retain long-established patches of scrub as valuable wildlife habitat. Manage these by periodic coppicing to produce a varied age structure and prevent excessively tall growth shading adjacent grassland.

Management Prescriptions

Coppice (cut to ground level and allow to re-sprout i.e. leave cut stumps untreated) approximately one-third of the total area of scrub (either parts of clumps or whole clumps) every 5-10 years i.e. a 15-30-year rotation. Stack or burn cut material at a regular site, away from good quality grassland.

A4 - beech woodland

1) Objectives

Maintain and manage beech woodland, including thinning to allow young (planted) trees to mature and expand, and perhaps further planting to promote a more varied age structure. This may not be required during the timescale of this management plan.

Management Prescriptions

Thin the beech trees planted in 1980 by felling approximately 20% of the total number of trees i.e. one in every 5. Remove timber and create several 'habitat piles' with brash / larger pieces of wood. Consider re-planting the open area towards the north-east end of the wood, with beech, oak or ash - or leave as a sheltered woodland glade.

2) Objectives

Retain mature / old trees in perpetuity, providing an increasingly rich habitat for invertebrates, hole-nesting birds and bats. Retain standing and fallen deadwood, where not posing a safety hazard.

Management Prescriptions

As described.

B5 - species-rich limestone grassland

1) Objectives

Manage limestone grassland to maintain / enhance botanical richness.

Management Prescriptions

Ideally mow or strim parts of the grassland, once a year in late summer / early autumn and remove the cuttings, concentrate on good quality grassland by cutting sections on rotation, i.e. 1/3 one year and another 1/3 the next. All the cuttings should be raked up and removed, this will prevent the cuttings from smothering flowers growing beneath and provide opportunities for seed establishment and germination..

2) Objectives

Prevent scrub and tree saplings from encroaching onto and replacing species-rich limestone grassland.

Management Prescriptions

Remove most scattered scrub and tree saplings, by cutting and treating the stumps with an appropriate herbicide e.g. a triclopyr-based product using a certificated operator. Stack or burn cut material at a regular site, away from good quality grassland.

3) Objectives

Maintain and manage patches of bramble where they occur, but prevent encroachment onto species-rich limestone grassland.

Management Prescriptions

Strim or cut by hand the edges of bramble patches each or every other year, and remove ash saplings from within patches.

4) Objectives

Remove large, inappropriate trees, reducing shading and enrichment by leaf litter, from species-rich limestone grassland.

Management Prescriptions

Remove large sycamore (middle of compartment) and beech (southern end), by felling and treating the stumps with an appropriate herbicide e.g. triclopyr-based using a certificated operator. If necessary, repeat this process on any re-sprouting.

5) Objectives

Consider establishing a clump of native shrubs at the southern end of this compartment, where the grassland is coarser, and less valuable.

Management Prescriptions

Plant species like hawthorn, spindle (*Euonymus europeaus*), hazel, wayfaring tree, purging buckthorn (*Rhamnus catharticus*) during winter, at 1.0 m spacings, using shrub guards to protect against field voles and rabbits. Control surrounding grass growth using a mulch or non-residual herbicide, for the following 3 years.

C6 - species-rich limestone grassland

1) Objectives

Manage limestone grassland to maintain / enhance botanical richness.

Management Prescriptions

Ideally mow or strim parts of the grassland, once a year in late summer / early autumn and remove the cuttings as mentioned previously.

2) Objectives

Prevent scrub and tree saplings from encroaching onto and replacing species-rich limestone grassland.

Management Prescriptions

Remove most scattered scrub and tree saplings, by cutting and treating the stumps with an appropriate herbicide e.g. triclopyr-based (using a certificated operator). Retain an occasional mature hawthorn or other species. At the perimeter of this compartment, where grassland meets scrub or woodland, create scallops / sheltered bays, for butterflies and other insects. Strim bramble patch edges. Stack on a regular site, away from good quality grassland and burn cut material. Regarding timing, small amounts of work each or every other year, using say 5-10 people, is generally better than more drastic occasional operations.

3) Objectives

Remove large, inappropriate trees, reducing shading and enrichment by leaf litter, from species-rich limestone grassland.

Management Prescriptions

Remove sycamore (base of rocky outcrop, below Quarryman's Arms car park) and birch (directly below Quarryman's Arms), by felling and treating the stumps with an appropriate herbicide e.g. a

triclopyr-based product (using a certificated operator). Remove timber, and stack or burn cut material at a regular site away from good quality grassland.

C7 - scrub

Objectives

Retain long-established patches of scrub as valuable wildlife habitat. Manage these by periodic coppicing to produce a varied age structure.

Management Prescriptions

Coppice (cut to ground level and allow to re-sprout i.e. leave cut stumps untreated) approximately one-third of the total area of scrub to be retained (either parts of clumps or whole clumps) every 5-10 years i.e. a 15-30-year rotation. Burn brash away from good quality grassland.

C8 - secondary, mixed woodland

Objectives

Maintain woodland, on a limited intervention basis. Keep public footpaths clear.

Management Prescriptions

As described.

C9 - secondary, broad-leaved woodland

Objectives

Maintain woodland. Consider expanding its extent by planting native tree and shrub species on adjacent rank, weedy area (away from good quality grassland).

Management Prescriptions

Plant species like oak, ash, field maple (*Acer campestre*) and birch at 3m spacings, using tree guards to protect against field voles and rabbits. Control surrounding weeds using a mulch or non-residual herbicide, for the following 3 years.

5. Work programme

The table below provides a summary of work tasks required, over time.

Task (compartment)	Time of year	1998	1999	2000	2001	2002
Mow species-rich limestone grassland (A1, ?B5)	once in Aug/Sept	✓	✓	✓	✓	✓
Mow amenity grassland (A2)	throughout growing season	✓	✓	✓	✓	✓
Control Japanese knotweed (A2)	spring / summer	✓	✓			
Control scattered scrub, tree saplings and bramble edges (B5, C6)	winter	✓		✓		✓
Remove large, inappropriate trees from limestone grassland (B5, C6)	winter	✓				
Coppice one-third of retained scrub (A3, B5, C6)	winter	✓				
Plant trees and shrubs (B5, C8)	winter		✓			
Keep public footpaths clear	all year	✓	✓	✓	✓	✓
Thin planted beech trees (A4) If deemed nessecary within the timescale of this management plan.	winter					✓

6. On-going monitoring.

Current detailed records for Box Hill Common include a plant species list, with some 202 species, compiled by Box Archaeological and Natural History Society in 1981. It may be possible to add to this, particularly regarding woodland species. Also, the abundance of each species should ideally be recorded, using the DAFOR scale:

D = dominant

A = abundant

F = frequent

O = occasional

R = rare

L = local e.g. LA = locally abundant

By way of monitoring habitat condition and the effects of management, one might select several less common / indicator species and count these or map their distribution, each year e.g. orchid species, eyebright, autumn gentian and horseshoe vetch.

Butterflies would be another interesting group to monitor, perhaps by setting up a transect. This would involve somebody walking a set route through the site (covering a range of habitats), once a week, from the first week of April to the last week of September (over 26 weeks). For comparability, each walk should take about an hour and all butterflies within 10 metres of the recorder, be recorded.

As well as recording flora and fauna, it would be useful to take photographs from fixed points, to record the changing distribution of scrub. This is a simple method, not dependant on ecological expertise.

Species list for Box Hill Common - Area A

Grid reference(s): ST835692

Date of survey: 28 Jul 1997

Autumnal Hawkbit	Leontodon autumnalis
Beaked Hawk's-beard	Crepis vesicaria
Black Medick	Medicago lupulina
Bramble	Rubus fruticosus agg.
Burnet-saxifrage	Pimpinella saxifraga
Common Bird's-foot-trefoil	Lotus corniculatus
Common Knapweed	Centaurea nigra
Common Nettle	Urtica dioica
Common Ragwort	Senecio jacobaea
Common Restharrow	Ononis repens
Common Sorrel	Rumex acetosa
Creeping Thistle	Cirsium arvense
Dandelion	Taraxacum officinale agg.
Dwarf Thistle	Cirsium acaule
Field Scabious	Knautia arvensis
Goat's-beard	Tragopogon pratensis
Greater Knapweed	Centaurea scabiosa
Greater Plantain	Plantago major
Hairy St. John's-wort	Hypericum hirsutum
Harebell	Campanula rotundifolia
Hawthorn	Crataegus monogyna
Hedge Bedstraw	Galium mollugo
Hedge Bindweed	Calystegia sepium
Hedge Woundwort	Stachys sylvatica
Hemp-agrimony	Eupatorium cannabinum
Hoary Plantain	Plantago media
Hogweed	Heracleum sphondylium
Horseshoe Vetch	Hippocrepis comosa
Meadow Buttercup	Ranunculus acris
Meadow Vetchling	Lathyrus pratensis
Mugwort	Artemisia vulgaris
Oxeye Daisy	Leucanthemum vulgare
Pyramidal Orchid	Anacamptis pyramidalis
Red Bartsia	Odontites vernus
Red Clover	Trifolium pratense
Ribwort Plantain	Plantago lanceolata
Rough Hawkbit	Leontodon hispidus
Salad Burnet	Sanguisorba minor ssp. minor
Small Scabious	Scabiosa columbaria
Spiny Restharrow	Ononis spinosa
Sycamore	Acer pseudoplatanus
Tall Melilot	Melilotus altissimus
Traveller's Joy	Clematis vitalba
Tufted Vetch	Vicia cracca
White Clover	Trifolium repens
Wild Basil	Clinopodium vulgare
Wild Carrot	Daucus carota
Yarrow	Achillea millefolium
Yellow-rattle	Rhinanthus minor

Grasses

Cock's-foot
Creeping Bent
Crested Dog's-tail
False Oat-grass
Meadow Fescue
Meadow Oat-grass
Perennial Rye-grass
Quaking-grass
Red Fescue
Sheep's Fescue
Smaller Cat's-tail
Smooth Meadow-grass
Sweet Vernal Grass
Timothy
Upright Brome
Yellow Oat-grass
Yorkshire-fog

Dactylis glomerata
Agrostis stolonifera
Cynosurus cristatus
Arrhenatherum elatius
Festuca pratensis
Helictotrichon pratense
Lolium perenne
Briza media
Festuca rubra agg.
Festuca ovina agg.
Phleum bertolonii
Poa pratensis
Anthoxanthum odoratum
Phleum pratense
Bromopsis erecta
Trisetum flavescens
Holcus lanatus

Moths

Six-spot Burnet

Zygaena filipendulae

Butterflies

Gatekeeper
Large Skipper
Large White
Marbled White
Meadow Brown

Pyronia tithonus britanniae
Ochlodes venata faunus
Pieris brassicae
Melanargia galathea serena
Maniola jurtina

Species list for Box Hill Common - Area B

Grid reference(s): ST833692

Date of survey: 28 Jul 1997

Ash	Fraxinus excelsior
Black Medick	Medicago lupulina
Burnet-saxifrage	Pimpinella saxifraga
Bush Vetch	Vicia sepium
Common Bird's-foot-trefoil	Lotus corniculatus
Common Knapweed	Centaurea nigra
Common Mouse-ear	Cerastium fontanum
Common Nettle	Urtica dioica
Common Ragwort	Senecio jacobaea
Common Rock-rose	Helianthemum nummularium
Common Sorrel	Rumex acetosa
Common Toadflax	Linaria vulgaris
Dandelion	Taraxacum officinale agg.
Dewberry	Rubus caesius
Dwarf Thistle	Cirsium acaule
Greater Plantain	Plantago major
Ground-ivy	Glechoma hederacea
Harebell	Campanula rotundifolia
Hedge Bedstraw	Galium mollugo
Hedge Bindweed	Calystegia sepium
Hemp-agrimony	Eupatorium cannabinum
Hoary Plantain	Plantago media
Hoary Willowherb	Epilobium parviflorum
Hogweed	Heracleum sphondylium
Horseshoe Vetch	Hippocrepis comosa
Lady's Bedstraw	Galium verum
Meadow Vetchling	Lathyrus pratensis
Mouse-ear-hawkweed	Pilosella officinarum
Mugwort	Artemisia vulgaris
Pyramidal Orchid	Anacamptis pyramidalis
Red Bartsia	Odontites vernus
Red Campion	Silene dioica
Red Clover	Trifolium pratense
Ribwort Plantain	Plantago lanceolata
Rosebay Willowherb	Chamerion angustifolium
Rough Hawkbit	Leontodon hispidus
Salad Burnet	Sanguisorba minor ssp. minor
Small Scabious	Scabiosa columbaria
Sycamore	Acer pseudoplatanus
Tall Melilot	Melilotus altissimus
Traveller's Joy	Clematis vitalba
Tufted Vetch	Vicia cracca
White Clover	Trifolium repens
White Dead-nettle	Lamium album
Wild Carrot	Daucus carota
Wild Marjoram	Origanum vulgare
Yarrow	Achillea millefolium
Yellow-rattle	Rhinanthus minor

Grasses

Cock's-foot
Creeping Bent
False Oat-grass
Perennial Rye-grass
Red Fescue
Smaller Cat's-tail
Sweet Vernal Grass
Upright Brome
Yellow Oat-grass
Yorkshire-fog

Dactylis glomerata
Agrostis stolonifera
Arrhenatherum elatius
Lolium perenne
Festuca rubra agg.
Phleum bertolonii
Anthoxanthum odoratum
Bromopsis erecta
Trisetum flavescens
Holcus lanatus

Butterflies

Gatekeeper
Marbled White
Meadow Brown
Peacock
Small Skipper

Pyronia tithonus britanniae
Melanargia galathea serena
Maniola jurtina
Inachis io
Thymelicus sylvestris

Species list for Box Hill Common - Area C

Grid reference(s): ST834694

Date of survey: 28 Jul 1997

Ash	<i>Fraxinus excelsior</i>
Autumnal Hawkbit	<i>Leontodon autumnalis</i>
Beaked Hawk's-beard	<i>Crepis vesicaria</i>
Black Medick	<i>Medicago lupulina</i>
Burnet-saxifrage	<i>Pimpinella saxifraga</i>
Bush Vetch	<i>Vicia sepium</i>
Common Bird's-foot-trefoil	<i>Lotus corniculatus</i>
Common Knapweed	<i>Centaurea nigra</i>
Common Nettle	<i>Urtica dioica</i>
Common Ragwort	<i>Senecio jacobaea</i>
Common Rock-rose	<i>Helianthemum nummularium</i>
Creeping Thistle	<i>Cirsium arvense</i>
Dog Rose	<i>Rosa canina</i>
Dwarf Thistle	<i>Cirsium acaule</i>
Field Scabious	<i>Knautia arvensis</i>
Glaucous Sedge	<i>Carex flacca</i>
Great Willowherb	<i>Epilobium hirsutum</i>
Greater Plantain	<i>Plantago major</i>
Harebell	<i>Campanula rotundifolia</i>
Hawthorn	<i>Crataegus monogyna</i>
Hedge Bedstraw	<i>Galium mollugo</i>
Hoary Plantain	<i>Plantago media</i>
Hogweed	<i>Heracleum sphondylium</i>
Holly	<i>Ilex aquifolium</i>
Horse-chestnut	<i>Aesculus hippocastanum</i>
Horseshoe Vetch	<i>Hippocrepis comosa</i>
Lady's Bedstraw	<i>Galium verum</i>
Meadow Vetchling	<i>Lathyrus pratensis</i>
Pedunculate Oak	<i>Quercus robur</i>
Red Clover	<i>Trifolium pratense</i>
Ribwort Plantain	<i>Plantago lanceolata</i>
Rough Hawkbit	<i>Leontodon hispidus</i>
Salad Burnet	<i>Sanguisorba minor ssp. minor</i>
Small Scabious	<i>Scabiosa columbaria</i>
Sycamore	<i>Acer pseudoplatanus</i>
Traveller's Joy	<i>Clematis vitalba</i>
Tufted Vetch	<i>Vicia cracca</i>
Viper's Bugloss	<i>Echium vulgare</i>
White Clover	<i>Trifolium repens</i>
Wild Privet	<i>Ligustrum vulgare</i>
Yarrow	<i>Achillea millefolium</i>
Yellow-rattle	<i>Rhinanthus minor</i>

Grasses

Cock's-foot	<i>Dactylis glomerata</i>
False Oat-grass	<i>Arrhenatherum elatius</i>
Quaking-grass	<i>Briza media</i>
Red Fescue	<i>Festuca rubra agg.</i>

Species list for Box Hill Common

Grid reference(s): ST833692

Date of survey: 10 May 1981 - 06 Sep 1981

Agrimony	<i>Agrimonia eupatoria</i>
American Willowherb	<i>Epilobium ciliatum</i>
Annual Wall-rocket	<i>Diplotaxis muralis</i>
Autumn Gentian	<i>Gentianella amarella</i>
Biting Stonecrop	<i>Sedum acre</i>
Bittersweet	<i>Solanum dulcamara</i>
Bluebell	<i>Hyacinthoides non-scripta</i>
Bramble	<i>Rubus dasycarpus</i>
Bramble	<i>Rubus tuberculatus</i>
Bramble	<i>Rubus ulmifolius</i>
Bramble	<i>Rubus vestitus</i>
Broad-leaved Dock	<i>Rumex obtusifolius</i>
Broad-leaved Willowherb	<i>Epilobium montanum</i>
Bulbous Buttercup	<i>Ranunculus bulbosus</i>
Butterfly-bush	<i>Buddleja davidii</i>
Caper Spurge	<i>Euphorbia lathyris</i>
Carline Thistle	<i>Carlina vulgaris</i>
Charlock	<i>Sinapis arvensis</i>
Cleavers	<i>Galium aparine</i>
Clustered Dock	<i>Rumex conglomeratus</i>
Colt's-foot	<i>Tussilago farfara</i>
Columbine	<i>Aquilegia vulgaris</i>
Common Broomrape	<i>Orobanche minor</i>
Common Comfrey	<i>Symphytum officinale</i>
Common Field-speedwell	<i>Veronica persica</i>
Common Figwort	<i>Scrophularia nodosa</i>
Common Milkwort	<i>Polygala vulgaris</i>
Common Poppy	<i>Papaver rhoeas</i>
Common Spotted-orchid	<i>Dactylorhiza fuchsii</i>
Cow Parsley	<i>Anthriscus sylvestris</i>
Cowslip	<i>Primula veris</i>
Creeping Buttercup	<i>Ranunculus repens</i>
Creeping Cinquefoil	<i>Potentilla reptans</i>
Curled Dock	<i>Rumex crispus</i>
Cut-leaved Crane's-bill	<i>Geranium dissectum</i>
Daisy	<i>Bellis perennis</i>
Dame's Violet	<i>Hesperis matronalis</i>
Dogwood	<i>Cornus sanguinea</i>
Dotted Loosestrife	<i>Lysimachia punctata</i>
Elder	<i>Sambucus nigra</i>
Elecampane	<i>Inula helenium</i>
Fairy Flax	<i>Linum catharticum</i>
Feverfew	<i>Tanacetum parthenium</i>
Field Bindweed	<i>Convolvulus arvensis</i>
Field Forget-me-not	<i>Myosotis arvensis</i>
Field Horsetail	<i>Equisetum arvense</i>
Field Wood-rush	<i>Luzula campestris</i>
Fool's Parsley	<i>Aethusa cynapium</i>
Foxglove	<i>Digitalis purpurea</i>
French Crane's-bill	<i>Geranium endressii</i>

Sweet Vernal Grass
Upright Brome
Yellow Oat-grass
Yorkshire-fog

Anthoxanthum odoratum
Bromopsis erecta
Trisetum flavescens
Holcus lanatus

Butterflies

Gatekeeper
Large Skipper
Marbled White
Meadow Brown

Pyronia tithonus britanniae
Ochlodes venata faunus
Melanargia galathea serena
Maniola jurtina

Birds

Wren

Troglodytes troglodytes