

# **THE WILDLIFE OF MAGDALEN FARM**

  

## **AND ITS CONSERVATION**



a landscape for learning

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# **THE WILDLIFE OF MAGDALEN FARM AND ITS CONSERVATION**

## **INTRODUCTION**

This report is a summary of 30 site visits to Magdalen farm over the period of a year from June 2007 to July 2008 with some references to more recent developments. Apart from a number of moth-trapping sessions, observations were made during the middle of the day from 10.00-15.00. The work was carried out by an experienced general naturalist with a specialist interest in butterflies and moths.

The purpose of this survey was to identify as much flora and fauna as time and expertise would allow in order to make recommendations for wildlife management in conjunction with organic farming practice.

While not overlooking the more commonplace, the surveyor was intent on finding areas of greatest biological diversity and any unusual or rare species which would indicate the conservation value of the site and guide management decisions.

After a general description of the site, the report describes in detail areas of particular interest, offers ecological impressions and considers implications for conservation. Species lists of some groups of flora and fauna are appended and offer an immediate indication of what wildlife can be found currently at Magdalen.

As far as is known, the only previous conservation report on Magdalen farm was produced by Charlie Radcliffe in 1998: "Conservation at Magdalen Farm". At that time the central focus of an "environmental management strategy" was "to enhance wildlife species diversity – a simple yardstick for measuring the ecological vitality of the various interlinked habitats at Magdalen farm". Reference to some of its findings will be made in this report.

Magdalen farm is designated as "A Site of Nature Conservation Interest" by the Dorset Wildlife Trust.

## **THE SITE**

Magdalen is a 52.8 ha (132 acres) mixed organic farm and education centre situated in the upper Axe valley on the Dorset bank of the river opposite the village of Winsham in Somerset. Its land descends gradually to the slightly steeper slopes that border the narrow floodplain through which a mile of the river meanders. Three small tributary streams run through steep-sided wooded dingles before issuing into water meadows.

Geologically, the underlying rock is the middle lias, specifically, the Eype clay member of the Dyrham formation comprising mudstone and siltstone. However, on the very western edge of the site is a band of upper greensand, a fine to medium-grained sandstone. There are extensive overlying alluvial deposits in the river valley. On balance, the soil is neutral, though tending towards acidic on the greensand.

Ecologically the richness of the site will be determined by the way the land has been managed and by landuse in the surrounding area. In broad terms, Magdalen farm is of a

piece with neighbouring farms along this stretch of the valley with meadow and pasture interspersed with marshy areas along the river and on the lower slopes, while arable fields are more prevalent higher up. Though there is a larger area of (mixed) woodland 2km to the west, for the most part the area is dotted with small to medium-sized copses. Generally speaking, farming in this part of the country is mixed and not unduly intensive.

The 1841 tythe map is a good starting point for ascertaining the history of landuse at Magdalen (Maudlin farm on OS map). The landscape pattern described above clearly obtains with the addition of fairly extensive orchards close to the farm and the then more numerous neighbouring dwellings. Of particular interest is the portion of Maypole Close given over to crops and the island of pasture in Long Common. The latter is now a marshy area and has probably been traditionally left unploughed.

The recent history of landuse at Magdalen can be taken as an indicator of current biodiversity. From the 1940s to 1975 it was a mixed dairy farm. For the next 10 years cattle were replaced by sheep, on average about 600 and only the top fields – Long Common and Springhead – were ploughed. In 1985 the farm was purchased by an East Anglian farmer who apparently “ploughed everything in sight” to grow mostly oats and barley. However, neither Higher and Lower Kensall, the water meadows or the steeper riverine slopes were ploughed. In 1990, the farm was bought by Alan Heaks, who made a considerable investment in developing Magdalen as an organic farm and education centre. Initially the main focus was on institutional development and the building work that this entailed. Intensive farming ceased and livestock were kept in low numbers, at first 10-20 cattle and then more recently 10-60 sheep. Under recent management there has been a focus on growing organic vegetables in Rack Close and Higher Orchard while the educational use of the farm has developed rapidly. Currently, plans to redevelop the farm are being considered with the introduction of more livestock, the growing of feed for them and the sale of hay from the water meadows which have been cut only occasionally over the years.

## **THE SURVEY: THE SURVEYOR'S FIRST IMPRESSIONS**

My first visit to Magdalen farm was made on a rather cool late June day of intermittent sunshine. As a naturalist I was encouraged to find no evidence of concerted agriculture apart from vegetable growing. The whole site was grassland apart from a copse and some scrub. The river Axe and adjoining water meadows were the most distinctive feature but my eye was caught by the steeper grassy slopes above the floodplain which appeared to “have potential”. I was dismayed to see the extent of the spread of Himalayan balsam. A quick glance at the meadows showed more floral diversity where there were banks. It was good to hear a skylark, a declining farmland bird, over Long Common but otherwise the birdlife was unexceptional. A few common butterflies were braving the weather but there was nothing out of the ordinary. However, along the river there were considerable numbers of banded demoiselle (damselfly), with many more males than females in evidence. Everything suggested that much closer investigation was required; most of nature does not readily meet the eye.





## ALFORD'S GOIL COPPICE

### Site description

Although just 1.18 acres (0.472 ha), AGC is the only piece of mature woodland at Magdalen. It is a "secondary wood" not a relic of ancient woodland. It is not marked on the tithe map of 1841 or a map of circa 1860. From the size of the largest oaks and ash, the wood appears to be around 110-130 years old.

The name of the wood, its shape and its site, growing on steep "dingle" slopes, suggests that it developed from a copse on unfarmable land and was possibly retained for game-harbours purposes. The species-mix of the wood is typical of the upper Axe valley topography and geology with its combination of Middle Lias and Upper Green Sand-derived soils which are either mildly alkaline or mildly acidic but broadly neutral and base-rich. Among the tree species in AGC, ash is widespread, readily regenerates and is indicative of the latter soil type. It seems unlikely therefore that the wood started as a plantation though some of the oaks may have been planted.

A recent survey of AGC revealed a tree layer in the higher wood nearly equally composed of mature pendunculate oak and ash (34/38) and a lower wood where the balance swung towards ash owing to a grove of 20 year old trees, possibly regeneration, and where willow and alder occur (8/3) as the wood merges with water meadow edge scrub.

In the shrub layer, hazel (63) was fairly uniformly distributed though not particularly vigorous, because of the closed canopy, though ash is the least shading of common broadleaved species. Holly is more shade tolerant and was growing quite prolifically (49). Blackthorn (8) was confined to the western edge while hawthorn (26) was evenly distributed but mostly small and straggly. Of particular interest was a row of five elm trees which had reached a diameter of 15 cms or so without succumbing to Dutch elm disease. These trees appear to be a hybrid showing features of English, wych and smooth-leaved elms.

Despite the mostly closed canopy enough light penetrates to sustain a moderately rich herb layer, at least in parts. Of note are some of the plant species Rackham identifies as ancient woodland indicators giving them a score of 1 to 18 from least to most indicative. From a list of 80, AGC has the following species which score as follows: hairy woodrush (15), wood anemone (15), moschatel (12), wood sorrel (10), early purple orchid (8), giant fescue (7), yellow pimpernel (6), male fern (6), dogs mercury (3), primrose (3), opposite-leaved golden saxifrage (3), a selection probably representative of over 100 years of woodland ecological development on this type of site.

From a botanical point of view, a major feature of AGC is the plant communities of the dingles, particularly where they are least disturbed as at the head of the main stream. The fern, moss and liverwort complexes require close examination. As several mature ash trees have fallen, with one across the stream adding to the waterlogged debris, conditions have been suitable for fungal growth and the wood as a whole has been comparatively rich in fungi. Readily recognisable species noted have been: hairy curtain crust, cramp balls, peeling oysterling, giant funnel, clustered toughshank, olive brittlegill, honey fungus, scaly webcap, willow bracket, common puffball and chanterelle.

The special ecological value of this site lies in its not having undergone woodland management for a considerable period. Nothing appears to have been done apart from the planting of a small selection of hardwood saplings in the ash grove area.

AGC has the expected woodland birds, including greater spotted woodpecker, nuthatch and five species of tit including marsh tit, with green woodpecker and spotted flycatcher at the woodland edge. Regarding readily observable mammals, roe deer in small numbers occasionally use the denser vegetation of the upper dingle as cover, badgers sometimes occupy small outlying setts at the top of the steep banks while fox and grey squirrel pass through the wood; bank voles are also present. The larger mammals are easily disturbed by the scale of human activity and are unlikely to remain in permanent residence.

In respect of invertebrates, as yet AGC is largely a closed book. Groups of diurnal insects such as butterflies, dragonflies, grasshoppers and crickets and others where identification is comparatively straightforward are largely sun loving and are thus mainly found at the outside edges of the wood. Common butterfly species like speckled wood, gatekeeper and holly blue dip in and out of the trees but as yet feasible more specialist woodland species like silver-washed fritillary and purple hairstreak have not been found, almost certainly because the wood, though having the requisite foodplants, is not of sufficient scale and not closely linked with more extensive suitable woodland. However, given the tree and shrub foodplant species present, it is likely that AGC supports a reasonable diversity of moths.

Wooded dingles are a comparatively scarce habitat and for this reason AGC warrants specialist invertebrate investigation, particularly as it has a quantity of long-accumulated woody debris in its watercourses. Some of the rarer caddis flies and crane-flies are associated with this type of habitat. Casual observation at the edge of the wood and in the wetland and riverine areas close by indicates some diversity in the latter group, while a wide variety of species of the former has come to light during moth-trapping close to a similar aquatic habitat nearby.

### **Conservation management: initial thoughts on a strategy**

The salient features of AGC are that it is a very small wood and the sole area of mature woodland on the entire Magdalen site. This immediately suggests that a major management intervention such as thinning of mature trees to instigate a coppice and standards regime, would greatly reduce a scarce resource and unavoidably impact on the existing eco-systems which have developed without significant interference over a considerable period.

Given these circumstances, rather than open up the wood from the inside to increase shrub and herb layer growth, the focus should be on the margins where there are already clearings, two grass spurs into the upper wood and an adjoining grass bank at the northeast edge. In different ways these open areas provide opportunities to expand the wood by selective small-scale clearing, ground preparation for regeneration and planting of site-appropriate species not currently present. This would extend the age profile of the trees and shrubs of AGC with clear ecological benefits. Such developments could be undertaken with light regulation in mind, particularly to encourage herb layer diversity and its attendant ecological elaboration. A specific preparatory task could be the removal of Himalayan balsam from the grass bank and copse at the northeast edge.

Inside the wood there is a case for reducing the quantity of holly. It flourishes in the closed canopy conditions and, particularly as an evergreen, is a severe light excluder. Against this must be weighed its value as winter feed for birds and a foodplant for some insects.

It is of great importance to protect the least disturbed and as yet unsurveyed section of dingle in the upper reaches of the main stream. No management should be undertaken here and human activity excluded.

Given the size of AGC, woodland management for conservation can be carried out virtually on a tree-by-tree basis. Working on such a small scale would encourage attention to the details of the natural world at the level where ecosystems function which seems appropriate in the context of an educational institution.

## **GORSE BANK**

### **Site description**

Gorse Bank is the name given to “once the river bank of the highly mobile river Axe” in the “Conservation at Magdalen Farm Report of 1998”. It comprises the steeper slopes of Lower Alford’s Ground and Limberd’s Hill and is no more than 1.2 ha (3acres) in extent. Geologically it is in the part of the site that the middle lias and upper greensand formations meet. Subtle differences in the flora along the length of the unimproved grassland slope suggest soil variations with a possible calciferous influence. The slope rises steeply from the floodplain with its water meadows and there are damp rushy flushes at its base.

With the spread of gorse, blackthorn and willow scrub, the hillside has become divided into three grassy slopes that are variously encroached upon by bramble, bracken and the ubiquitous Himalayan balsam. It is of considerable ecological interest that despite the minor distances involved each slope has its own floristic character. In broad terms it appears that the vegetation indicates mildly alkaline to neutral soils on slope 1 which adjoins Alford’s Gail Coppice, changing to mildly acidic on slope 3 with slope 2 intermediate, with increasing bracken and gorse as acid indicators. This reflects the change from the underlying liassic rocks to the greensand.

At first glance the vegetation of the slopes seems quite different. Slope 1 appears botanically more complex, especially towards the scrubby copse at the bottom where there is a damp flush. Approaching from the water meadow (Long Mead) there is the distinct smell of herb-rich grassland and in their different seasons the wildflowers are blooming in profusion here. In contrast, slope 3 is a wider expanse of tussocky grassland with discrete clumps of flowers. Slope 2 is sandwiched between drifts of dense scrub and appears to be a mixture of the characteristics of the other two slopes. According to the tythe map of 1841, slopes 1 and 2 were meadow and slope 3 pasture suggesting that their current appearance may also be a result of different landuse. That familiar indicator of “ancient grassland” anthills is not obviously present on the slopes though quite conspicuous in the rough grassland immediately above slope 3. Looking more closely at botanical diversity, quadrat measures of the richest parts of the three slopes give the following results:

One metre square plant count in area of greatest diversity (July 2008)

	Wildflowers	Grasses	Rushes	Sedges	total
Slope 1	14	7	2	0	23
Slope 2	9	6	1	0	16
Slope 3	10	4	0	0	14

Record of extra species, not exhaustive, found on site (throughout the survey period)

	Wildflowers	Grasses	Rushes	Sedges	total
Slope 1	16	2	0	1	19
Slope 2	15	1	0	0	16
Slope 3	13	1	3	0	17

In total, 42 plant species have been recorded on slope 1, 31 on slope 2 and 30 on slope 3.

Though not equally distributed on each slope, the following species occurred on all three slopes (\* denotes Dorset Wildlife Trust notable plants):

Wildflowers: birdsfoot trefoil\*, ribwort plantain, white clover, red clover, devil's bit scabious\*, lesser stitchwort, pignut\*, creeping thistle, marsh thistle, black knapweed\*, greater birdsfoot trefoil\*, yarrow, common catsear, common sorrel, creeping buttercup, dandelion.

Grasses: sweet vernal, creeping softgrass, rough meadowgrass, red fescue, cocksfoot.

Rushes: compact rush.

In addition the following species occurred on slopes 1 and 2 only:

Wildflowers: oxeye daisy\*, meadow vetchling.

Grasses: tufted hairgrass.

And on slopes 1 and 3 only:

Wildflowers: common spotted orchid, creeping cinquefoil, tormentil\*, meadowsweet.

However, there was a contrast in quantity of these plants. So on slope 1 in 2008, there were 46 stems of common spotted orchid and only 2 on slope 3. Similarly devil's bit scabious was much more abundant on slope 1. On slope 3 there was a greater quantity of creeping cinquefoil than on slope 1.

On slopes 2 and 3 only:

Wildflowers: betony\*, dog violet\*, bugle.

Plants exclusive to slope 1 were:

Wildflowers: eyebright\*, smooth hawksbeard, self-heal, fleabane\*, salad burnet\*, marsh bedstraw, common mouse-ear, hoary plantain.

Grasses: soft brome, crested dog's-tail, quaking grass\*.

Sedges: glaucous sedge.

Plants exclusive to slope 2 were:

Wildflowers: common hempnettle, figwort\*.

Grasses: brown bent.

Plants exclusive to slope 3 were:

Rushes: sharp-flowered rush.

It is worth noting that in 1998 the grassy slope referred to as Alford's Goil Bank, on the other side of Alford's Goil Coppice from slope 1 and now completely overgrown by coarse grasses, Himalayan balsam and other adventitious species, had a similar flora except that in addition to eyebright, it boasted common milkwort\*. Both these species are abundant on unimproved chalk and limestone grassland, hence the suggestion of a calciferous band of soil in this part of the site. I suspect that milkwort also occurred on slope 1.

The grassland flora of Gorse Bank is the richest at Magdalen with some species occurring only here and others where they do occur elsewhere, only in very small quantities.

The unimproved grassland of this part of the Axe Valley conforms to the description of mesotrophic grasslands in the National Vegetation Classification. Of the 13 categories in this vegetation type, the grassland at Magdalen, best exemplified by Gorse Bank, is closest to MG5, the *Cynosurus cristatus*-*Centaurea nigra* (crested dog's-tail – black knapweed) community which includes almost all the species found here. MG5 is divided into 3 sub-communities depending on the abundance and balance between the 78 species listed. Highly-detailed sampling would be required to designate the three slopes of Gorse Bank as MG5a,b, or c, though the tables suggest slope 1 is closest to MG5b while slope 3, the less fine-grained sward, is closer to MG5c. Interestingly crested dog's-tail, one of the defining species of MG5, has so far only been found on slope 1, though black knapweed (known also as common knapweed and hardheads) is present on all three and especially well-represented on slopes 2 and 3.

The floristic diversity of Gorse Bank provides rich habitat for invertebrates and it is no surprise that a greater variety and greater numbers of conspicuous insects like butterflies, hoverflies and grasshoppers, for example, can be found here than elsewhere on the site. Apart from the availability and range of larval foodplants, nectar is a big draw. Especially attractive to bees and hoverflies is devil's bit scabious which flowers in August and September and grows in some profusion at the bottom of slope 1. At the same time and adjacent to the scabious, the insect-attracting fleabane is in flower (apart from slope 1 there are only 3 other small patches of this plant on the site as a whole). Black knapweed is also

a rich nectar source and is in flower from July onwards. A range of butterfly species also nectars on these plants. Because butterflies are conspicuous and readily identified they are a good indicator group of habitat diversity. Of special interest on Gorse Bank is the marbled white, which occurs here almost exclusively at Magdalen. Its larvae feed primarily on red and sheep's fescue, fine grasses which flourish on the less rich soils where they are not swamped by more prolific plants. One of the characteristic sights of midsummer is to see marbled whites nectaring on knapweed. Like elsewhere in southern England, the marbled white population at Gorse Bank has been seriously reduced over the last two years, almost certainly as a result of inclement weather in the flight season. Another species, even more seriously threatened at Gorse Bank is the common blue which was probably truly common here in 1998 when it was listed for the site as a whole. None have been seen since a single male was observed near the bottom of slope 1 at the end of August 2007. Its foodplant, birdsfoot trefoil, is still reasonably abundant on the slopes, so other factors will be contributing to its decline. Other grassland and grassland-edge species which occur at Gorse Bank are meadow brown, ringlet, gatekeeper, small copper and large and small skipper, while speckled wood and holly blue can be seen flying through the intervening areas of scrub.

Day-flying moths on these slopes have been few. In 2007 a couple of sixspot burnets were seen and apart from occasional migrant silver Ys and a few straw dot moths and the micro lepidopteran *Agriphilia tristella*, little else has been recorded. Again poor weather has been a factor.

The five species of grasshopper and cricket so far recorded at Magdalen (see species list) including long and short-winged coneheads, which have fairly recently started to colonise the southern counties from the continent, have all been found on Gorse Bank. On slope 3 a huge female oil beetle was disturbed in its lumbering progress, while across the site there has been an abundance of thick-legged flower beetle, otherwise the coleoptera has not been recorded. Dragonflies seen here have been mainly in the floristically rich part of slope 1, southern hawkler, golden-ringed dragonfly, beautiful demoiselle and common darter. Most of the species of hoverfly (see species list) so far recorded at Magdalen can be found on Gorse Bank.

When considering birds and mammals at this site, the scrub woodland assumes greater importance. It forms a continuation of cover from Alford's Gail Coppice to slope 3, sometimes quite dense. Roe deer lie up in it during the day and foxes have been seen curled up on beds of bracken in the sunshine. There is a small earth, sometimes used, between slopes 2 and 3. Rabbits are numerous on the slopes and in places keep the grass sward low; this is especially noticeable on slope 3. Prints in the damp patches indicate that badgers regularly cross slope 1 but so far there has not been much in the way of "snuffle holes", suggesting limited feeding, at least on more deeply buried roots and invertebrates. Recently what appeared to be the small spherical non-breeding nest of a harvest mouse was found at the top of slope 1. However, this is similar to the hibernating nest of the common dormouse though it was found in open grassland.

Given the apparently abundant insect life insectivorous birds are drawn to Gorse Bank and hunt in the cover of the scrub. The common tits, goldcrest, wren and chiffchaff regularly work the area at different times of the year as does the spotted flycatcher, a rarer migrant. As yet, willow warbler and whitethroat have not been recorded here despite the suitability of

the habitat, nor anywhere else at Magdalen. Again a decline in migrants during recent years may be responsible. Blackcap seen elsewhere at Magdalen has not yet been observed on Gorse Bank. Goldfinches have been seen taking seed from thistle heads on slope 2 and there is a resident woodcock in a particular patch of scrub at the bottom of slope 1.

### **Conservation management: initial thoughts on a strategy**

In my view, Gorse Bank with its floristic diversity and comparative abundance of insect life is one of the most ecologically important parts of the Magdalen site and conservation management interventions here need to be made with great care. Because the area has not been concertedly farmed for a considerable time, complex ecosystems have developed and require protection, particularly where they are at their most diverse. Given the demise of Alford's Goil Bank since 1998, active protection may be necessary.

The conservation strategy for Gorse Bank in 1998 was to maintain the same balance between grassland and scrub being mindful of the process of succession from grass to woodland. In addition, to support this general principle, I would suggest an approach which distinguishes between particular parts of the site in terms of biological diversity and species scarcity entailing a variety of interventions. Thus for areas of maximum richness, like the bottom of slope 1, the purpose of intervention would be protection in the form of keeping invasive species like Himalayan balsam, creeping thistle and bramble at bay and carried out on a "gardening" basis because of the small scale and the imperative that the operator has botanical expertise. On the same principle, where there are particular species which are nationally and/or locally uncommon, or do not occur elsewhere on the entire site, disturbance must be avoided particularly if they are flourishing in their current niche, for example, the small patches of eyebright and betony in the grass and guelder rose in the scrub. Even a plant as common as gorse has local conservation value when it occurs at Magdalen only abundantly on Gorse Bank. Apparently in the south-west, dormice use gorse scrub as habitat. However, none have been seen on the farm for two years. If on the other hand it was discovered that a nationally rare insect was using a common species as a foodplant there would be a strong case for allowing the plant to increase or be managed to the insect's optimum requirements, for example the brown hairstreak butterfly lays its eggs on low young shoots of blackthorn.

In areas where there is currently less biological interest but the possibility that diversity may be increased by appropriate management, an experimental approach should be adopted. Ideally, separate grassland compartments should be subject to different grazing regimes and closely monitored for amelioration but always leaving some compartments unmanaged both as a measure to preserve existing ecosystems and as a control for evaluating the success of the management regimes.

In regard to grassland management regimes for this site, the standard British conservationist handbook, "Managing Habitats for Conservation" (edited by William J. Sutherland and David A. Hill) offers the following broad guidelines (summarised and paraphrased):

- Grazing is preferable to cutting because even when the latter is done on a rotational basis it tends to create floristic uniformity and destroys the natural variation of height

and texture of the sward so essential for sustaining invertebrates through their lifecycles. On the same basis light grazing is clearly preferable to heavy grazing.

- Grazing by sheep is not advocated for restorative grassland management because they prefer short herbage and tend to avoid the coarser tussocks which need reducing. Additionally, the short herbage which would include most of the plants to be conserved would be grazed close to the ground.
- Grazing by cattle is preferable because they will consume coarser and taller vegetation than sheep and do not graze so close to the ground. Also they tend to produce more natural, uneven swards.
- Grazing by horses and ponies can be problematic because they are selective feeders and can completely eliminate individual plant species and are thus not advocated on sites of high botanical interest.
- Although goats tend to be browsers rather than grazers, they can be used to reduce coarse grasses and scrub, particularly if they are tethered.
- Rabbits are the most selective feeders of all and will closely graze herb-rich turf ignoring rank swards. If numbers are high they can seriously reduce floristic diversity.
- Mixed grazing tends to be less beneficial because it produces a uniform sward.

The practice of controlled cattle grazing on sites of high botanical interest is now a standard conservation measure and this seems most appropriate for Gorse Bank. At Magdalen, given the existing farming practice, there is the advantage of being able to experiment with the intensity and timing of grazing on a compartmental basis. Generally, winter (October to March) grazing is the least threatening to plants and invertebrates.

## **THE LOWER PASTURES (BENNETT'S HILL, MAYPOLE CLOSE, HIGHER AND LOWER KENSALL)**

### **Site description**

To the east of Alford's Goil Coppice from Bennett's Hill (0.86 ha, 2.15 acres), through Maypole Close (4.84 ha, 12.10 acres) to Higher and Lower Kensall (2.95 ha, 6.48 acres), the bank slopes to the floodplain become less steep, though in these pastures there are occasional steeper banks and it is here that the flora is richest. The tythe map of 1841 shows these fields as pasture rather than meadow apart from the lower NW section of Maypole Close which was arable land at that time. None of these pastures was ploughed from the late 1940s to 1985 though during the following five years, oats and barley were grown on Maypole. This history is reflected in the current botanical diversity where a quadrat species count on the richest sward at Lower Kensall was 21, but only 12 at Maypole Close. The former site has a similar plant community to Gorse Bank with plenty of the mesotrophic grassland MG5 National Vegetation Classification indicator black knapweed on a steeper bank at the north-eastern edge of the field. The species lists for each site are as follows:

One metre sq plant count in area of greatest diversity (July 2008)

	Wildflowers	Grasses	Rushes	Sedges	total
Maypole Close	9	3	0	0	12
Lower Kensall	17	5	0	0	22

Record of extra species found on site, not exhaustive (found throughout the survey period)

	Wildflowers	Grasses	Rushes	Sedges	total
Maypole Close	5	3	0	0	8
Lower Kensall	11	2	2	0	15

Though not equally distributed on each site, the following species occurred on both:

Wildflowers: birdsfoot trefoil\*, white clover, dandelion, creeping buttercup, lesser stitchwort, creeping thistle, common sorrel, ox-eye daisy\*

Grasses: tufted hair-grass, creeping soft-grass, rough meadow-grass, sweet vernal

Occurring only at Maypole Close:

Wildflowers: daisy, common mouse-ear, thyme-leaved speedwell, field forget-me-not, ragwort, common spotted orchid (3 stems), spear thistle

Grasses: perennial rye grass, soft brome

Occurring only at Lower Kensall:

Wildflowers: black knapweed\*, meadow vetchling, yarrow, chickweed, ribwort plantain, pignut\*, creeping cinquefoil, red clover, devilsbit scabious\*, corky-fruited water dropwort\*, smooth hawksbeard, self heal, germander speedwell, tormentil\*, marsh thistle, lady's smock, lesser celandine, burnet saxifrage\*

Grasses: brown bent, Timothy, cocksfoot

Rushes: compact rush, Good Friday grass

Comparison between these pasture fields with quadrat measures taken on geologically and topographically similar sites is useful in demonstrating the effect on botanical diversity of farming practice, in this case, comparatively recent ploughing. However, Lower Kensall, like Gorse Bank slope 1, is bounded by woodland to the east which may favour some grassland species and has a more extensive damp area than Maypole Close thus adding species like compact rush, lady's smock and marsh thistle. At Maypole, the perennial rye grass (not Italian), is possibly indicative of reseeding after discontinuation of crop growing and there is an indication of "arable weeds" in daisy, ragwort, common mouse-ear and field forget-me-not. In terms of arable weeds, it is worth comparing this pasture with adventitious species on this year's ploughed ground at Long Common, quite a different spectrum: redshank, scentless mayweed, field pansy, scarlet pimpernel, prickly sow-thistle and white charlock, along with the regular creeping thistle, creeping buttercup, hoary plantain and dandelion.

On the other hand, it is good to see the arrival of common spotted orchid in 2008 and to find spear thistle, not a common plant on the site as a whole.

Higher Kensall is of a piece with the lower pasture though it is less botanically diverse and given its apparently similar agricultural history suggests soil changes as the slope descends. However, the mass of creeping thistle and nettle here does indicate more recent soil disturbance.

The steeper part of Bennett's Hill is covered in scrub, mainly blackthorn, with a few mature trees just above the water meadow. The adjoining grassland running into the lower part of Bennett's Ground has features in common with Gorse Bank and though no systematic survey has been carried out here, there are burnet saxifrage, meadow vetchling and a mass of greater birdsfoot trefoil with compact rush at the ditch edges on the boundary with the water meadow.

A major factor concerning the abundance of wildlife in general in these larger areas of grassland is where they lie in relation to other features of the site as a whole. Maypole Close is a large, broad field where faunal activity is greater at its edges where there are mature hedgerows and in the NW corner a small larch copse. Kensall by contrast is a narrower field with a rich though slenderly wooded goil (dingle) to the east, which, as it descends towards the floodplain, expands into an open grove of trees on one side and denser woodland on the other. On the opposite side of the field is a substantial hedge. Consequently, for example, the pasture is constantly overflowed by feeding birds, redwings and fieldfares, in the late autumn and winter, foraging for berries, a good range of insectivorous woodland birds especially in the spring and of specific interest a pair of reed buntings working the sods turned over by pigs which were recently given the run of the top of the field. In a tall oak halfway down the goil side buzzards have a nest. Similarly, mammals emerge from the adjoining cover to feed in the field, roe deer, badgers and rabbits, most conspicuously.

Where Lower Kensall meets the floodplain, the river and a marshy area are close by and so the insect life from the river bank, such as beautiful and banded demoiselle, and common blue and azure damselflies readily migrate to the damp end of the pasture where the flora is still of a piece with the water meadows. For instance, there is a substantial patch of lady's smock, a foodplant for the orange tip and green-veined white butterflies, both of which can also be seen nectaring on it. The black knapweed matrix of plants on the bank above this area offers plenty of nectar to hoverflies and other diptera, bees and other hymenoptera as well as the abundant meadow brown and ringlet and occasional large skipper butterflies in high summer. The extensive patches of creeping thistle in Higher Kensall attract nymphalids, such as peacock and small tortoiseshell, the latter butterfly apparently making a slight recovery from predation by an immigrant parasite brought north by climate change.

The west side of Maypole which slopes more steeply than the rest of the field and is the most botanically diverse supports the most insect life. Because it is closer to Gorse Bank than Kensall, the sedentary marbled white butterfly has managed to spread as far as here, though only one was sighted in late June 2007. Another butterfly so far not seen at Kensall but occurring here is the small copper whose foodplants are common and sheep's sorrel. There have been occasions when there have been more meadow browns here than at Gorse Bank. Generally, however, there are fewer conspicuous insects here than at Gorse

Bank and Kensall because there is less of a concentration of nectar plants. Nonetheless insects like the red admiral butterfly and gold-ringed dragonfly which are less restricted in their travels will regularly be seen in pastures like this. Two species of bird which are not abundant at Magdalen have been seen here, a treecreeper in the adjoining larch copse and green woodpecker in the field.

Bennett's Hill and the lower part of Bennett's Ground are immediately to the west of Maypole and the insect life here is broadly similar though an increasing variety of fauna would be expected at the marginal zones where the pasture meets scrub and the woodland beyond.

### **Conservation management: initial thoughts on a strategy**

Unlike Gorse Bank, these pastures are already being farmed and probably will be more concerted in the near future. Conservation practices have already been adopted. Firstly, the areas of Maypole Close and Lower Kensall which are conspicuously more botanically diverse, have been recognised and treated accordingly. When Maypole Close was cut for hay in late July 2008 the western slope was left uncut as was a headland around the field, broad enough at the northern hedgerow to act as a corridor for insect movement to and from Kensall with species of the brown family of butterflies an obvious focus. When the flowers had seeded and the insects concluded their summer cycles, these set aside areas were skimmed.

In Lower Kensall, the knapweed bank and adjoining damp gulley were left uncut with nectar remaining available until October. A part of the botanically less diverse Higher Kensall was given over to pigs, as previously mentioned, and afterwards sown with a root crop for livestock feed which was subsequently seriously defoliated by turnip sawfly, an early 20<sup>th</sup> century pest which has recently reasserted itself. This heavily disturbed ground was quickly invaded by nettle and creeping thistle. Should the pig stock increase at the farm special consideration will have to be given to this form of grassland use. In the event of more grazing and increased cutting of these pastures for silage and hay, it would be advantageous to consider the regimes employed. In terms of grassland biodiversity, grazing is preferable to cutting and light seasonal grazing clearly preferable to unlimited heavy grazing. However, retaining small areas for special treatment and leaving headlands will serve to maintain some wildlife interest.

## **THE RIVER AXE, TRIBUTARIES AND WATER MEADOWS**

### **Site description**

A mile of the river Axe in its middle to upper reaches meanders through the Magdalen site. On this stretch it does not vary much in size, being within 10-15 metres in width from bank top to bank top. Neither does bank height vary greatly at around 2 metres though there are some lower places probably associated with former fording points. The river bed is somewhat more variable with shallows and occasional deeper pools. Water level rises swiftly after heavy rain and flooding occurs periodically especially during the winter months. The course of the river changed slightly shifting northwards through Wet Mead at the end of the nineteenth century.

The river is fed by three tributary streams running through gills on the south side while two streams come in from the north. There are extensive water meadows extending from the southern banks (10 ha, 25 acres) and small riverside meadows on the other side of the river (0.6 ha, 1.5 acres) which also belong to Magdalen. At the eastern end of the site, West Wood Mead (0.7 ha, 1.85 acres) has for several years remained flooded and is effectively a marsh. Overlying the middle lias formations in the river valley are alluvial deposits of silt, sand and clay on a bed of gravel.

On the north side much of this stretch of the Axe is bounded by woodland, particularly dense through the middle section where a former tree nursery has apparently been left to revert to nature. Along its length on this side are a scattering of mature trees mainly oaks with a few ash, maple and sycamore, either out in the open or in blackthorn, hazel, hawthorn and holly thickets. However, on both sides of the river, alder is the dominant species interspersed occasionally by willow and the odd crack-willow. The alder has been coppiced but probably not for 30 years.

Although the southern bank giving onto the water meadows is not heavily treed, the general impression is that the river runs through a tunnel of foliage. However this impression is partly created by tall herbage in the summer, native umbellifers like hogweed, hemlock water dropwort, cow parsley and alexanders, and the usual mass of Himalayan balsam. Owing to this and the river running between high banks, much of it is in shade which, given other variables like speed of flow and geology, has restricted the growth of aquatic plant life. The only obvious plant is water crowfoot (spp.), confined to the lighter stretches. The commonest waterside plants are reed-canary grass, fool's watercress and brooklime. There is some water horsetail and in one location water fleabane.

For most of their extent, the water meadows are botanically not especially diverse, almost certainly due to the comparative richness of the alluvial soil and the challenge of waterlogging to the sort of plants that flourish on Gorse Bank, for example. Much of this entirely unimproved grassland is a mat of creeping and meadow buttercup, dandelion, creeping thistle and common sorrel with a mixture of creeping soft-grass, false oat-grass, cocksfoot and Timothy. However, where there are damper flushes and patches of soft rush, there are also small quantities of ragged robin, lady's smock, brooklime, hemlock water dropwort, water forget-me-not, spear thistle and marsh bedstraw. Similarly, on the top of the river banks there is an increase in floral diversity with the occasional patch of fleabane and angelica amongst the common wildflowers like red campion, herb bennet and herb robert. Beside the stream which runs down to the river on the boundary of Parish and River Mead, these species are augmented by teasel, watermint, hairy bittercress and greater birdsfoot trefoil. In addition on the flooded West Wood Mead, there are areas of reed-grass and floating sweet-grass, fool's watercress and brooklime, and at the edge of these areas, purple loosestrife, marsh woundwort, bittersweet, tufted hair-grass, greater birdsfoot trefoil and yarrow. One clump of marsh ragwort was also found here. This flooded meadow has the most prolific growth of Himalayan balsam on the site and in 2008 it was joined by a quantity of orange balsam, a North American invasive.

The invertebrate fauna of the river and its adjoining meadows, despite successive, damp, cool and windy summers, appears fairly abundant, particularly mayflies and stoneflies, though these remain to be identified with the exception of the mayfly *Siphonurus lacustris*.

The scorpion fly *Panorpa communis* is found in good numbers on the riverside vegetation along with a variety of crane flies, including *Tipula maxima*. Because of the larval association of some scarcer crane flies with "coarse, woody debris" in streams and rivers, as previously mentioned, this group of insects needs specialist attention on the site. The same could be said for caddis flies which also have water-borne larvae, with a variety of species coming regularly to the mothtrap.

Despite the weather, there have been large numbers of both banded and beautiful demoiselle damselflies congregated at the edge of the river, their flight seasons overlapping in late June and early July. All the other odonata species so far recorded at Magdalen have been observed in this part of the site, viz, southern hawkler, golden-ringed dragonfly, broad-bodied chaser, common darter and azure, common blue and large red damselflies.

In late summer a noticeable feature of the water meadows especially where the grass is thick and matted is the sheer number of grasshopper nymphs, particularly of the common green grasshopper. The dark bush cricket favours the taller vegetation on the river banks and is not averse to sitting on Himalayan balsam leaves. Both long and short-winged coneheads are also present in this riverside habitat. This time of year also sees a build up of flies, bees and wasps on the umbellifers, especially angelica but also yarrow and hogweed. Three quarters of the species of hoverfly currently identified at Magdalen have been seen on the stream and riverside plants. It is of interest that only honeybees have been seen nectaring on Himalayan balsam, emerging from the flowers covered with white pollen. Hornets preying on the nectaring flies are continuing to increase in numbers each year.

The great attraction for butterflies in the water meadows is creeping thistle, sought after nectar for the common nymphalids, peacock, comma and small tortoiseshell, though the red admiral seemingly has no taste for it. There has been a marked decrease in this family of butterflies from 2007 to 2008 no doubt due to adverse weather conditions. The colourful small copper can also be found occasionally on these thistles. In the spring both brimstone and orange tip can be seen flying in the vicinity of the river along with green-veined whites, and later, large and small whites. All the common brown butterflies are here but not the skippers.

Much remains to be done in identifying the aquatic life of the river and its tributaries. So far the only fish seen has been brown trout and this in small numbers and not frequently. There are freshwater shrimps in the streams but other crustaceans have yet to be found. Work has also to be done on aquatic molluscs.

Surprisingly, only one reptile, a young grass snake, has been encountered in this habitat though the amphibians, common frog and toad, are prevalent, though no newts as yet.

There is a good chance of spotting all the birds recorded to date at Magdalen in this area owing to its diversity of habitat. Species directly associated with it are: kingfisher, regularly seen flying along the river and occasionally perching, though as yet, no nest site has been found; grey heron is another regular as are moorhen and a small flock of mallard which apparently is resident on this stretch of the Axe. The nearest recent dipper sighting was two miles downstream but surprisingly grey wagtail has not been observed. Of special interest has been a small flock of siskin feeding on alder seeds in February. This is also a food

source for the four common species of tit but so far not marsh tit. The combination of mature oaks and alder with hazel, holly and blackthorn understorey at certain points on the river attracts many birds including two species of woodpecker, treecreeper, nuthatch, goldcrest and chiffchaff. At a favoured spot, on one occasion, a wren was seen catching a mayfly and on another, a female blackcap picking off bees as they emerged from Himalayan balsam flowers. On a single occasion a flock of 8 meadow pipits was gathered on the boundary of River and Parish Meads.

There has been considerable interest in the mammals associated with this riverine habitat. Otter has not yet been reliably sighted, though prints have been found on a couple of sand spits and by a stream in a wooded dingle adjoining the site. Scats have not been found as yet. No evidence of American mink, which is now declining in the Axe catchment area, has come to light though a "mink raft" has been in situ during the survey period. Unfortunately neither have there been any definitive signs of water vole on this stretch of the river despite the hope that it may return from the Axe headwaters with the elimination of mink. Bank vole has been seen close to the river while, judging by frequent prints, brown rat appears to be the most abundant rodent in this habitat. The slots of roe deer and less frequently of muntjac have been found in the silt beside the water. There are badger dung pits on the river bank, probably indicating a territory boundary. Recently, during the clearance of nettle beds and coarse grass, a non-breeding nest (5cm in diameter) of the harvest mouse was discovered in one of the small riverside meadows.

### **Conservation management: initial thoughts on a strategy**

Before any conservation management is carried out on this character-defining part of Magdalen farm, thought should be given to the possible future of the neighbouring land, in particular in respect of woodland management. For example, riverbank alder coppicing on the Magdalen side of the Axe to let light in seems less draconian when the alders on the opposite side remain uncut by the neighbour. As always the intention is to retain as much biological diversity as possible and to be circumspect when changing habitat structure. Bearing this in mind a strategy of opening up stretches of the river by alder coppicing and cutting back some of the rank vegetation has been agreed. The Axe Valley angling club which rents this stretch of the river has already trimmed some overhanging alder boughs to allow fly-fishing access. The plan is to create an alternation of open and more enclosed sections of the river. Given the shortage of mature broadleaf trees at Magdalen, no riverside species other than alder will be cut.

As previously mentioned, some clearance of rank vegetation in the small meadows on the northside of the river has been carried out, again adopting the policy of managing one area and leaving adjoining areas untouched in order to balance the retention of existing ecosystems with the attempt to restore greater biological diversity. The benefit of this approach in creating mosaics and extra edge habitat is to more generally enhance biodiversity. A further advantage is in providing a control for monitoring the effects of management.

On the same principle, the stream that runs beside the Maypole Close hedgerow in Wet Mead has been opened up only in its lower section to encourage the growth of aquatic and wetland plants.

As regards the water meadows as a whole, a policy of retaining the more marshy areas where there is greater floral diversity has been agreed and already carried out during hay cutting when they have been avoided. There is an intention to create several shallow scrapes next to these rushy areas to attract wading birds and in particular, the snipe which are occasionally seen on other parts of the farm.

Most of these measures are expected to make the site more attractive to water voles. In conjunction with the East Devon water vole project, a single species restoration strategy can readily combine with the general conservation strategy for Magdalen. The EDWV officer's suggestion of creating two adjoining large ponds just above the floodplain in Wet Mead is currently being considered. The major benefit of these ponds would be to increase the quantity and variety of aquatic plant life and its attendant fauna, including the water vole, which is absent from the fast flowing river Axe.

### **OTHER AREAS OF CONSERVATION INTEREST: A BRIEF SUMMARY**

At the far NW corner of the site on a continuation of Gorse Bank and bordering the Winsham road is a small copse with a few mature trees and promising ground flora. Here there are the only examples of Scots pine at Magdalen and the sole very large grey willow. Predominantly the woodland is ash with some hazel understorey and a row of mature sycamore trees close to the road. In it is the largest area of primrose on the site mixed with more bugle than elsewhere. The only conservation work required here is the removal of numerous sycamore seedlings to protect the ground flora.

Regarding bugle, the only other place where it grows is along the track to Bere Chapel farm bordering Long Common. The ditch and bank to the south and the hedgerow to the north of this track are floristically rich with 23 species of wildflower, 5 of grasses and 1 of rush recorded in August 2008. The hedge also contains spindle, guelder rose and hornbeam which are scarce elsewhere.

Hedgelaying between Home Mead and Rack Close literally brought to light the only wild daffodils on the farm.

The small area of woodland that runs from the farm gate to Bennett's Ground down to Lower Orchard is biologically not insignificant. Though it comprises mainly ash it has the most mature field maples on site and plenty of stumps and fallen timber which, according to a recent specialist survey, yield considerable fungal diversity. Despite being near the farm, there is a well-worked badger sett close to the field boundary.

The system of 3 sizeable ponds next to the farm buildings has yet to be fully surveyed but it is clear that the lowest pond in deep woodland shade has little plant life in it while the middle partly shaded pond could be more productive. A major future conservation task would be to improve the biological diversity of these ponds and their surroundings.

The complex of farm buildings, barns and gardens is also worthy of a more detailed survey. It was significant that during a recent bat survey most of the activity was recorded here.

## **CONCLUSION**

The initial survey work reported here has been sufficient to suggest some straightforward conservation management interventions, some of which are currently being implemented. The intention is to continue the biological survey, monitoring changes year on year, and crucially to expand the work into the more “difficult” groups of flora and fauna with the help of local specialists, a process recently set in train.

From a conservation point of view, Magdalen farm has the ideal set-up for different carefully controlled and monitored management practices. Regimes can be instigated as a result of consultation between farm manager, wildlife surveyor and regional conservation agencies, carried out flexibly with outcomes regularly checked and modifications made as required. For example, with the farm’s current range of livestock, a variety of grazing regimes can be trialled. To conservation bodies, such as the Dorset Wildlife Trust, which has already provided grant-aided voluntary work, at no cost to Magdalen, the main benefit is that the outcomes of interventions will be monitored on an ongoing basis.

Now that survey and conservation management work have been established at Magdalen there is a framework for participation for a wider range of educational courses internally and for educative tours for the general public, something recently begun with some success. It is envisaged that there will be guided access to sites of conservation interest, hopefully enhanced by the establishment of the water features previously mentioned and the erection of a hide at a good viewpoint by the river.

Specialist wildlife groups are starting to show an interest in Magdalen and some local people having seen Open Day displays have been encouraged to attend moth identification sessions. Discussions with a local farmer seeking to benefit from our survey and conservation management expertise have begun. These are early beginnings but indicate potential developments which can flow from this nature conservation initiative.

Peter Darch 2008

## **Acknowledgements**

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**NATURE CONSERVATION AT MAGDALEN FARM  
SPECIES LISTS FROM JULY 2007**

<b>MAMMALS</b>	
Roe deer	Muntjac
Rabbit	Fox
Badger	Otter
Stoat	Grey squirrel
Bank vole	Mole
Common pipistrelle	Soprano pipistrelle
Brown rat	
<b>BIRDS</b>	
Cormorant	Grey heron
Mallard	Kestrel
Sparrowhawk	Buzzard
Kingfisher	Pheasant
Moorhen	Snipe
Common gull	Black-headed gull
Wood pigeon	Collared dove
Tawny owl	Swift
Swallow	House martin
Greater-spotted woodpecker	Green woodpecker
Skylark	Meadow pipit
Pied wagtail	Wren
Dunnock	Robin
Blackbird	Song thrush
Mistle thrush	Fieldfare
Redwing	Blackcap
Chiffchaff	Goldcrest
Spotted flycatcher	Great tit
Coal tit	Blue tit
Marsh tit	Long-tailed tit
Nuthatch	Treecreeper
Magpie	Jay
Jackdaw	Rook
Carrion crow	Raven
Starling	House sparrow
Chaffinch	Goldfinch
Greenfinch	Siskin
Bullfinch	Reed bunting
Woodcock	

<b>REPTILES/AMPHIBIANS</b>	
Slow worm	Grass snake
Common frog	Common toad
<b>BUTTERFLIES</b>	
Small tortoiseshell	Meadow brown
Ringlet	Marbled white
Green-veined white	Large white
Large skipper	Small skipper
Peacock	Red admiral
Painted lady	Gatekeeper
Small white	Small copper
Holly blue	Speckled wood
Comma	Common blue
Brimstone	Orange tip
<b>MOTHS (MACROS)</b>	
Six spot burnet	Yellow shell
Silver y	Sharp-angled carpet
Large yellow underwing	Lesser yellow underwing
Dark arches	Brimstone
Straw dot	Common carpet
Garden carpet	Square spot rustic
Green carpet	Snout
Setaceous Hebrew character	Dusky thorn
Flame shoulder	Centre-barred sallow
Spectacle	Dunbar
Double-striped pug	Common wainscot
Bloodvein	Herald
Vapourer	Common marbled carpet
Marbled minor	Pale tussock
Clouded silver	Figure of eighty
Common lutestring	White pinion-spotted
Pebble hook-tip	Clouded-bordered brindle
Silver ground carpet	Peppered moth
White spotted pug	Small angle shades
May highflyer	Angle shades
Clouded border	Red twin-spot carpet
Ingrailed clay	Shuttle-shaped dart
Tawny marbled minor	Ghost swift
V pug	Small fan-footed wave
Green pug	Swallowtailed moth
Beautiful hook tip	Smoky wainscot
Drinker	Bright line brown eye
July highflyer	Common footman

Buff arches	Common emerald
Early thorn	Coronet
Double square spot	Brussels lace
Wood carpet	Nut tree tussock
Black arches	Lesser broad-bordered yellow underwing
Small square spot	Small phoenix
Canary-shouldered thorn	Common rustic
Copper underwing	Knotgrass
Rustic	Convolvulus hawk
Elephant hawk	Coxcomb prominent
Six striped rustic	Sallow kitten
Uncertain	Burnished brass
Single-dotted wave	Lunar underwing
<b>MOTHS (MICROS)</b>	
Udea olivalis	Small magpie
Mother of pearl	Ringed chinamark
Agriphila tristella	
<b>DRAGONFLIES</b>	
Banded demoiselle	Southern hawkler
Common blue damselfly	Golden-ringed dragonfly
Beautiful demoiselle	Azure damselfly
Common darter	Broad-bodied chaser
<b>GRASSHOPPERS, CRICKETS</b>	
<b>CONEHEADS</b>	
Field grasshopper	Common green grasshopper
Dark bush cricket	Short winged conehead
Long winged conehead	
<b>HOVERFLIES</b>	
Eristalis nemorum	Eristalis tenax
Eristalis pertinax	Eristalis arbutorum
Pyrophaena granditarsa	Pyrophaena rosarum
Syrphus ribesii	Episyrphus balteatus
Megasyrphus annulipes	Epistrophe grossularia
Helophilus pendulus	Platycheirus albimanus
Platycheirus clypeatus	Melanstoma scalare
Sericomyia silentis	

<b>FUNGI</b>	
Hairy curtain crust	Cramp balls
Peeling oysterling	Giant funnel
Clustered toughshank	Crab brittlegill
Honey fungus	Scaly webcap
Willow bracket	Jelly ear
Poisonpie	Yellow fieldcap
Clouded agaric	Yellow brain
Sulphur tuft	Beefsteak
Lilac fibrecap	Lilac bonnet
Candlesnuff	Common puffball
Chanterelle	Turkeytail
Buttercap	White coral
Snapping bonnet	Blushing wood mushroom
Grey coral	Clouded funnel
Toughshank	Glistening inkcap
Common inkcap	Blushing bracket
King Alfred's cakes	Southern bracket
Elder whitewash	Amethyst deceiver
Scurfy deceiver	Bearded milkcap
Wood blewit	Dusky puffball
Stump puffball	Common bonnet
Clustered bonnet	Nitrous bonnet
Shaggy scalycap	Common stump brittlestem
Peppery roundhead	Agrocybe rivulosa
Byssomerulius corium	Hemimycena cuculata
Hypoxylon howeanum	Marasimius cohaerens
Melanoleuca melaleuca	Mycena metata

PLANT LIST  
UPDATED TO  
OCTOBER 2008

**MAGDALEN FARM CENTRE**  
**SPECIES LISTINGS 1958-1999**

KEY  
 A NOT INCLUDED ON DORSET ENVIRONMENTAL RECORDS LIST AS OF 10/2008  
 O SO FAR NOT FOUND ON SITE IN 2007-8  
 (\*) DORSET HERBARIUM 'NOTABLE PLANTS'

TREES & BUSHES

- |  |  |
|--|--|
| Ash ( <i>Fraxinus excelsior</i> )            | English oak ( <i>Quercus robur</i> )           |
| Alder ( <i>Alnus glutinosa</i> )             | A Green alder ( <i>Alnus viridis</i> )         |
| Elder ( <i>Sambucus nigra</i> )              | A Sycamore ( <i>Acer pseudoplatanus</i> )      |
| Field Maple ( <i>Acer campestre</i> )        | Holly ( <i>Ilex aquifolium</i> )               |
| hazei ( <i>Corylus avellana</i> )            | A Wych elm ( <i>Ulmus glabra</i> )             |
| A Goat willow ( <i>Salix caprea</i> )        | Gray willow ( <i>Salix cinerea</i> )           |
| A Spindle ( <i>Euonymus europaeus</i> )      | A Larch ( <i>Larix decidua</i> )               |
| Cherry Laurel ( <i>Prunus laurocerasus</i> ) | Beech ( <i>Fagus sylvatica</i> )               |
| A Silver birch ( <i>Betula pendula</i> )     | Blackthorn ( <i>Prunus spinosa</i> )           |
| Hawthorn ( <i>Crataegus monogyna</i> )       | Gorse ( <i>Ulex europaeus</i> )                |
| Broom ( <i>Cytisus scoparius</i> )           | Gelder rose ( <i>Viburnum opulus</i> )         |
| Honeysuckle ( <i>Lonicera periclymenum</i> ) | A Old man's beard ( <i>Clamulis vitaioba</i> ) |
| Bramble ( <i>Rubus fruticosus</i> agg.)      | Dog rose ( <i>Rosa canina</i> )                |
| Field Rose ( <i>Rosa arvensis</i> )          | A Sweet briar ( <i>Rosa rubiginosa</i> )       |

WILDFLOWERS  
(DICOTYLEDONS)

- |  |  |
|--|--|
| Common nettle ( <i>Urtica dioica</i> )                                   | (O) Pelitory of the wall ( <i>Plantago judaica</i> )     |
| Water pepper ( <i>Persicaria hydropiper</i> )                            | Common sorrel ( <i>Rumex acetosa</i> )                   |
| Clustered dock ( <i>Rumex conglomeratus</i> )                            | Wood dock ( <i>Rumex sanguinolentus</i> )                |
| Broad-leaved dock ( <i>Rumex obtusifolius</i> )                          | A Good King Henry ( <i>Chenopodium bonus-henricus</i> )  |
| A Fat hen ( <i>Chenopodium album</i> )                                   | Common mouse ear ( <i>Cerastium triternatum</i> )        |
| Lesser sitchwort ( <i>Stellaria graminea</i> )                           | (*) Sticky mouse ear ( <i>Cerastium glomeratum</i> )     |
| Common chickweed ( <i>Stellaria media</i> )                              | Ragged Robin ( <i>Lychnis vis-cavuli</i> )               |
| Red campion ( <i>Silene dioica</i> )                                     | (*) Procrumban pearwort ( <i>Sagina procumbens</i> )     |
| (*) Corn spurry ( <i>Spergula arvensis</i> )                             |  |
| Woad anemone ( <i>Anemone nemorosa</i> )                                 | Creeping buttercup ( <i>Ranunculus repens</i> )          |
| Meadow buttercup ( <i>Ranunculus acris</i> )                             | (*) Kingcup ( <i>Caltha palustris</i> )                  |
| Lesser celandine ( <i>Ranunculus ficaria</i> )                           | (*) Monk's head ( <i>Aconitum napellus</i> )             |
|  | White water lily ( <i>Nymphaea alba</i> )                |
| A Yellow water lily ( <i>Nymphaea lutea</i> )                            | A Biting stonecrop ( <i>Sedum acre</i> )                 |
| Navelwort ( <i>Umbilicus rupestris</i> )                                 |  |
| A White stonecrop ( <i>Sedum album</i> )                                 | Silverweed ( <i>Potentilla anserina</i> )                |
| Opposite-leaved golden saxifrage ( <i>Chrysanthemum oppositifolium</i> ) | (*) trailing tormentil ( <i>Potentilla arguta</i> )      |
| Meadowswae ( <i>Filipendula ulmaria</i> )                                | Barn strawberry ( <i>Potentilla sterilis</i> )           |
| Tormentil ( <i>Potentilla erecta</i> )                                   | Common bird's foot trefoil ( <i>Lotus corniculatus</i> ) |
| Creeping cinquefoil ( <i>Potentilla reptans</i> )                        |  |
| Herb rampion ( <i>Genium urbanum</i> )                                   | Meadow voichling ( <i>Lathyrus pratensis</i> )           |
| Large bird's foot trefoil ( <i>Lotus pedunculatus</i> )                  | Red clover ( <i>Trifolium pratense</i> )                 |
| (*) Narrow-leaved vetch ( <i>Vicia sativa ssp. nigra</i> )               |  |
| White clover ( <i>Trifolium repens</i> )                                 | Herb robert ( <i>Geranium robertianum</i> )              |
| Tufted vetch ( <i>Vicia cracca</i> )                                     | Dug's mercury ( <i>Mercurialis perennis</i> )            |
| Cut-leaf cranesbill ( <i>Geranium dissectum</i> )                        | (*) Common milkwort ( <i>Polygala vulgaris</i> )         |
| (*) Shining cranesbill ( <i>Geranium lucidum</i> )                       | A Musk mallow ( <i>Malva moschata</i> )                  |
| Wood sorrel ( <i>Oxalis acetosella</i> )                                 | Wild pansy ( <i>Viola tricolor</i> )                     |
| Himalayan balsam ( <i>Impatiens glandulifera</i> )                       | Garlic mustard ( <i>Alliaria petiolata</i> )             |
| Common mallow ( <i>Malva sylvestris</i> )                                |  |
| Common dog violet ( <i>Viola riviniana</i> )                             |  |
| Cuckoo flower ( <i>Lady's Smock</i> ) ( <i>Cardamine pratensis</i> )     |  |
| Wild radish ( <i>Raphanus raphanistrum</i> )                             |  |
| A FLEABANE   | (*) Field pansy  |
| A SAGE SWALLOW   | (*) Peacock swallowtail                                  |
| HONEY PLASTAIN   | (*) Milk thistle   |
| A BUTTERFLY  | (*) Purple loosestrife                                   |
|  | (*) Spurred orchid                                       |
|  | (*) St John's wort                                       |
|  | (*) Black poplar   |
|  | (*) Marsh marigold                                       |

- ▲ Shepherd's purse (*Capsella bursa-pastoris*)
- Primrose (*Primula vulgaris*)
- Cowslip (*Primula veris*)
- Encianicris nightshade (*Circus luteiflora*)
- Great willowherb (*Epilobium hirsutum*)
- ▲ Mare's tail (*Hippuris vulgaris*)
- ▲ Wild angelica (*Angelica sylvestris*)
- ▲ Pignut (*Coropodium majus*)
- Curly-fruited water-dropwort (*Oenanthe pimpinelloides*\*)
- ▲ Fool's water cross (*Apium nodiflorum*)
- Rough chervil (*Chacrophylum temulentum*)
- Hedge bedstraw (*Galium mollugo*)
- Common marsh bedstraw (*Galium palustre*)
- Common comfrey (*Symphytum officinale*)
- Creeping forget-me-not (*Myosotis secunda*)
- Field forget-me-not (*Myosotis arvensis*)
- ▲ Betony (*Stachys officinalis*)
- White dead-nettle (*Lamium album*)
- Yellow archangel (*Galeobdolon luteum*)
- Selfheal (*Prunella vulgaris*)
- ▲ Bittersweet (*Solanum dulcamara*)
- ▲ Deadly nightshade (*Atropa belladonna*)
- ▲ Great mullein (*Verbascum thapsus*)
- ▲ Purple toadflax (*Linaria purpurba*)
- ▲ Ivy leaved toadflax (*Cymbalaria muralis*)
- Germanic speedwell (*Veronica chamaedrys*)
- Bruecklime (*Veronica heccaburgu*)
- ▲ Common field speedwell (*Veronica persica*)
- ▲ Ivy leaved speedwell (*Veronica hederae*)
- Common eyebright (*Euphrasia nemorosa* agg.)
- Common bronrape (*Orbanche minor*)
- Greater plantain (*Plantago major*)
- ▲ Town Hall Cluck (*Adoxa moschatellina*)
- Devil's-bit scabious (*Scabiosa pratensis*)
- Lesser burdock (*Achium minus*)
- Meadow thistle (*Cirsium dissectum*)
- Marsh thistle (*Cirsium palustre*)
- Common knapweed (*Centauria nigra*)
- Autumnal hawkbit (*Leontodon autumnalis*)
- Nippelwort (*Lapsana communis*)
- Mouse-ear hawkweed (*Pilosella officinarum*)
- Yarrow (*Achillea millefolium*)
- Common ragwort (*Senecio jacobaea*)
- ▲ Canadian pondweed (*Elodea canadensis*)

- ▲ Scarlet pimpernel (*Anagallis arvensis*)
- Yellow pimpernel (*Lysimachia nemorum*)
- ▲ Ruselaj willowherb (*Epilobium angustifolium*)

#### Common Parasites

- ▲ Queen Anna's lace (*Anthriscus sylvestris*)
- ▲ Burnat-saxifrage (*Pimpinella saxifraga*)
- Hogweed (*Heracleum sphondylium*)
- Clavars (*Galium aparine*)
- ▲ Russian comfrey (*Symphytum x uplandicum*)
- ▲ Wood forget-me-not (*Myosotis sylvatica*)
- Hedge woundwort (*Stachys sylvatica*)
- ▲ Red dead-nettle (*Lamium purpurcum*)
- Bugle (*Ajuga reptans*)
- Ground Ivy (*Glechoma hederacea*)
- Common figwort (*Scrophularia nodosa*)
- Foxglove (*Digitalis purpurea*)

- Wood speedwell (*Veronica montana*)
- Thyme leaved speedwell (*Veronica serpyllifolia*)
- ▲ Green field speedwell (*Veronica agrestis*)
- ▲ Wall speedwell (*Veronica arvensis*)

- Ribwort plantain (*Plantago lanceolata*)
- Honeysuckle (*Lonicera periclymenum*)
- ▲ Coltsfoot (*Tussilago farfara*)
- Spargthistle (*Cirsium vulgare*)
- Dwarf thistle (*Cirsium aviculare*)
- Creeping thistle (*Cirsium arvense*)
- Cat's-ear (*Hypochaeris radicata*)
- Rough hawkbit (*Leontodon hispidus*)
- Dandelion (*Taraxacum officinale* agg.)
- Daisy (*Bellis perennis*)
- Oxeye daisy (*Leucanthemum vulgare*)

#### (Snowdrops & Hyacinths)

- Stuebell (*Hyacinthoides non-scripta*)
- ▲ Early purple orchid (*Orchis mascula*)
- Lion's and ladies (*Arum maculatum*)
- ▲ Yellow flag (*Iris pseudacorus*)
- Common spotted orchid (*Dactylorhiza fuchsii*)
- ▲ Snowdrop (*Galanthus nivalis*)
- ▲ Stinking iris (*Iris foetidissima*)

#### RUSHES

- Sharp-flowered rush (*Juncus acutiflorus*)
- Soft rush (*Juncus effusus*)
- Field wood-rush (*Luzula campestris*)
- Hard rush (*Juncus inflexus*)
- Compact rush (*Juncus conglomeratus*)

#### SEDGES

- Ramble sedge (*Carex remota*)
- Hairy sedge (*Carex hirta*)

- o Glaucous sedge (*Carex flacca*)
- o Spring sedge (*Carex acrotylla*)

- o Gamsion sedge (*Carex psimosa*)

GRASSES

- Red fescue (*Festuca rubra*)
- Crested dog's tail (*Cynosurus cristatus*)
- Rough meadow grass (*Poa trivialis*)
- False oat-grass (*Arrhenatherum elatius*)
- Tufted hair-grass (*Deschampsia cespitosa*)
- Creeping soft grass (*Holcus mollis*)
- Reed canary-grass (*Phalaris arundinacea*)
- Creeping bent (*Agrostis stolonifera*)
- Timothy (*Phleum pratense*)
- o Soft brome (*Bromus hordeaceus ssp. hordeaceus*)
- o **10000 AYS GRASS**
- Perennial ryegrass (*Lolium perenne*)
- o Quaking grass (*Bromus moerhousii*)
- Cook's foot (*Dactylis glomerata*)
- Yellow oat-grass (*Trisetum flavescens*)
- Yorkshire fog (*Holcus lanatus*)
- o Hoar-grass (*Deschampsia decumbens*)
- Common bent (*Agrostis capillaris*)
- o Meadow foxtail (*Alopecurus pratensis*)
- o Barron brome (*Anisantha stans*)
- o Sweet vernal grass (*Anthoxanthum odoratum*)

FERNS & HORSETAILS

- Field horsetail (*Equisetum arvense*)
- o **WATER HORSETAIL**
- o **HARTSTONGUE FERN**
- o **MOLE FERN**
- o **MAIDENHAIR SPERMATOPHYTE**
- o **BROAD BUCCLEER FERN**
- Bracken (*Pteridium aquilinum*)
- o **KIDS FERN**
- o **Common SPOONFERN**
- o **SOFT SHANK FERN**

PLANTS SINCE 8/08

- o ORANGE BALSAM
- o LESSER INCLAMERIS
- o MARSH WOUND WORT
- o Common HEMNETTLE
- o GREEN BUCKLE

<sup>2</sup> LISTINGS DRAWN UP BY CHARLIE RABCLIFFE MADGLOW FARM  
CENTRE ENVIRONMENTAL CO-ORDINATOR IN CONJUNCTION WITH  
FIONA GREENHIELDS OF DOCKET WILDLIFE TRUST'S RUCI PROJECT  
& DOCKET ENVIRONMENTAL RECORDS CENTRE<sup>2</sup> 1998-1999