



**CARAVAN CLUB ECOLOGICAL
SITE APPRAISAL**



Park Coppice Caravan Club Site
Coniston
Cumbria
LA21 8LA



General Information

Site Name and County: Park Coppice Caravan Club Site, Cumbria.

Grid Reference: SP 296 957

Area: 8.09 hectares (in a 25.5 hectare wood)

Date: 04/08/05

Recorder: Jon Mellings, Just Ecology

Weather Conditions: Overcast (100% cloud), intermittent showers, slight breeze

Site Description

Park Coppice is a large site set in an extensive area of native broadleaved woodland within 300 metres of the north shore of Lake Coniston. The 280 caravan pitches are spread out in clusters, arranged in a complex of tracks and loops branching from a central main thoroughfare. The main track traverses the gentle incline through the woodland in the direction of the lakeshore. There are natural woodland areas in and around the clearings characterised by large boulders, a small stream traverses the southern boundary of the woodland and there are wet flushes and extensive areas of Sphagnum and a range of other mosses and lower plants.

Context

The site is located close to the north shore of Coniston Water in the Lake District, England's largest National Park. The landscape of the Lake District is characterised by fells, lakes and wooded valleys. The extensive native broadleaved woodlands surrounding the site (owned by the National Trust) are typical of the upland oak woodlands, and wet woodland habitat which surrounds Coniston Water and other lakes in the region. These woodlands are classified as priority habitats both under the UK Biodiversity Action Plan (BAP) and the Cumbria Local Biodiversity Action Plan (LBAP). The woodlands are an important stronghold for the native Red Squirrel which has declined throughout much of England following the introduction of the Grey Squirrel from North America.



Habitat Information

Broad Habitats Present: Broad-leaved Woodland, Acid Grassland, Improved Grassland

BAP Priority Habitats Present: Upland Oak Woodland, Wet Woodland, Acid Grassland

Subsidiary Habitats Present: Decaying wood habitat, Streams

Plant Communities Present:

Woodland:

An extensive, 25 hectares of mature acid woodland occupying rugged, boulder-strewn terrain (Figure 1), entirely encloses the grassy caravan berth clearings. The habitat includes localised wetland areas with a diverse and luxuriant lower plant flora including Sphagnum mosses. 15 species regarded as indicators of ancient woodland were recorded, ancient woodland indicators are denoted in the text with an asterisk.



Figure 1: Woodland interior showing boulders

The woodland canopy included mature yet frequently stunted trees, predominately Pedunculate Oak *Quercus robur* with other species achieving local dominance including Silver Birch *Betula pendula* and in the wetter areas, Alder *Alnus glutinosa*. Other canopy species such as *Sessile Oak *Quercus petraea* and Sycamore *Acer pseudoplatanus* occurred less frequently. On the whole, the canopy and understorey trees were fairly well spaced, allowing reasonable levels of sunlight to penetrate the canopy. The dappled conditions have created suitable conditions for a range of woodland ground flora species and invertebrates.

NB: Alder stands occurring in the wetter areas can be considered Alder carr wet woodland habitat, wetland ground flora often characterised these areas.

Understorey trees included *Holly *Ilex aquifolium*, Hazel *Corylus avellana*, Alder, Rowan *Sorbus aucuparia* and occasionally Grey Willow *Salix cinerea*, Hawthorn *Crataegus monogyna* and sapling Ash *Fraxinus excelsior*. Many of the understorey Alder and Hazel were multi-stemmed, indicative of a past history of coppicing, however, there was little evidence of recent coppice management. Scrub species included Bramble *Rubus fruticosus* agg., with Honeysuckle *Lonicera periclymenum* occurring frequently. Honeysuckle also occurred on understorey trees in as a climber. Blackthorn *Prunus spinosa* was only rarely found during the survey. *Bilberry *Vaccinium myrtillus*, a woody species characteristic of upland acid woodlands and moors also occurred prolifically especially on the drier, bolder strewn banks.

The ground flora varied with the hydrology of the site, the wetter areas often occupying rugged, boulder-strewn banks. It included typical species of dry acid grassland and moorland as well as species found more exclusively in woodland. Wavy Hair Grass *Deschampsia flexuosa* was dominant throughout much of the drier terrain, occurring to a lesser extent in the wetter areas. Other abundant to locally dominant grasses included *Creeping Soft Grass *Holcus mollis*, Yorkshire Fog *Holcus lanatus*,

Common Bent Grass *Agrostis capillaris*, Creeping Bent Grass *Agrostis stolonifera* and Wood False Brome *Brachypodium sylvaticum*. Purple Moor Grass *Molinia caerulea* was also fairly abundant, often frequenting the wetter areas of the wood with another tussock-forming species, Tufted Hair Grass *Deschampsia caespitosa*, also occurring regularly. Other species occurring to a lesser extent included Sweet Vernal Grass *Anthoxanthum odoratum*, Velvet Bent Grass *Agrostis canina*, *Bearded Couch Grass *Elymus caninus* and Smooth Meadow Grass *Poa pratensis*.

Several sedges were recorded including woodland species such as *Remote Sedge *Carex remota* frequently occurring in the wetter areas with *Pendulous Sedge *Carex pendula*. *Wood Sedge *Carex sylvatica* was occasional as was Common Sedge *Carex nigra*. Soft Rush *Juncus effusus* was locally abundant in the wetter habitat with Compact Rush *Juncus conglomeratus* occurring to a lesser extent.

Bracken *Pteridium aquilinum* was locally dominant, forming stands intermittently throughout the site with other common fern species of which the most frequent were Broad Buckler Fern *Dryopteris dilatata* and *Hard Fern *Blechnum spicant*.

The most abundant herb species included acid grassland plants such as Tormentil *Potentilla erecta* and Heath Bedstraw *Galium saxatile*, with more specialised woodland herbs including * Wood Sorrel *Oxalis acetosa*, Enchanter's Nightshade *Circaea lutetiana*, *Yellow Pimpernel *Lysimachia nemorum*, *Bluebell *Hyacinthoides non-scripta* and Wood Sage *Teucrium scorodonia*. Less frequently recorded species included *Wood Speedwell *Veronica montana*, Wood Avens *Geum urbanum*, Common Dog Violet *Viola riviniana*, Herb Robert *Geranium robertianum*, *Golden Rod *Solidago virgaurea*, Broad-leaved Willowherb *Epilobium montana*, *Primrose *Primula vulgaris*, Selfheal *Prunella vulgaris*, Hedge Woundwort *Stachys sylvatica*, Common Figwort *Scrophularia nodosa*, Foxglove *Digitalis purpurea* and Dandelion *Taraxacum officinale* agg.

Other species confined to the wettest areas with shallow surface water over peat included Floating Sweet-grass *Glyceria fluitans*, Marsh Bedstraw *Galium palustre*, Meadowsweet *Filipendula ulmaria*, Common Water Starwort *Callitriche stagnalis* and Common Valerian *Valeriana officinale*. In the wetter hollows throughout the woodland mosses and liverworts proliferated including *Sphagnum* (not identified to species. Figure 2).

A small triangle of Hazel coppice was located at the north-western edge of the woodland area, in a space defined by two converging dry stone walls at the site boundary.



Figure 2: Sphagnum (more shaggy to left of picture) and an unidentified moss (possibly *Polytrichum commune*)

Grassland Communities:

Much of the more ecologically interesting grassland habitat on the site occurred as a component of the woodland ground flora and was consequently described in the woodland section above. Otherwise, the main areas of grassland were the mowed amenity grassland habitat in the clearings throughout the main caravan park area.

Here the sward was predominately seeded with improved grassland species such as Perennial Rye Grass *Lolium perenne*. Other abundant and locally dominant grasses included Smooth Meadow Grass, Annual Meadow Grass *Poa annua*, Common Bent Grass, Yorkshire Fog and to a lesser extent, Creeping Bent Grass, Sweet Vernal Grass and Red Fescue *Festuca rubra*. The only abundant herb species were White Clover *Trifolium repens* and Creeping Buttercup. A range of other herbs occurring less frequently included Greater Plantain *Plantago major*, Selfheal, Germander Speedwell *Veronica chamaedrys*, Daisy *Bellis perennis*, Dandelion, Ribwort Plantain *Plantago lanceolata* and Meadow Buttercup *Ranunculus acris*. Locally at the woodland edges, there were small patches of taller acid grassland sward with Wavy Hair Grass, Tormentil, Heath Speedwell and Bilberry. Also several woodland herb species occasionally crept into the shaded edges of the mown sward. These included: Wood Speedwell, Enchanter's Nightshade, Yellow Pimpernel, Marsh Thistle *Cirsium palustre* and Wavy Bitter-cress *Cardamine flexuosa*. Another species frequently encountered in the woodland edge habitat around the caravan berths was the introduced alien Montbretia *Crococsmia x crocosmiiflora*.

Woodland edge scrub species included Bramble, Cleavers *Galium aparine* and Bracken, with trees occurring at the woodland edge being mostly Pedunculate Oak, Silver Birch, Grey Willow, Rowan and Hazel.

Wetland:

The wetland habitat has been largely described in the woodland section (above), in addition, several small streams passed through the woodland, these occupied mossy, fern rich gullies but lacked obvious aquatic flora.

Decaying wood habitat:

The woodland habitat included a considerable resource of standing and fallen decaying wood, a valuable resource for many species of invertebrates and fungi. During the survey the Birch Polypore *Piptoporus betulinus*, a bracket fungus, was frequently recorded on dead and dying Birches.

**Habitat Evaluation**

The fifteen species of ancient woodland indicators, together with banks suggest a long history of woodland on the site. The name of the site Park Coppice, together with numerous multi-stemmed Hazel and Alder trees indicate a history of coppice management (though 'Park Coppice' is a name likely to have its origins in the 18th or 19th Century). The woodland species composition is fairly typical of upland oak woodland on rugged terrain, a UK BAP habitat also included in the Cumbria LBAP.

There is not much evidence of recent woodland management, although there are occasional stumps of sawn trees and log piles in certain areas. Many parts of the woodland are, however, fairly open, due to some extent to the proliferation of large boulders over the site (displacing trees). The multi-stemmed Hazel and Alder over much of the woodland have clearly not been coppiced for many years; however, the small patch of Hazel in the north-western edge of the woodland area had evidently been coppiced more recently, perhaps within the past twenty years.

Currently much of the woodland is in favourable condition, with sufficient light levels penetrating the canopy to enable some of the less shade tolerant ground flora species to persist as well as providing sunny, sheltered habitat for the more warmth loving woodland invertebrates such as hoverflies, bees and wasps and beetles such as the coppice associate, the Hazel Leaf-rolling Weevil.

The topography and varying degree of drainage across the site provides a wide range of conditions resulting in marked changes in plant communities, from dry acid grassland to wet sphagnum bog/Alder carr habitat. There are some patches of tall grassland on the raised woodland banks at the edges of the more intensively managed caravanning areas. These provide important sheltered, yet sunny, habitat for invertebrates as well as providing good foraging habitat for woodland birds and mammals. There was generally a good resource of decaying wood on the site often occurring in fairly open areas of woodland beneficial to woodland invertebrates.

Some parts of the woodland are in danger of becoming over-shaded notably an area colonised by fairly dense stands of Birch towards the southwest woodland boundary. Areas such as this would benefit from some selective thinning.

The mown grassland clearings within the site itself were generally species poor, but supported a reasonable diversity of species in some areas and local patches where the grassland had been eroded provided potential habitat for ground dwelling invertebrates such as solitary bees and wasps.

The large area of diverse native broadleaved woodland, provides some excellent habitat which due to the rugged terrain, requires less intensive management than comparable woodland habitats in more hospitable terrain. The diversity of the site could be improved with some relatively small changes in management, possibly some selective thinning of trees, and there is scope for resurrecting coppice management, perhaps in a small area of the site. The current management is evidently suitable for sustaining the population of Red Squirrel, however, the maintenance of a good range of fruiting trees and scrub such as Hazel, Birch and Bramble should be a consideration.



Species Information

BAP Species Seen: None (but Red Squirrel definitely on site, see below).

BAP Species Potential: The site supports the native Red Squirrel *Sciurus vulgaris*, however, none were seen during the survey. Red Squirrel is protected under schedules 5 and 6 of the Wildlife and Countryside Act, 1981, appears on the IUCN Red List of threatened animals (1996) for species occurring in UK. Red Squirrel is also subject of a Species Action Plan (SAP) in the UK BAP and the Local BAP for Cumbria.

Other Noteworthy Species: The Hazel Leaf-roller *Apoderus coryli*, a hoverfly *Sericomyia silentis*

Flora:

The woodland habitat supported a rich diversity of trees and flora typical of upland oak woodlands. Collectively the plant communities recorded at the site were of greater interest than any one particular species. The optimal time for surveying woodland ground flora is the spring and early summer. Most species are in flower at this time and the vegetative parts of certain species such as Wood Anemone *Anemone nemorosa* and Bluebell *Hyacinthoides non-scripta* are ephemeral in nature and their withered remains become increasingly difficult to spot later in the season. Although the current survey was conducted in August, 15 species of ancient woodland indicators were still recorded in the woodland. These included tree species Holly and Sessile Oak, ground flora including Bilberry, Wood Sorrel, Wood Speedwell, Yellow Pimpernel, Golden Rod, Primrose and Bluebell. Grasses including Creeping Soft Grass and Bearded Couch Grass as well as sedges such as Remote Sedge, Wood Sedge and Pendulous Sedge and the Hard Fern.

Not included in this list were other species forming important sub-communities within the habitat. Acid grassland communities comprising species such as Wavy Hair Grass, Tormentil and Heath Bedstraw were also present in the woodland. In addition, the habitat appeared to support interesting and diverse lower plant communities, upland oak woodlands of the Lake District are known to provide excellent conditions for mosses, liverworts, lichens and fungi and it is likely that the lower plant flora of this site is no exception.

Invertebrates:

The overcast and rainy conditions were sub-optimal for recording invertebrates. Therefore only a handful of species were recorded from a site with potential to support a diverse and interesting invertebrate fauna. Species recorded included: Tree Slug *Limax marginatus*, in the woodland, this slug is associated with mature broad-leaved woodland habitat. The Hazel Leaf-roller *Apoderus coryli*, a bright red and black weevil whose larvae develop in leaf rolls constructed by the adults (Figure 3), this species is local in northern England where it is primarily associated with Hazel coppice and hedgerows. The Giant Crane-fly *Tipula maxima* is a fairly common species associated with wet woodlands, the larvae develop in wetland margins. The only butterfly recorded was the common Meadow Brown *Maniola jurtina*, a tall grassland species recorded in the more open grassy clearings of the site. Two hoverflies were recorded the Marmalade Hoverfly *Episyrphus balteatus*, a ubiquitous migrant species and *Sericomyia silentis* a species associated with heath and bog habitats especially in northwest UK. The only bee recorded was the very common Buff-tailed Bumblebee *Bombus terrestris*, a ground nesting species.



Figure 3: A leaf roll of the Hazel Leaf Roller (on Hazel)

The clearings occupied by the caravan berths provided sunny, sheltered habitat potentially suitable for many species of invertebrates especially those associated with woodland clearings.

Herptofauna:

No reptiles or amphibians were recorded during the survey and the habitat was unsuitable for most species of reptile. Many reptiles for which the site supported at least some potential habitat, are uncommon as far north as the Lake District. These include Grass Snake *Natrix natrix* and Slow Worm *Anguis fragilis*, whilst Adder *Vipera berus* prefers drier, open heathland this far north. The species most likely to occur in the drier, sheltered grassland edges is the Common Lizard *Lacerta vivipara*.

The wetland habitat of the more open wooded areas and immediately south of the site is potentially suitable for common amphibians, Common Frog *Rana temporaria*, Common Toad *Bufo bufo* and newts such as Palmate Newt *Triturus helveticus* and possibly Smooth Newt *Triturus vulgaris* and the rare Great-crested Newt *Triturus cristatus*. The damp, rugged nature of the woodland provides many potentially suitable hiding places for amphibians outside of the breeding season and for hibernation purposes.

Avifauna:

The ancient oak woodland provides excellent habitat for a range of arboreal bird species such as Pied Flycatcher *Ficedula hypoleuca*, a summer migrant, as well as residents including Treecreeper *Certhia familiaris*, Nuthatch *Sitta europaea* and Tawny Owl *Strix aluco* which nest on the site. Woodland species recorded during the survey included Goldcrest *Regulus regulus*, Great-spotted Woodpeckers *Dendrocopus major* and Willow Warbler *Phylloscopus trochilus*. Other common bird species recorded during the survey included: Robin *Erithacus rubecula*, Wren *Troglodytes troglodytes*, Chaffinch *Fringilla coelebs*, Great Tit *Parus major*, Blue Tit *Parus caeruleus*, Swallow *Hirundo rustica*, and Blackbird *Turdus merula*.

Mammals:

Red Squirrel *Sciurus vulgaris* is regularly recorded on the site and frequently visits the feeders provided for it at the site. The native Red Squirrel has declined heavily in the past 100 years, having been replaced by the introduced Grey Squirrel *Sciurus carolinensis* over much of its former range. Though the main reason for the Red Squirrel's decline is due to its displacement by Greys, other factors affecting the species include changes in woodland management. Other more common mammals recorded from the site include Badger *Meles meles*, Rabbit *Oryctolagus cuniculus* and European Mole *Talpa europaeus*, only the latter two of these being recorded during the current survey.



Species Evaluation

The woodland surrounding the caravanning areas clearly supports a great diversity of species. There was a wide range of lower-plants such as mosses (including sphagnum in the wetter areas), lichen, fungi and liverworts. The importance of these groups on the site can only be understood following specialist surveys by lower plant experts.

Of the higher plants, the site was distinguished more by the diversity of ancient woodland indicator and acid grassland species than by the rarity of any one particular plant. The woodlands were botanically rich, and particularly attractive species characteristic of this habitat included: Wood Anemone, Bluebell, Golden Rod, Yellow Pimpernel, Wood Sorrel, Primrose and Tormentil.

As with lower plants, the invertebrate fauna was in no way fully explored during the survey, this was due to unsuitable weather conditions and also comprehensive invertebrate surveys are highly specialised and beyond the scope of this survey and report. Many of the species occurring here will be woodland species, associated with the dominant tree species, and species associated specifically with woodland ground

flora and decaying wood. An example of an invertebrate the larvae of which develops in rotting wood found on the site is the giant crane fly species *Tipula maxima*. The Tree Slug is another species associated primarily with damp, ancient woodland habitats. The presence of the Hazel Leaf-roller Weevil, a species closely associated with Hazel coppice, indicates that the habitat is suitable for other woodland invertebrates favouring more open conditions.

The woodland provides excellent habitat for woodland birds the site clearly supported a good range of species. Nest boxes and feeding stations set up around the site provided extra nesting opportunities for breeding birds on the site. Species worth mentioning recorded during the survey include Goldcrest, Greater Spotted Woodpecker and Chiffchaff. However other species have been recorded by the site wardens including Pied Flycatcher an attractive migratory species with a preference for ancient upland oak woods in western England. Treecreeper, Nuthatch and Tawny Owl have also been recorded, the site has suitable breeding habitat for all these species as well as a range of other woodland specialists.

The woodlands around Coniston Water are important for the native Red Squirrel. The site's woodlands are privileged to support a population of this UK BAP priority mammal. Loss and fragmentation of wooded habitats is thought to have contributed to the decline of Red Squirrel in the UK, however, the most important factor appears to be competitive exclusion by the North American Grey Squirrel, this is thought to partly be due to Red Squirrels being susceptible to the parapox virus carried by Greys. Research suggests that Red Squirrels are less vulnerable to competition to Greys in conifer woodland. Theoretically then, the Red Squirrels of the predominantly broadleaved woodland of Park Coppice would be susceptible to competition by Greys should Greys reach this part of the Lake District.

In the absence of Greys, Red Squirrels can live in a range of different woodland habitats provided there are adequate food resources. Red Squirrels feed on leaf shoots and flowers in spring, and fruits and nuts in late summer and autumn. Being omnivorous, they supplement their diets with insects and other small animals. It is likely that the resource of Hazel nuts and blackberries on the site are important for the mammal. Feeding stations for the squirrels are provided on the site. Red Squirrels are said to be fairly adaptable to change (i.e. woodland management) being able to colonise new areas if trees utilised by the squirrel is felled.

Management Recommendations

- Thinning of woodland: Selective felling of trees, especially dense new growth of trees such as Birch in the south west of the site. This would enable greater light levels to penetrate the canopy in some areas of the site. Ideally management should be undertaken between October and early February, to minimise impact on nesting birds and other wildlife.
- Maintain small patches of exposed sand, particularly on banks at the woodland edges. These provide nesting habitats for solitary bees and wasps (NB: unlike the social wasp species, solitary bees and wasps are shy, elusive and harmless to man).

-
- Leave at least some fallen and standing deadwood *in situ*, this provides habitat for dead wood invertebrates, which, in turn provides a valuable food resource for insectivorous woodland birds such as woodpeckers and warblers. Outside of the breeding season in spring, fallen dead wood also provides shelter for amphibians such as Great-crested Newts *Triturus cristatus* and Common Toad *Bufo bufo*.
 - Avoid depositing heaps of grass within the woodland area, decomposition of such material may have an adverse affect on the woodland ground flora, by acting as a mulch and also causing nutrient enrichment in the woodland soil, thus encouraging weed species such as docks, thistles and nettles to flourish at the expense of more sensitive woodland species.
 - Avoid using herbicides or pesticides on the grassland areas adjacent to the woodland edge.
 - Where feasible, maintain two metre wide strips of taller grassland at the woodland edge. (However, there was evidence of rabbit grazing in certain areas, so this may be impractical),
 - Continue providing nest boxes on the site.
 - Continue providing feeding stations for birds and Red Squirrels on the site. (Provide food for squirrels during mid-summer – when resources are surprisingly short, as well as through the winter months.)

Further Suggestions to Enhance the Wildlife Value of the Site

- Consider resurrecting coppice management of Hazel on the site. The area of coppice at the north western edge of the woodland provides a possible area for coppice management. Typically coppice is managed on a rotation of seven or eight years. A patch of coppice called a ‘coup’ comprising of a number of Hazel stools is cut to the base every seven or eight years. Typically a rotation is maintained so that there are stands of different aged growth at any given point. It is not recommended that large areas are coppiced at this site. Small patches should be maintained to provide variation in the habitat structure of the woodland as a whole. Various organisations devoted to coppicing exist and management can be sought from relevant wildlife organisations such as the Cumbria Wildlife Trust.
- Continue to maintain written records of species recorded in the park and encourage visitors to the site to contribute records.
- Consider creating a woodland nature trail or providing an interpretation board illustrating some of the interesting species and habitats in the woodland.
- Consider erecting bat boxes on the site.

Further Survey or Information Requirements

- Detailed lower plant surveys (mosses, lichens, liverworts and fungi).
- Invertebrate surveys to establish more detailed invertebrate records useful for informing management.
- Additional botanical surveys between mid April and May.
- Bat surveys.