

2 THE ECOLOGY OF DOWNLEY COMMON

2.1 Wildlife habitats

The origins of Downley Common's range of wildlife habitats have been outlined in Section 1.5, and their distribution mapped in Plan C. Here we consider in more detail the individual habitats, together with their flora and fauna, under the headings of (1) grasslands, (2) scrub and hedges, (3) trees and woodland and (4) wetlands.

2.2 Grasslands

Grassland communities are represented by five main kinds: (1) the coarse pastures of the road-verges and tracksides; (2) the more species-rich hay-meadows or "neutral" grasslands (so-called because of their association with soils of near-neutral reaction); (3) similar grasslands of the more acid soils, typically with more of a heathy flora; (4) the fine, level sward of the cricket-field which is the sporting equivalent of the farmer's ley, and with a similarly narrow spectrum of grasses and herbs; and (5) the communities - again rather poor in species of the paths and more heavily trampled or disturbed areas. Other types of grassland occur as part of the Common's woodland and wetland habitats, but these are described in their turn under those other headings.

The coarse pastures of the roadsides and rougher areas mark those situations where conditions are most nutrient-rich, and so are also said to be eutrophic. They may in addition include a ruderal element - species which favour disturbed ground. This is the NVC's MG1 community (Rodwell, 1992), of which tall oat-grass is the classic example. Others on Downley Common include couchgrass, rough-stalked meadow-grass, stinging nettle, cow parsley, hogweed, greater bindweed, cleavers and white deadnettle, as well as spear and creeping thistles, broad-leaved dock, mugwort, ground-elder and even the occasional horseradish. Rose-bay willow-herb is another familiar example, its handsome magenta flower-spikes marking summer's turning point, and its tiny seeds with their silky plumes always seeming to get stuck to the best blackberries. It is among these communities that the occasional garden-escapes turn up, such as ground-elder and the notorious Japanese knotweed.

Although of limited interest botanically, these coarse pastures provide valuable cover for small mammals and invertebrates, and it is this sort of vegetation which attracts the rare (though increasing) Roesel's bush cricket which Chris Damant identified for us during one of our visits to the Common.

Next the neutral or hay-meadow community, occurring over much of Downley Common's grassy stretches, but especially well seen opposite the Le De Spencers Arms. Grasslands of this type (MG5 in the NVC's scheme) often overlap or merge with the previous type, and indeed share some of the characteristic species, but a useful indicator, of which there is an abundance on Downley Common, is lesser knapweed. Others include crested dogstail, red and tall fescues, meadow foxtail, cocksfoot, Yorkshire fog, lesser catstail, yarrow, common and hoary ragworts, goatsbeard, field bindweed, wild carrot, upright hedge parsley, common St John's-wort, meadow vetchling, bird's-foot trefoil, red clover, ribwort plantain and the semi-parasitic red bartsia.

Here, the flowers (especially of knapweed) provide a rich source of nectar for summer insects, and in addition bird's-foot trefoil is the favoured larval food-plant of the common blue butterfly which undoubtedly breeds at Downley. But the grassy vegetation as a whole is marvellous invertebrate habitat, not least for grasshoppers of which another important species, the long-winged cone-head, was noted by Chris Damant.

The acid grasslands (U2 in the NVC scheme) mark the heathier parts of Downley Common, these in turn probably associated with more gravelly strata or with loess (wind-blown silt). This is where the remaining pockets of heather are still to be found, and other key species include sheep's fescue, early and wavy hair-grasses, moor mat-grass and common and sheep's sorrel - larval food-plants of the small copper butterfly. Though found to some extent also in the MG5 pastures, bracken and catsear are more abundant in the acid areas, as is the exquisite harebell.

The more limited flora of the sports field consists largely of turf-forming perennial ryegrass, bents and fescues, but contains in addition occasional daisy, dandelion, autumn hawkbit, ribwort and hoary plantains, common mouse-ear and other herbs. It should not be written off as wildlife habitat, since it harbours its own invertebrate community such as earthworms and froghoppers, which bring in ground-feeding birds such as robin, blackbird and starling, as well as the occasional winter migrants.

Finally the communities of the pathways and track-sides, able to withstand, or to recover from, repeated trappings and occasional inundations. Annual meadow-grass is a common example, with the tiny toad-rush in the wetter areas, but others include greater plantain, knotgrass and the mealy-looking cudweed.

2.3 Scrub and hedges

Scrub is frequently seen as a negative factor, and of course this is true enough when grassland habitats, or access to footpaths, are threatened or encumbered. As a habitat in itself, however, it is of substantial importance, whether as isolated bushes, or more continuous thickets, particularly as cover for small mammals, or as nesting and feeding cover for birds. The association of much of this scrub, moreover, with the Common's many dells, adds further to the interest, and it is here that rabbit, muntjac and badger find refuge.

The main scrub species include hawthorn, blackthorn, briar and bramble - all typical components of the NVC's W21 community (Rodwell, 1991). Gorse is of particular significance on account of its substantial decline in the past few decades across the Chilterns. Other species include hazel, elder and crab apple, the latter, along with sapling oak, ash, birch, field maple, cherry and sycamore, forming a community which essentially merges with the woodlands.

Hedges occur in three main forms. There are those bordering the commonside properties, including the recently laid example alongside the Well Cottage orchard (which also contains box), as well as John Willson's spectacular holly hedge! Then there are the much more substantial, though still regularly trimmed, farmland hedges adjoining Cookshall Farm. Thirdly there is the very substantial grown-out hedge, now essentially a tree-belt, skirting the inner side of the track leading from Blacksmith's Cottage to the Chilton/Spinney/Lantern Cottage enclave north of Plomer Green lane (N).

Component species are essentially the same as for the scrub communities, except that ivy is more abundant.

2.4 Trees and woodlands

Scattered trees of varying age occur about the Common, most of these resulting from natural regeneration, and often accompanying pockets of scrub, as noted above, where an idea can be gained of the main species. Others occur in the hedgerows, or as more substantial clumps.

More extensive stands of oak and beech woodland proper (and reminiscent of the NVC's W14 community) occupy much of the north and south-eastern parts of Downley Common, though as already mentioned, much of this is of so-called secondary growth, the trees having sprung up once regular grazing management lapsed earlier in the century. It is within these woodlands that the spectacular old veteran pollards are to be found, these also of both oak and beech.

Accompanying and understorey species in these woodland tracts include birch, wild cherry, holly, ivy, honeysuckle, bramble and wild raspberry. The field and ground flora are generally fairly sparse, but include species such as wood false-brome, tufted hair-grass, wood melick, wood millet, lords-and-ladies, bluebell, enchanter's nightshade, wood sorrel, wood dock and ground ivy, as well as pockets of more of a grassy vegetation with roughstalked meadow-grass and creeping soft-grass, as well as occasional bracken again.

The woodlands attract their own characteristic fauna, among which birds include the great spotted woodpecker and nuthatch, and mammals the grey squirrel. The edible dormouse (*Glis Glis*) is

reputed to be about, having spread from its main enclave in the Tring area. Purple hairstreak butterflies were seen in abundance during the 1995 survey, and may well now breed regularly. Their caterpillars feed on the foliage of oak. The speckled wood is a generally more common woodland butterfly to be seen in the these parts of the Common . Moths appear to be abundant, and would repay further study.

2.5 Ponds

Downley Common's main pond - Manning's Pond at the northern end towards Hunts Hill - has been a prime focal point in the management of the Common, and literally came to fame in the late 1980s when DCPS's routine clearance work resulted in the reappearance after many decades of the extremely rare starfruit (Showler, 1994). As a result of its unique ecology, this celebrated little has gone very much into hiding again, and the predominant species are floating sweet-grass, soft rush, lesser pond-sedge and water starwort, with sallow regenerating in places. Summer invertebrates include southern hawker and ruddy darter dragonflies and common blue damselfly, while it is also home to frogs and common newts.

Although falling within the Cookshall Farm boundary, it is worth once again pinpointing the small pond on the opposite side of the boundary hedge to Manning's Pond, remarkable for its persistent water-holding powers, and in which the unusual large-leaved duckweed grows.

2.6 Other habitats

Although occurring mainly within the scrub or woodland habitats, the many old clay (and possibly some chalk) workings about the Common have left a corresponding scatter of pits and dells. Best known is the substantial cluster towards Oaks Wood and Hunts Hill - a popular haunt for stunt cyclists for many generations though there are many more hidden away in the Common's less disturbed and more secret places.

Inevitably the ecology of Downley Common benefits not only from the additional expanses of woodland, particularly along its eastern flank, and from its continuation northwards as Naphill Common, but also from the various semi-domestic habitats both alongside and in its midst, among which gardens and at least some of the older buildings feature most prominently. Even the expanses of Cookshall Farm have begun to attract the Chilterns' spectacular red kites, which are bound to stray across to Downley Common sooner or later!

3 MANAGEMENT RECOMMENDATIONS AND PRESCRIPTIONS

3.1 Aims and objectives

3.1.1 Overall aims

The overall aims for the continuing management of Downley Common relate to exactly the same set of topics as for Naphill, namely (1) forestry, (2) landscape, (3) ecology, (4) access and (5) coordination of effort. These aims can be expressed more explicitly as follows:

- (1) To undertake such silvicultural management of the main woodland areas as to promote their continuing spontaneous development, taking full advantage of their capacity for natural regeneration, extracting any timber strictly on a traditional and sustainable basis, and leaving selected areas undisturbed.
- (2) To safeguard the attractive appearance of the landscape, bearing in mind its inclusion within the Chilterns AONB, taking steps to protect those features of known historic interest and to restore to their former more open character those parts of the commons most recently invaded by scrub.
- (3) To promote optimum biodiversity throughout the property by appropriate management of all its wildlife habitats, with special attention to the needs of individual plant and animal species of particular significance.