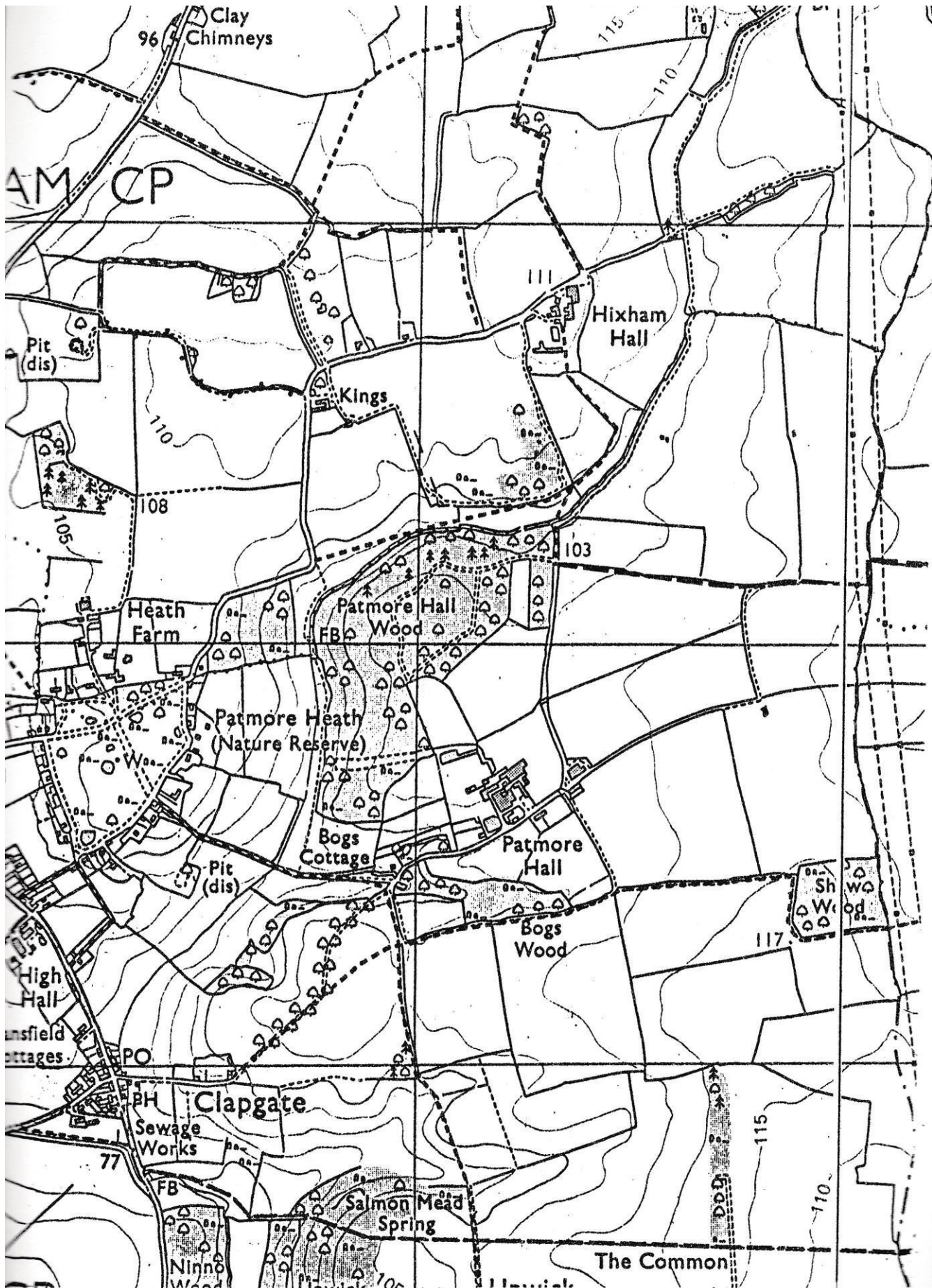


**BISHOPS STORTFORD AND DISTRICT  
NATURAL HISTORY SOCIETY.**

**A Wildlife Survey  
of the  
Patmore Hall Estate  
1985-1987.**



---

## Introduction

The Bishop's Stortford Natural History Society has a long history of carrying out surveys of various forms of wildlife in the local area. Notable successes include the work done on birds, wildflowers, moths and butterflies. These surveys have usually been carried out by interested groups of individuals who often have the specialist knowledge necessary for this dedicated and detailed work. The areas covered range from individual sites to a large radius based on Bishop's Stortford. It was thus with some interest and excitement that the Society was given the opportunity in 1985 to carry out a detailed survey of the Patmore Hall Estate. In this case the idea was for all groups to concentrate on one large area and thus give an overall picture as to the status of as many groups of wildlife as possible. In this way it was hoped that the results obtained would not only be a useful scientific record in themselves but may also act as a basis for future wildlife management on the estate if the owners and manager should so choose.

The survey was started with the following aims in mind.

## Aims

1. To record the presence and where applicable, the status, of as many species of wildlife, both plant and animal.
2. To carry out 1. on as many parts of the estate as possible in order to record a complete picture.
3. To place special emphasis on records of rare species or any cases where particularly unusual or interesting sites were found.
4. To relate the species found to their habitat with particular reference to current management practises on the estate.
5. To make positive and realistic suggestions regarding best methods of encouraging wildlife in the future within the framework of a working farm situation.
6. Ultimately to produce a report of the findings to be made available to those concerned.

## General Description of the Area

The area under survey consisted of the Patmore Hall Farm Estate including woodlands, hedgerow, pasture and farm tracks. The area can be broadly divided into two regions depending on the underlying geology. The first being the higher ground to the East rising to the 375 foot contour and consisting of relatively level land underlain by Chalky Boulder Clay. This area is the most intensively farmed being put over mostly to intensive cereal cultivation. Several isolated woods were surveyed and also the hedgerows and farm tracks which cross the area. The second area, lying further to the West and nearest to Patmore Heath, consists of a tributary valley of the River Ash. The underlying geology here is the Reading Beds (sands interspersed with clay lenses) and is the site of the major woodlands, pastures and several poorly-drained boggy areas. At several points in the bed of the Ash the Chalk was seen to outcrop thus indicating that this main rock formation lies relatively near to the surface.

## Methods

In order to achieve the aims outlined above it was necessary to organise interested and experienced members into small groups, each group to be made responsible for their particular discipline. These groups in turn visited the estate on a regular basis over the survey period. Different techniques were employed by the groups according to their objective. In some cases, for example the birds, the area was divided up between members for regular field observation whilst the plants needed methodical searching to ensure that all species were recorded. Where possible and applicable seasonal recording was employed this being especially true for groups such as moths and butterflies. Where specialised techniques have been employed these are described in the relevant section report.

## FUNGUS

Many more species of fungi surely occur on the estate than have been recorded in this survey.

The fruiting bodies are the only visible parts to be found, and do not have to appear each year to survive because the main structures are below ground or within other tissue.

Nutrients are absorbed by the mycelium from the breakdown of leaf-litter in woods or other dead or living material.

Here are listed some of the larger fungi which have been noted in the last three years and that were readily identifiable. They come mainly from the wooded areas, and are therefore associated with both coniferous and broad-leaved trees; fewer species occur in the drier, sandy and open areas.

C Watson  
S Watson

Agaricus silvicola	Wood Mushroom
Amanita rubescens	The Blusher
Armillaria mellea (and var. bulbosa)	Honey Fungus
Auricularia auricula-judae	Jew's Ear
Auricularia mesenterica	Tripe Fungus
Boletus chrysenteron	Red-Cracked Boletus
Boletus parasiticus	
Clavulinopsis helvola	
Clitocybe flaccida	Tawny Funnel Cap
Collybia fusipes	Spindle Shank
Collybia peronata	Wood Woolly-foot
Coprinus atramentarius	Common Ink Cap
Coprinus disseminatus	Fairies' Bonnets
Coriolus versicolor	Many-zoned Polypore
Cortinarius tabularis	
Cystoderma amianthinum	
Dacrymyces stillatus	
Daedalea quercina	Maze-Gill
Flammulina velutipes	Velvet Shank
Ganoderma adpersum	
Ganoderma lucidum	
Gloeophyllum sepiarium	
Hygrocybe psittacina	Parrot Wax Cap
Hypholoma fasciculare	Sulphur Tuft

<i>Laccaria amethystea</i>	Amethyst Deceiver
<i>Laccaria laccata</i>	Deceiver
<i>Lactarius subdulcis</i>	
<i>Lactarius turpis</i>	Ugly Milk-Cap
<i>Lepiota procera</i>	Parasol mushroom
<i>Lepiota rhacodes</i>	Shaggy Parasol
(var. <i>hortensis</i> )	
<i>Lycoperdon perlatum</i>	
<i>Lycoperdon pyriforme</i>	
<i>Macrocystidia cucumis</i>	
<i>Mycena alcalina</i>	
<i>Mycena epipterygia</i>	
<i>Mycena fibula</i>	
<i>Mycena filipes</i>	
<i>Mycena galericulata</i>	
<i>Mycena polygramma</i>	
<i>Nectria cinnabarina</i>	Coral Spot Fungus
<i>Oudemansiella radicata</i>	Rooting Shank
<i>Paxillus involutus</i>	Brown Roll-Rim
<i>Phaeolus schweinitzii</i>	
<i>Phallus impudicus</i>	Stinkhorn
<i>Phlebia merismoides</i>	
<i>Pholiota apicrea</i>	
<i>Piptoporus betulinus</i>	Birch Polypore
<i>Pleurotus cornucopiae</i>	
<i>Polyporus squamosus</i>	Dryad's Saddle
<i>Psathyrella marcescibilis</i>	
<i>Pseudotrametes gibbosa</i>	Bracket
<i>Russula atropurpurea</i>	Blackish-Purple Russula
<i>Russula nigricans</i>	Blackening Russula
<i>Russula ochroleuca</i>	Common Yellow Russula
<i>Russula puellaris</i>	
<i>Schizopora paradoxa</i>	
<i>Scleroderma citrinum</i>	Common Earth-Ball
<i>Stereum gausapatum</i>	
<i>Stereum hirsutum</i>	Hairy Stereum
<i>Stereum rugosum</i>	
<i>Thelephora terrestris</i>	Earth Fan
<i>Tricholomopsis rutilans</i>	
<i>Tyromyces albellus</i>	
<i>Xylaria hypoxylon</i>	Candle-snuff

## WILD PLANTS AND WOODLAND TREES

During the period of the survey 286 species of higher plants and ferns were recorded and 24 species of mosses and liverworts. The latter number represented only a token sample from three of the main woodland areas, and the total number of mosses and liverworts on the farm is likely to be considerably more. No surveyor was competent to identify bryophytes, and therefore a small collection was made and identified by Dr K J Adams of Loughton.

The flora of Patmore Hall farm is relatively rich partly due to the presence of two distinct soil types, the acid sands of the Reading Beds and the calcareous soils of the boulder clay. The effect of this difference is most clearly seen in Patmore Hall wood where most of the western and northern parts are on well-drained sandy soils overlying chalk and the remainder on boulder clay. Chalk is exposed in the small chalkpit on the western side of the wood and also where the small tributary of the River Ash has cut into the chalk along the north-west boundary. The presence of a substantial acreage of ancient woodland and the sympathetic management of hedgerows, ditches, ponds, farm roads and bridleways have also contributed to the large number of species recorded.

### The Grasslands

These have not been studied in depth but all are believed to have been improved at some time and therefore contain relatively few species, just the usual grasses and a few other common plants. The improvement has resulted in at least one extinction, the disappearance of Lady's Mantle (*Alchemilla vestita*), now a very rare plant in the Herts/Essex border area. This used to grow some years ago in the field on the western edge of Patmore Hall Wood.

One particular grass enclosure on the eastern side of the wood, Bush Pasture was found to be a complete stand of Creeping Bent (*Agrostis stolonifera*) with just a few scattered plants of Musk Mallow (*Malva moschata*).

### The Arable Land

Arable land comprises the greater part of the farm. All of it is on boulder clay and under intensive cultivation, well fertilised and treated where necessary with herbicides. This habitat provided very little contribution to the species list apart from a few common weeds mostly also found elsewhere. One exception was Field Woundwort (*Stachys arvensis*) near the southern edge of Bogs Wood, the first time this plant has been recorded in the 150 square miles surrounding Bishop's Stortford.

### The Woodlands

How old are these woods? G F Peterken in his book, *Woodland Conservation and Management* published in 1981, has listed, as a result of his researches in Lincolnshire, 34 species of flowering plants with a strong affinity for ancient woods, that is woods which have been in existence at least since the medieval period, and in many cases are fragments of the primaevial forest that covered most of this island after the last ice age. These species show little or no ability to colonise secondary woodland and are rarely found in other habitats. Of these 34 species, the following occur in Patmore Hall woods:

		<u>Present in wood Nos.</u>
Wood Anemone	Anemone nemorosa	1,2
Nettled-leaved Bellflower	Campanula trachelium	1,2,5
Remote Sedge	Carex remota	1,4
Small Teazel	Dipsacus pilosus	1,3
Yellow Archangel	Galeobdolon luteum	2,5
Hairy Wood-rush	Luzula pilosa	1
Wood Pimpernel	Lysimachia nemorum	1
Wood Millet	Milium effusum	1,5
Early Purple Orchid	Orchis mascula	1,2
Wood Sorrel	Oxalis acetosella	1
Barren Strawberry	Potentilla sterilis	1,2,3
Primrose	Primula vulgaris	1,2
Figwort	Scrophularia nodosa	1,2,3,4

Distribution:	1. Patmore Hall Wood	12 species
	2. Shaw Wood	7 species
	3. Grassy Wood	3 species
	4. Bogs Wood	2 species
	5. Inzett's Wood	3 species

Patmore Hall Wood with 12 species and Shaw Wood with 7 are clearly of ancient origin and likely to be remaining fragments of primaeval forest cover. The fact that Shaw wood is on the parish, and also the county boundary, is also a good indication of ancient, and probably primary woodland. Forest clearance would have gradually moved outwards from the centre of each settlement as more and more land came into agricultural use. The forest remnants on and adjacent to parish boundaries would have been the last to be cleared and often left to provide timber, firewood and other woodland products for the parish.

Inzett's Wood is almost certain to be of ancient origin because Yellow Archangel, Wood Millet and Nettle-leaved Bellflower are very strong indications. The status of Bogs Wood and Grassy Wood is much more uncertain. On the 1805 Ordnance Survey map Inzett's Wood is considerably larger while Grassy Wood is not shown.

#### The Wild Daffodils

The Patmore Hall estate has one of, and possibly, the largest concentration of wild Daffodil (*narcissus pseudo-narcissus*) remaining in the counties of Hertfordshire and Essex. Wild Daffodil is not specifically a woodland plant as it requires ample light to flower successfully, and it often does better in meadows and pastures. It has gone from many areas during the last 100 years, and was once profuse in meadows and pastures in parts of Hertfordshire. It is now found mostly in fairly open woodland because the meadows and pastures where it occurred were ploughed up during the two world wars or were otherwise improved. It will still spread back into grassland and there is evidence of this at Patmore Hall.

Many garden varieties of *Narcissus* have been planted at Patmore Hall, some quite close to the native population. Where this occurs there is danger of hybridisation with the native plants which would destroy their genetic integrity.



## Brief Description of the Woodlands

### Patmore Hall Wood

This is the largest wood extending to about 25 hectares, and in consequence contains the largest number of species, 145 higher plants (of which no less than 12 are indicators of ancient woodland) and at least 22 bryophytes, but this group has not been fully recorded. There are two distinct woodland types present with a clear dividing line where the sands of the Reading beds give way to boulder clay in the upper part of the wood. Based on the G F Peterken system of classification these are:

a) Pedunculate oak/Hornbeam (Birch/Hazel variant) which is characteristic of light to medium-textured strongly acid soils. In Patmore Hall wood this is confined to the exposed sands and is mainly hornbeam coppice with scattered birch. Part has been re-planted with conifers. As is usual with almost pure hornbeam coppice, the shrub layer is virtually non-existent and the dense shade cast causes large areas of bare ground in the herb layer. The more open areas are dominated by large drifts of bluebells and bracken with scattered patches of three other ferns, Male fern, Broad Buckler fern and the locally rare Narrow Buckler fern. Mosses are abundant in places.

b) Pedunculate oak/Hornbeam (Ash/Maple variant). This woodland type occupies the remainder of the wood where the soil is calcareous boulder clay. Although this is still hornbeam woodland the canopy is more mixed with ash and maple in place of birch as the main subsidiary trees, and with a pronounced shrub layer with hazel and other species. The ground flora is more varied and distinctly richer in species.

Many of the more interesting plants of Patmore Hall Wood are to be found on the woodland tracks and particularly in the large bracken infested clearing. The surrounding countryside is blanketed almost entirely with varying depths of glacial till in the form of calcareous boulder clay, and acid sands, where they occur are rarely exposed. Because of this, several plants on the sandy track and clearing are either locally rare or very uncommon. The most interesting of these are:

Water Blinks	Montia fontana	Found nowhere else in the district
Trailing Tormentil	Potentilla anglica	Rare
Changing forget-me-not	Myosotis vesicolor	Rare
Yellow Pimpernel	Lysimachia nemorum	Uncommon

### Shaw Wood

A parish boundary wood on boulder clay which is undoubtedly ancient in origin, and probably a fragment of primary woodland. At one time before Dutch Elm disease, it contained a large area of elmwood, since felled. This has left a large part of the wood in a semi-derelict state which will eventually grow trees again by natural regeneration subject, however, to the browsing of deer. The woodland still standing is Pedunculate oak/hornbeam (ash/maple variant).

At the southern edge of the wood there appears to be the remains of an ancient roadway, or what could have been a central ride into or through the wood when it was much larger.

Shaw Wood is note-worthy for its large drifts of Yellow Archangel and the abundance of Nettle-leaved Bellflower in the north-west corner.

### Grassy Wood

The status of this wood is uncertain. It contains only three species which are said to be indicators of ancient woodland but in my opinion not one of them is strongly indicative. The name suggests former clearance, at least in part, and the Pedunculate oak/birch woodland type which occupies the lighter soils is a common component of secondary woodland. On the other hand the ash/maple type on the boulder clay could be an ancient remnant. Uncommon plants to be found here are the Small teasel (*Dipsacus pilosus*) and the Soft Shield fern (*Polysticum setiferum*) which grows sparingly along the ditch bank along the southern edge.

### Bogs Wood

This small wood with a stream through the centre feeding a pond at its western edge is partly on boulder clay and partly on sand. It contains small fragments of hornbeam woodland and ash/maple woodland. A large part has been recently replanted with a mixture of trees, and elsewhere there has been a massive invasion of sapling sycamore. Very little of the original tree cover is left and the open sandy areas are dominated by large drifts of wild daffodil.

### Inzetts Wood

A narrow strip of woodland which contains a mixture of trees and conforms to no particular woodland type due to replanting at some time in the recent past particularly with sycamore and larch. It is almost certainly a fragment of ancient woodland with an interesting shrub and ground flora containing such species as Cowslip, Sanicle, Red Current, Holly, Wood Violet, Wood Millet, Wayfaring Tree, Guelder Rose, Nettle-leaved Bellflower, Yellow Archangel and a large number of Twayblade (c.200 plants), an orchid not found elsewhere on the estate.

### Summary and Conclusions

The important features of the Patmore Hall estate are:-

- 1) The large proportion of ancient woodland and the uncommon juxtaposition of acid sands with calcareous boulder clay. The ancient woodland needs careful management under expert advice to ensure its continuation and to preserve its integrity. Further planting of conifers in ancient woodland should be avoided.
- 2) The large populations of Wild Daffodil. These should be encouraged to flower well by allowing sufficient light to penetrate the canopy, and to spread where possible. The possibility of hybridisation with cultivated daffodils should be prevented.
- 3) The large numbers of Nettle-leaved Bellflower and Small Teazel in various places on the estate, both uncommon plants. These should be protected and encouraged.
- 4) The presence of Narrow Buckler-fern in Patmore Hall Wood, (it is found elsewhere in the district only on Patmore Heath) and the rare Soft Shield-fern in Grassy Wood and Hard Shield fern in Patmore Hall Wood.
- 5) The interesting and locally rare plants on the tracks and in the central clearing of Patmore Hall Wood. It is important to keep down the Bracken in this area by mowing. Two of the rarities are annuals and they need disturbed soil to survive. The rabbits normally do this.
- 6) The wide grassy track and ditch to Shaw Wood with its drifts of Cowslips and other plants, the farm road from the barns to Patmore Hall Wood, the ponds, the private picnic area, the hedges and ditchbanks. These are all well managed and a large number of species are found in



<i>Arum maculatum</i>	Wild Arum	1 2 3 4	6	8
<i>Ballota nigra</i>	Black Horehound			8
<i>Barbarea vulgaris</i>	Winter Cress		6	8
<i>Bellis perennis</i>	Daisy	1	6	8
<i>Betula pendula</i>	Silver Birch	1 3	5	
<i>Betula pubescens</i>	Downy Birch	1		
<i>Brachypodium sylvaticum</i>	Wood False Brome	1 2 3	5	7 8
<i>Bromus hordeaceus</i>	Soft Brome	2		8
(ssp <i>hordeaceus</i> )				
<i>Bromus ramosus</i>	Wood Brome	2 3		8
<i>Bromus sterilis</i>	Sterile Brome	2	4	7 8
<i>Bryonia dioica</i>	White Bryony	1 2 3 4 5		7 8
<i>Callitriche agg</i>	Water Starwort		4	
<i>Callitriche stagnalis</i>	Common Starwort	1		
<i>Caltha palustris</i>	Marsh Marigold		4	
<i>Campanula trachelium</i>	Nettle-leaved Bellflower	1 2	5 6	
<i>Capsella bursa-pastoris</i>	Shepherds Purse		3 4	6 8
<i>Cardamine hirsuta</i>	Hairy Bitter Cress			8
<i>Cardamine pratensis</i>	Cuckoo Flower	1	4	6 8
<i>Carduus acanthoides</i>	Wetted Thistle	1 2 3		6 7 8
<i>Carex flacca</i>	Glaucous Sedge			7 8
<i>Carex hirta</i>	Hairy Sedge			8
<i>Carex otrubae</i>	False Fox Sedge	1		8
<i>Carex ovalis</i>	Oval Sedge	1		8
<i>Carex remota</i>	Remote Sedge	1	4	
<i>Carex sylvatica</i>	Wood Sedge	1		
<i>Carpinus betulus</i>	Hornbeam	1 2 3 4 5		
<i>Centaurea nigra</i>	Hardheads			6 7 8
<i>Centaurea scabiosa</i>	Greater Knapweed			8
<i>Centaureum erythraea</i>	Common Centaury	1 2		
<i>Cerastium fontanum</i>	Common Mouse-ear Chickweed	1 2	4	8
(ssp <i>triviale</i> )				
<i>Cerastium glomeratum</i>	Clustered Mouse-ear Chickweed	1	4	6 8
<i>Chaerophyllum temulentum</i>	Rough Chervil	1 2 3 4	6	8
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	1 2 3 4	6	8
<i>Chenopodium album</i>	White Goosefoot	2	4	6 8
<i>Circaea lutetiana</i>	Enchanter's Nightshade	1	4 5	
<i>Cirsium arvense</i>	Creeping Thistle	1 2 3 4 5 6 7 8		
<i>Cirsium palustre</i>	Marsh Thistle	1 2		
<i>Cirsium vulgare</i>	Spear Thistle	1 2 3 4	6	8

<i>Galium palustre</i>	Marsh Bedstraw	1	8
<i>Galium saxatile</i>	Heath Bedstraw	1	
<i>Galium verum</i>	Lady's Bedstraw	1	8
<i>Geranium dissectum</i>	Cut-Leaved Cranesbill	2	7 8
<i>Geranium pusillum</i>	Small-Flowered Cranesbill		4 8
<i>Geranium robertianum</i>	Herb Robert	2 3 4 5 6 7 8	
<i>Geum urbanum</i>	Wood Avens	1 2 3	5 6 8
<i>Glechoma hederacea</i>	Ground Ivy	1 2 3 4 5 6 7 8	
<i>Glyceria fluitans</i>	Floating Sweet Grass		8
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	1	8
<i>Hedera helix</i>	Ivy	2 3 4 5 6 7 8	
<i>Heracleum mantegazzianum</i>	Giant Hogweed (introduced)		8
<i>Heracleum sphondylium</i>	Hogweed	2	5 6 7 8
<i>Hieracium pilosella</i>	Mouse-Ear Hawkweed		8
<i>Holcus lanatus</i>	Yorkshire Fog	1 2	4 6 7 8
<i>Holcus mollis</i>	Creeping Soft-Grass	1	
<i>Humulus lupulus</i>	Hop		4
<i>Hyacinthus non-scripta</i>	Bluebell	1 2 3 4	
<i>Hypericum hirsutum</i>	Hairy St John's Wort	1 2 3 4	6 7
<i>Hypericum tetrapterum</i>	Square-stalked St John's Wort	1	
<i>Hypochoeris radicata</i>	Cat's Ear	2	8
<i>Ilex aquifolium</i>	Holly	2 3 4 5	
<i>Iris pseudacorus</i>	Yellow Flag	1	8
<i>Juncus articulatus</i>	Jointed Rush		8
<i>Juncus bufonius</i>	Toad Rush	1	3 4
<i>Juncus conglomeratus</i>	Compact Rush	1 2	
<i>Juncus effusus</i>	Soft Rush	1 2 3	8
<i>Juncus inflexus</i>	Hard Rush		8
<i>Kickxia spuria</i>	Round-Leaved Fluellen		8
<i>Knautia arvensis</i>	Field Scabious		7 8
<i>Lactuca serriola</i>	Prickly Lettuce		8
<i>Lamiastrum galeobdolon</i>	Yellow Archangel	2	5
<i>Lamium album</i>	White Dead-Nettle	1 2 3 4	6 8
<i>Lamium purpureum</i>	Red Dead-Nettle		8
<i>Lapsana communis</i>	Nipplewort	1 2 3 4	6 8
<i>Larix decidua</i>	European Larch	1	5
<i>Lathyrus pratensis</i>	Meadow Vetchling		6 7 8
<i>Leontodon autumnalis</i>	Autumnal Hawkbit		8
<i>Leontodon hispidus</i>	Rough Hawkbit		7
<i>Listera ovata</i>	Twayblade		5

Clematis vitalba	Traveller's Joy	1 2 3 5 6 8
Clinopodium vulgare	Wild Basil	7 8
Conium maculatum	Hemlock	2 8
Conopodium majus	Pignut	1 2 4
Convolvulus arvensis	Field Bindweed	6 7 8
Cornus sanguinea	Dogwood	2 5 6 7 8
Coronopus squamatus	Swine Cress	8
Corylus avellana	Hazel	1 2 3 4 5 6 7 8
Crataegus monogyna	Hawthorn	1 2 3 4 5 6 7 8
Crataegus laevigata	Midland Hawthorn	1 2 6
Crepis capillaris	Smooth Hawk's-Beard	3 8
Crepis vesicaria	Bearded Hawk's-Beard	8
Cynosurus cristatus	Crested Dog's-Tail	8
Dactylis glomerata	Cocksfoot	2 4 6 7 8
Deschampsia cespitosa	Tufted Hair Grass	1 2
Digitalis purpurea	Foxglove	1
Dipsacus fullonum	Common Teasel	1 3 8
Dipsacus pilosus	Small Teasel	1 3
Dryopteris carthusiana	Narrow Buckler Fern	1
Dryopteris dilatata	Broad Buckler Fern	1 2 3 4
Dryopteris filix-mas	Male Fern	1 2 3 4
Elymus caninus	Bearded Twitch	3
Elymus repens	Twitch	6 8
Epilobium adenocaulon	American Willowherb	1 2 3
Epilobium hirsutum	Great Hairy Willowherb	2 4 7 8
Epilobium montanum	Broad-leaved Willowherb	8
Epilobium parviflorum	Small-flowered Hairy Willowherb	8
Epilobium tetragonum	Square-stalked Willowherb	1 2 3
Equisetum arvense	Field Horsetail	7 8
Euonymus europaeus	Spindle	1 2 4 7 8
Fallopia convolvulus	Black Bindweed	1 4 8
Festuca pratensis	Meadow Fescue	8
Festuca rubra	Red Fescue	7 8
Filipendula ulmaria	Meadowsweet	1 4 6 8
Fragaria vesca	Wild Strawberry	1 2 8
Fraxinus excelsior	Ash	1 2 3 4 5 6 7 8
Fumaria officinalis	Fumitory	1 8
Galeopsis tetrahit	Common Hemp-Nettle	1 2 3 4 8
Galium aparine	Goosegrass	1 2 3 4 5 6 7 8
Galium mollugo	Hedge Bedstraw	6 7 8



<i>Plantago lanceolata</i>	Ribwort Plantain						7	8
<i>Plantago major</i>	Great Plantain	1	2	4	6	7	8	
<i>Poa annua</i>	Annual Meadow-Grass	1	2	3	4			8
<i>Poa nemoralis</i>	Wood Meadow-Grass	1						
<i>Poa pratensis</i>	Smooth Meadow-Grass						7	
<i>Poa trivialis</i>	Rough Meadow-Grass	1	2	4	6	7	8	
<i>Polygonum aviculare</i>	Knot-Grass			4	6		8	
<i>Polygonum persicaria</i>	Persicaria	1	3	4				8
<i>Polystichum aculeatum</i>	Hard Shield Fern	1						
<i>Polystichum setiferum</i>	Soft Shield Fern			3				
<i>Populus x canadensis</i> (var. <i>serotina</i> )	Hybrid Black Poplar							8
<i>Populus tremula</i>	Aspen	1						
<i>Potamogeton crispus</i>	Curled Pondweed							8
<i>Potentilla anglica</i>	Procumbent Cinquefoil	1						
<i>Potentilla anserina</i>	Silverweed	1			6	7	8	
<i>Potentilla erecta</i>	Tormentil	1						
<i>Potentilla reptans</i>	Creeping Cinquefoil	1			6	7	8	
<i>Potentilla sterilis</i>	Barren Strawberry	1	2	3				
<i>Primula veris</i>	Cowslip	1			5	6	7	8
<i>Primula vulgaris</i>	Primrose	1	2		6			
<i>Prunella vulgaris</i>	Selfheal	1	3		6		8	
<i>Prunus avium</i>	Wild Cherry	1	2	3	4			
<i>Prunus cerasifera</i>	Cherry Plum			4				
<i>Prunus domestica</i>	Wild Plum							8
<i>Prunus spinosa</i>	Blackthorn		2	3	4	5	7	8
<i>Pteridium aquilinum</i>	Bracken	1	3	4	6	7	8	
<i>Quercus robur</i>	Pedunculate Oak	1	2	3	4	5	6	7
<i>Ranunculus acris</i>	Meadow Buttercup		2					8
<i>Ranunculus auricomus</i>	Goldilocks	1	3		6			
<i>Ranunculus ficaria</i>	Lesser Celandine	1		4	6		8	
<i>Ranunculus repens</i>	Creeping Buttercup	1	2	3	4	6	8	
<i>Ranunculus trichophyllus</i>	Water Crowfoot							8
<i>Raphanus raphanistrum</i>	Wild Radish					6	8	
<i>Reseda luteola</i>	Dyer's Rocket	1						
<i>Rhamnus catharticus</i>	Purging Buckthorn					7	8	
<i>Ribes rubrum</i>	Red Currant			4	5			
<i>Ribes uva-crispa</i>	Gooseberry		3	5				
<i>Rosa arvensis</i>	Field Rose		2		6	7	8	
<i>Rosa canina</i>	Dog Rose		2	3	5	6	7	8



<i>Rosa micrantha</i>	Small Sweet Briar	2						
<i>Rosa tormentosa</i>	Downy Rose	2						
<i>Rubus caesius</i>	Dewberry							8
<i>Rubus fruticosus</i>	Blackberry	1	2	3	4	5	6	7 8
<i>Rubus idaeus</i>	Raspberry				4			
<i>Rumex acetosa</i>	Field Sorrel			3				8
<i>Rumex acetosella</i>	Sheep's Sorrel	1						8
<i>Rumex conglomeratus</i>	Sharp Dock							8
<i>Rumex crispus</i>	Curled Dock	1	2					8
<i>Rumex obtusifolius</i>	Broad-Leaved Dock	1	2	3	4		6	8
<i>Rumex sanguineus</i>	Wood Dock	1	2	3			6	8
<i>Sagina procumbens</i>	Common Pearlwort	1						8
<i>Salix alba</i>	White Willow			2				8
<i>Salix caprea</i>	Great Sallow							8
<i>Salix cinerea</i> ssp <i>oleifolia</i>	Rusty Sallow				4			8
<i>Sambucus nigra</i>	Elder	1	2	3	4	5	6	7 8
<i>Sanicula europaea</i>	Sanicle					5		
<i>Scrophularia auriculata</i>	Water Figwort	1			4			8
<i>Scrophularia nodosa</i>	Figwort	1	2		4			
<i>Senecio jacobaea</i>	Ragwort	1	2		4		6	8
<i>Senecio squalidus</i>	Oxford Ragwort							8
<i>Senecio sylvaticus</i>	Wood Groundsel							8
<i>Senecio vulgaris</i>	Groundsel					4	6	8
<i>Silene alba</i>	White Campion	1	2		4			7 8
<i>Silene dioica</i>	Red Campion			2				
<i>Silene vulgaris</i>	Bladder Campion	1	2		4			7 8
<i>Sinapsis arvensis</i>	Charlock							7 8
<i>Sisymbrium officinale</i>	Hedge Mustard							8
<i>Solanum dulcamara</i>	Bittersweet	1	2	3	4			7 8
<i>Solanum nigrum</i>	Black Nightshade	1			4			8
<i>Sonchus arvensis</i>	Corn Sow-Thistle	1	2					8
<i>Sonchus asper</i>	Prickly Sow-Thistle			2	3			8
<i>Sonchus oleraceus</i>	Common Sow-Thistle					4		7 8
<i>Sparganium erectum</i>	Branched Bur-Reed							8
<i>Stachys arvensis</i>	Field Woundwort							8
<i>Stachys sylvatica</i>	Hedge Woundwort	1	2	3	4	5	6	7 8
<i>Stellaria graminea</i>	Lesser Stitchwort							8
<i>Stellaria holostea</i>	Greater Stitchwort			2	3			7 8
<i>Stellaria media</i>	Chickweed	1		3	4		6	8

<i>Symphoricarpos rivularis</i>	Snowberry	4	8
<i>Symphytum officinale</i>	Comfrey	6	
<i>Symphytum x uplandicum</i>	Russian Comfrey	6	8
<i>Tamus communis</i>	Black Bryony	1 2	5 6 7 8
<i>Taraxacum officinale</i>	Dandelion	1 2 3 4	7 8
<i>Torilis japonica</i>	Upright Hedge-Parsley	2	6 8
<i>Tragopogon pratensis</i>	Goat's Beard		7 8
<i>Trifolium dubium</i>	Lesser Yellow Trefoil	1	8
<i>Trifolium pratense</i>	Red Clover		8
<i>Trifolium repens</i>	White Clover	1	4 6 7 8
<i>Tripleurospermum inodorum</i>	Mayweed	4	8
<i>Trisetum flavescens</i>	Yellow Oat Grass		7 8
<i>Typha latifolia</i>	Reedmace		8
<i>Ulmus glabra</i>	Wych Elm	1 2 3 4	6 7 8
<i>Ulmus minor</i>	Smooth Elm		3 4 5 6 7 8
<i>Urtica dioica</i>	Stinging Nettle	1 2 3 4 5 6 7 8	
<i>Urtica urens</i>	Annual Nettle		6
<i>Verbascum thapsus</i>	Common Mullein	1	
<i>Veronica arvensis</i>	Wall Speedwell	1	3 4 8
<i>Veronica beccabunga</i>	Brooklime		4
<i>Veronica chamaedrys</i>	Germander Speedwell	1 2	6 7 8
<i>Veronica hederifolia</i>	Ivy-Leaved Speedwell		4 8
<i>Veronica montana</i>	Wood Speedwell	1	
<i>Veronica officinalis</i>	Heath Speedwell	1	
<i>Veronica persica</i>	Common Field Speedwell		8
<i>Veronica serpyllifolia</i>	Thyme Leaved Speedwell	1	3 4 8
<i>Viburnum lantana</i>	Wayfaring Tree		5 8
<i>Viburnum opulus</i>	Guelder Rose	2	4 5 8
<i>Vicia angustifolia</i>	Narrow-Leaved Vetch		7 8
<i>Vicia cracca</i>	Tufted Vetch		6 7 8
<i>Vicia sepium</i>	Bush Vetch	2 3	6 8
<i>Vicia tetrasperma</i>	Smooth Tare	2	8
<i>Viola arvensis</i>	Field Pansy		8
<i>Viola hirta</i>	Hairy Violet	1	7
<i>Viola odorata</i>	Sweet Violet		3 4 5 6 7
<i>Viola odorata</i>	White Violet	2	8
(var. <i>dumetorum</i> )			
<i>Viola reichenbachiana</i>	Pale Wood Violet	1 2 3	7

MOSSES AND LIVERWORTS

Patmore Hall Wood

Atrichum undulatum  
Brachythecium rutabulum  
Campylopus introflexus  
Dicranella heteromalla  
Dicranoweisia cirrata  
Dicranum scoparium  
Eurhynchium praelongum  
Fissidens taxifolius  
Hypnum cupressiforme var. cupressiforme  
Hypnum cupressiforme var. resupinatum  
Lophocolea bidentata  
Lophocolea cuspidata  
Lophocolea heterophylla  
Marchantia polymorpha  
Mnium hornum  
Orthodontium lineare  
Plagiothecium curvifolium  
Plagiothecium denticulatum  
Plagiothecium nemorale (sylvaticum)  
Pohlia nutans  
Rhytidiadelphus squarrosus

Shaw Wood

Amblystegium serpens  
Dicranoweisia cirrata  
Eurhynchium praelongum  
Hypnum cupressiforme var. cupressiforme  
Hypnum cupressiforme var. resupinatum  
Lophocolea heterophylla

Bogs Wood

Aulacomnium androgynum  
Brachythecium rutabulum  
Eurhynchium praelongum  
Hypnum cupressiforme var. resupinatum  
Mnium hornum  
Mnium undulatum

MOSSES AND LIVERWORTS

Patmore Hall Wood

Atrichum undulatum  
Brachythecium rutabulum  
Campylopus introflexus  
Dicranella heteromalla  
Dicranoweisia cirrata  
Dicranum scoparium  
Eurhynchium praelongum  
Fissidens taxifolius  
Hypnum cupressiforme var. cupressiforme  
Hypnum cupressiforme var. resupinatum  
Lophocolea bidentata  
Lophocolea cuspidata  
Lophocolea heterophylla  
Marchantia polymorpha  
Mnium hornum  
Orthodontium lineare  
Plagiothecium curvifolium  
Plagiothecium denticulatum  
Plagiothecium nemorale (sylvaticum)  
Pohlia nutans  
Rhytidiadelphus squarrosus

Shaw Wood

Amblystegium serpens  
Dicranoweisia cirrata  
Eurhynchium praelongum  
Hypnum cupressiforme var. cupressiforme  
Hypnum cupressiforme var. resupinatum  
Lophocolea heterophylla

Bogs Wood

Aulacomnium androgynum  
Brachythecium rutabulum  
Eurhynchium praelongum  
Hypnum cupressiforme var. resupinatum  
Mnium hornum  
Mnium undulatum

J Fielding  
C Watson  
S Watson

HEDGEROW TREES AND SHRUBS

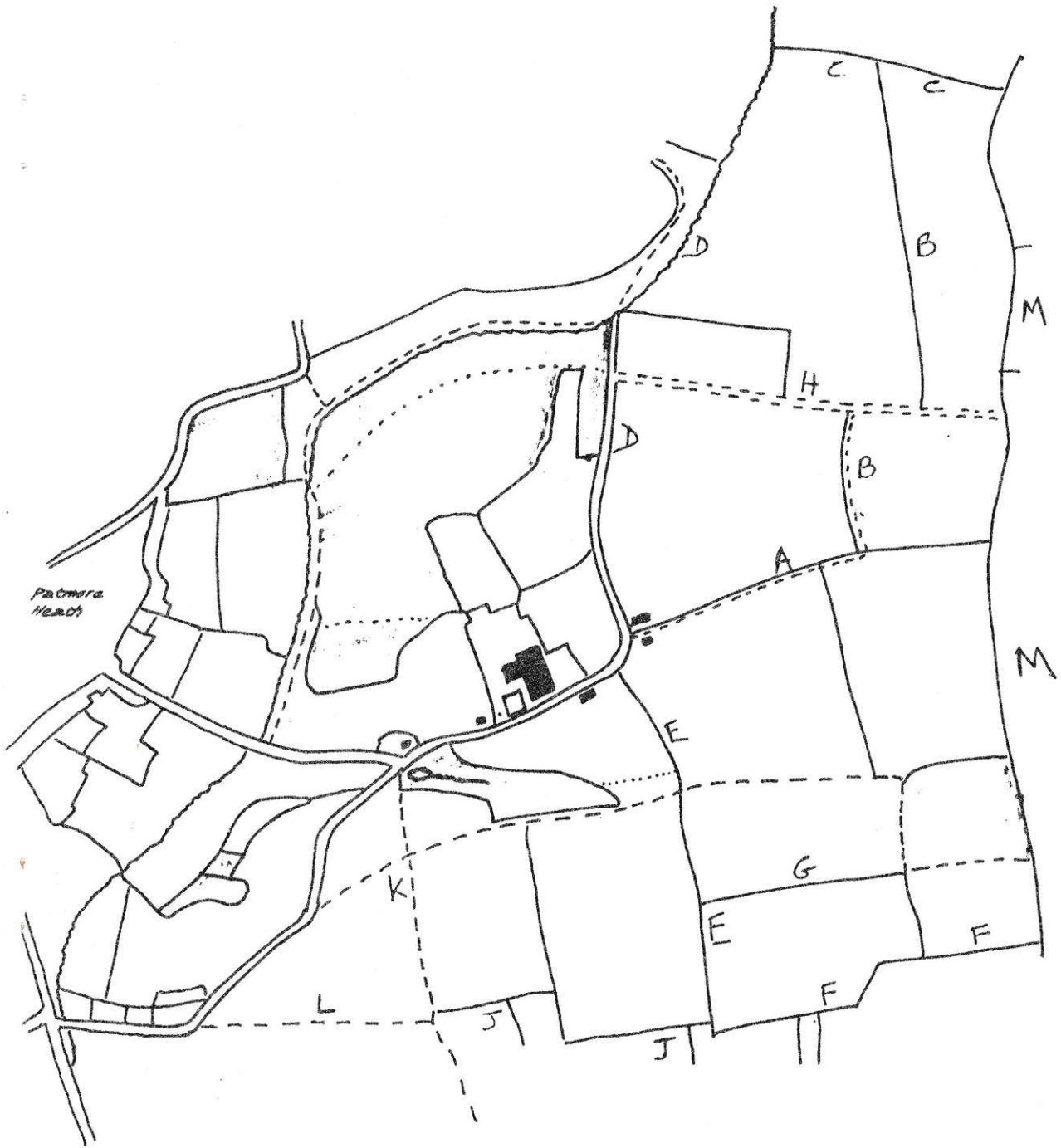
As the present field boundaries are unchanged from those recorded in the Tithe map of 1840, it is reasonable to assume in this "bocage" district that they are of a considerable age, though no attempt was made to apply the 30 yard rule for aging. All the hedges surveyed in this sample are rich in species with, as one would expect, the county boundary (M) being the richest with 17 species. There was no obvious evidence of any wood relict hedges.

All the hedges on the estate are in very good condition and it is clear that the farm staff have been meticulous in avoiding spray and burn damage to both hedges and ditches.

<u>Species</u>		<u>Present in Areas:</u>												
		A	B	C	D	E	F	G	H	J	K	L	M	
Acer Campestre	Field Maple	A	B	C	D	E	F	G	H	J	K	L	M	
Acer Pseudoplatanus	Sycamore	A			D	E	F			J				
Carpinus betulus	Hornbeam				D		F	G	H	J	K	L	M	
Cornus sanguinea	Dogwood	A	B	C	D		F	G	H	J	K		M	
Corylus avellana	Hazel	A	B	C	D		F	G	H		K	L	M	
Crataegus monogyna	Hawthorn	A	B	C	D	E	F	G	H	J	K	L	M	
Crataegus laevigata	Midland Hawthorn						F					L		
Euonymus europaeus	Spindle	A					F						M	
Fraxinus excelsior	Ash	A	B	C	D	E	F	G	H	J	K	L	M	
Ilex aquifolium	Holly									J		L		
Malus pumila	Crab Apple	A					F			J			M	
Populus tremula	Aspen								H					
Prunus avium	Cherry (Gean)									J				
Prunus domestica												K		
ssp insititia	Bullace													
Prunus spinosa	Blackthorn	A	B	C	D	E	F	G	H	J	K	L	M	
Quercus robur	Common Oak	A	B	C	D	E	F	G	H	J	K	L	M	
Rhamnus catharticus	Buckthorn											K		
Salix caprea	Great Sallow	A		C	D					J	K		M	
Salix cinerea										J			M	
ssp oleifolia	Rusty Sallow													
Sambucus nigra	Elder	A	B	C	D	E	F		H	J	K	L	M	
Ulmus glabra	Wych Elm	A		C	D		F			J	K	L	M	
Ulmus procera	English Elm	A		C	D	E	F	G		J	K	L	M	
Virburnum lantana	Wayfaring Tree						F						M	
Viburnum opulus	Guelder Rose			C				G					M	
<hr/> Number of Species		14	8	12	13	8	16	10	10	16	14	12	17	

(Rosa canina and arvensis (Dog and Field Rose) and Rubus (Bramble), though common, have been ignored).

# Patmore Hall Estate



## BUTTERFLIES

A total of 17 species of butterflies was recorded during the period of the Survey. None of these was new to the area.

The three white butterflies are common throughout the district.

The Orange Tip is a species of hedgerows and the edges of woods. On the estate it is no doubt breeding on Jack-by-the-hedge (*Alliaria petiolata*). This species is thriving here.

The Brimstone breeds only on Buckthorn (*Rhamnus catharticus*). The only specimen of this shrub that we could find on the estate grows in the hedgerow between Eighteen Acres and Brooms field.

The Small Heath, Gatekeeper, Wall Brown, Meadow Brown and the Skippers are all grass feeders and prefer the sunny banks and long rough grass beside the tracks to Shaw Wood and Hixham Hall.

The Ringlet is also a grass feeder but prefers some shade - Shaw Wood and Patmore Hall Wood.

The Peacock and Small Tortoiseshell larvae feed only on nettles. The caterpillars are common on odd patches of nettles around the farm.

The Red Admiral is an immigrant which also feeds on nettles, but does not over-winter here.

The Common Blue needs trefoils and clovers, preferably in short grass on a sunny bank. In spite of its name it is by no means common locally.

The Small Copper is scarce in the district. A colony survives in the large open area in Patmore Hall Wood - no doubt breeding on the sorrel in short grass. If the bracken here is not cut regularly the colony will die out. The rabbit population is essential here to keep the grass short.

The Painted Lady, White Letter Hairstreak and Purple Hairstreak may occur on the estate but were not recorded in our survey.

C Watson

S Watson

### Species List

	<u>Occurrence</u>		<u>Occurrence</u>
Large White	Common	Small Tortoiseshell	Common
Small White	Common	Red Admiral	Common
Green Veined White	Common	Small Copper	Scarce
Orange Tip	Common	Small Skipper	Occasional
Brimstone	Occasional	Large Skipper	Occasional
Small Heath	Scarce	Essex Skipper	Occasional
Wall Brown	Scarce	Ringlet	Scarce
Meadow Brown	Common	Common Blue	Scarce
Peacock	Common		

## MOTHS

The estate has excellent woodland for moths with a wide range of plant species.

Due to inaccessibility it was decided not to survey Parish Groves or Grass Wood which we considered would have a similar moth population to Bogs Wood and Patmore Hall Wood, and accordingly our efforts were concentrated on the latter.

Successful moth trapping requires warm, cloudy, or moonless nights. Unfortunately we were unable to record during the months of June and October due to poor weather and therefore our survey cannot be considered comprehensive.

Over 160 species of moths (macro-lepidoptera) have been trapped and recorded. All were released. Patmore Hall Wood appears to have the largest population of the Lobster Moth and Nut Tree Tussock in the district. Both moths are locally scarce. Proof that the conifers in the wood are of benefit to wildlife is given by the presence of the Tawny Barred Angle, Barred Red, and Bordered White - all conifer feeders.

Other moths for which this wood is noted include the Large Emerald, Blotched Emerald and Brown Scallop.

Bogs Wood has similar moths to Patmore Hall Wood, although fewer conifer feeding species were recorded, as was to be expected. Notable moths of Bogs Wood include the Water Carpet and Tawny Pinion.

While the woodland has produced a large and varied number of moths, the rest of the estate is disappointing, in terms of macro-lepidoptera.

The lack of marshland, unimproved or rough grassland etc means that species to be found on nearby Patmore Heath are absent here.

Similarly fields of improved grassland, wheat, barley etc are of little use to insects.

J Fielding  
G Sell  
C Watson

Alder Moth	Blotched Emerald
Angle Shades	Blue Bordered Carpet
Ash Pug	Bordered White
Barred Red	Brick
Barred Sallow	Bright Line Brown Eye
Barred Straw	Brimstone
Barred Yellow	Brindled Green
Beaded Chestnut	Broad Bordered Yellow Underwing
Beautiful Golden Y	Broken Barred Carpet
Beautiful Hook Tip	Brown Rustic
Bloodvein	Brown Scallop



Brown Silver Lines	Figure of 80
Buff Arches	Flame
Buff Ermine	Flame Shoulder
Buff Footman	Frosted Orange
Buff Tip	Garden Tiger
Burnished Brass	Golden Y
Centre Barred Sallow	Gold Swift
Chinese Character	Green Carpet
Clay	Green Pug
Clouded Border	Green Silver Lines
Clouded Bordered Brindle	Grey Dagger
Clouded Drab	Grey Pine Carpet
Clouded Silver	Grey Pug
Common Carpet	Heart & Dart
Common Emerald	Hebrew Character
Common Footman	Ingrailed Clay
Common Quaker	Iron Prominent
Common Rustic	July Highflyer
Common Swift	Large Emerald
Common Wainscot	Large Nutmeg
Common Wave Lines	Large Twin Spot Carpet
Common White Wave	Large Yellow Underwing
Copper Underwing	Leopard
Coxcomb Prominent	Lesser Yellow Underwing
Dark Arches	Light Arches
Dot Moth	Lilac Beauty
Dotted Rustic Sallow	Little Emerald
Double Dart	Lobster
Double Square Spot	Magpie
Drinker	Maple Prominent
Dunbar Bordered Brindle	Marbled Minor
Dusky Brocade	Marbled White Spot
Dusky Thorn	March Moth
Dwarf Pug	Middle Barred Minor
Early Grey	Miller
Early Thorn	Mottled Beauty
Elephant Hawk	Mottled Rustic
Engrailed	Mouse Flyer
Fanfoot Swift	Narrow Bordered Five Spot Burnet
Fern Wainscot	November Moth
Common Wave	Large Twin Spot Carpet

Nut Tree Tussock  
Oak Beauty  
Oak Hook Tip  
Pale Oak Beauty  
Pale Prominent  
Pale Tussock  
Peach Blossom  
Pebble Prominent  
Peppered Moth  
Plain Wave  
Poplar Grey  
Poplar Lutestring  
Powdered Quaker  
Pretty Chalk Carpet  
Red Chestnut  
Red Twin Spot Carpet  
Riband Wave  
Rustic  
Rustic Should Knot  
Scalloped Hazel  
Scarce Footman  
Scorched Carpet  
Scorched Wing  
Setaceous Hebrew Character  
Short Cloaked  
Shoulder Stripe  
Silver Ground Carpet  
Silver Y  
Single Dotted Wave  
Small Angle Shades  
Small Bloodvein  
Small Dotted Buff  
Small Emerald  
Small Fanfoot  
Small Fan Footed Wave  
Small Poenix  
Small Quaker  
Small Rivulet  
Small Square Spot  
Smoky Wainscott

Snout  
Spinach  
Square Spot Rustic  
Stout Dart  
Swallow Prominent  
Swallowtail  
Tawny Barred Angle  
Tawny Minor  
Tawny Pinion  
Twin Spot Carpet  
Twin Spot Quaker  
Varied Coronet  
Varied Pug  
Water Carpet  
White Ermine  
White Pinion Spotted  
Wood Carpet  
Yellow Shell  
Yellowtail

## BIRDS

The bird survey was carried out by six observers - John Taylor, Dave Hill, Chris Swan, Ralph Gilbert, Michael Hurford and Hugh Coe. A total of 79 species were recorded, of which 57 were found to breed.

As a generalisation, the estate contains three habitats - woodland (c.18%), arable (c.72%), pasture (c.10%) with hedgerows, buildings, etcetera adding diversity. While the cereal crops produced a predictably high count of skylarks, the woodlands - with the notable exception of Shaw Wood - proved to be a disappointment. Few birds were found to inhabit Patmore Hall Wood - though the pines support good numbers of goldcrests and tits and only in 1985 was a substantial flock of finches recorded with warblers being particularly low throughout.

Perhaps the most exciting discovery was a pair of Hobbies that bred in Shaw Wood in 1987 and possibly 1986 and 1985 as well. This wood benefits from a relatively remote location and the partial coppicing has produced a dense underwood habitat that is attractive to tits, finches and warblers, with standards that provide canopy feeding as well as breeding sites for greater and lesser spotted woodpeckers. As might be expected, the green woodpecker was recorded on the sandy sites of Patmore Heath and Patmore Hall Wood.

The estate was notable for its gatherings of gulls and lapwings during the winter, together with occasional groups of golden plover. Large parties of fieldfares and redwings arrived each autumn to consume the berries, converting to ground feeders in the late winter with the lower pastures to the South West of Patmore Hall Wood providing an ideal habitat. There were few passage birds.

	<u>Breeding Status</u>			
	<u>1985</u>	<u>86</u>	<u>87</u>	
Heron	0	0	0	2 Observations: (2) 21.4.85, (1) 7.85. Both records of birds flying over Patmore Hall Wood
Mallard	3	2	2	
Sparrowhawk	0	0	0	Recorded each year with a pair 22.8.87. No evidence of breeding
Hobby	0	0	1	
Kestrel	1	0	1	
Red Legged Partridge	6	7	3	
Grey Partridge	1	5	0	
Pheasant	13	14	11	
Moorhen	3	3	3	
Lapwing	0	0	0	Flocks of 300+ each winter with 1000+ 21.9.86
Golden Plover	0	0	0	Regular winter visitor. 300+ Forty Acres
Snipe	0	0	0	(1) Flying over Dobbin Hill 31.3.85, (2) 29.8.86
Woodcock	0	0	0	(1) Shaw Wood 24.3.85, (1) Shaw Wood 15.12.86, (1) Shaw Wood 21.2.87, (1) Shaw Wood 8.3.87, (1) Bogs Wood 22.3.87
Curlew	0	0	0	(1) heard calling as it flew over Bogs Wood 3.5.85

Gt Black Back Gull	0	0	0	Only (1) recorded 11.1.86
Lr Black Back Gull	0	0	0	Regular visitor. Large numbers 1986 - 150+ 21.9.86
Comon Gull	0	0	0	Regular visitor
Black Headed Gull	0	0	0	
Little Auk	0	0	0	(1) exhausted bird found 26.11.86
Stock Dove	1	4	2	
Wood Pigeon	*	*	*	
Turtle Dove	3	3	2	Passage noted late summer (14) 29.8.86, (10) 31.8.87
Collared Dove	2	4	2	
Cuckoo	5	3	5	
Little Owl	2	2	1	
Tawny Owl	4	4	1	
Swift	0	0	0	No evidence of breeding, though regular visitor in summer months
Green Woodpecker	1	1	0	Infrequent observations of generally silent birds. Breeding assured in 1985 & 86 from records throughout spring of each year. Sandy terrain is ideal habitat
Gt Spotted Woodpecker	3	4	1	
Lr Spotted Woodpecker	1	1	0	Overlooked?
Skylark	37	31	13	
Swallow	2	2	2	
House Martin	2	4	5	
Tree Pipit	0	0	0	Shaw Wood (1) 19.5.85
Meadow Pipit	0	0	0	Passage birds (1) 28.4.85, (1) 26.10.85
Pied Wagtail	1	1	0	Occurs all year round
Starling	*	*	*	
Jay	3	3	3	
Magpie	5	5	3	
Jackdaw	*	5	7	Not counted 1985
Rook	0	0	0	Regular visitor. Breeds Upwick Wood
Carrion Crow	6	2	3	May have been over counted in 1985
Wren	*	*	*	
Dunnock	*	*	*	
Garden Warbler	9	4	8	
Blackcap	11	11	14	
Whitethroat	3	8	5	
Lr Whitethroat	1	1	0	
Willow Warbler	16	16	16	
Chiffchaff	1	2	5	

Goldcrest	5	4	2	
Spotted Flycatcher	2	1	1	
Wheatear	0	0	0	(1) observation 30.8.85 Upper Three Scores
Whinchat	0	0	0	(1) 7.9.85 Sixteen Acre Ley
Stonechat	0	0	0	(1) 15.3.86 Sixteen Acre Ley
Robin	*	*	*	
Blackbird	*	*	*	
Redwing	0	0	0	Large gatherings in mid-winter in Daniels and early spring Bogs Wood
Song Thrush	*	*	*	
Mistle Thrush	2	3	2	
Fieldfare	0	0	0	Large gatherings in mid-winter in Daniels and early spring Bogs Wood
Marsh Tit	1	1	0	
Willow Tit	1	2	1	
Blue Tit	*	*	*	
Coal Tit	5	2	1	
Great Tit	*	*	*	
Long Tailed Tit	4	5	3	
Nuthatch	0	2	1	
Treecreeper	3	0	1	
House Sparrow	*	*	*	
Tree Sparrow	2*	2*	1*	*Colonies (numbers not counted)
Chaffinch	26	26	21	
Bullfinch	1	3	3	
Greenfinch	*	6	8	Marked variation in numbers Large flocks 200+ in spring 85
Goldfinch	0	1	1	
Linnet	2	3	1	
Redpoll	0	0	0	(1) 15.9.85
Reed Bunting	2	0	0	
Yellowhammer	16	23	18	

\* Breeding birds not counted

## MAMMALS

### Aims

To identify the various species of mammal present on the Estate and where possible to assess their status.

### Methods

Because of their generally nocturnal and retiring habits most mammal survey work is carried out by looking for field evidence, tracks, food signs, droppings, burrows etc and this was the main method employed during the survey period together with limited night time observations. Because of the necessity of visiting small mammal traps, of the Longworth type, every three hours or so, this method was restricted to a concentrated session in Shaw Wood only. In the Patmore Hall Wood area an indirect indicator method was used for small mammals consisting of plastic tubes 12cms x 3cms. These tubes were partly lined with double-sided sticky tape and baited with rolled oats, the aim being to remove a few loose guard hairs which can then be subjected to microscopic examination for identification, in theory each species of small mammal has distinctive guard hairs. Pellets were collected from the roost of a Little Owl and these were also subjected to hair analysis, no small mammal skulls were found in the pellets making identification of the contents more difficult. Regular watch was kept on the two bat roosts located within the farm buildings and a record kept of any species present.

### Results of the Survey

The following mammals were recorded along with a note on their status where applicable.

Badger (*Meles meles*) The combination of suitable geology and pasture in the Patmore Hall Wood area proved particularly suitable for badgers. Four sett areas were identified and of these the Patmore Hall Wood sett was the largest and most commonly used. The soft, yellow sand of the Reading Beds provide easy, dry and well-drained digging conditions and hence this sett is large, old and of considerable extent. The sloping terrain is another favourable point allowing deep tunnels and chambers. Paths leading from this sett radiate in several directions onto suitable feeding areas such as Bush Pasture, Daniels and Dobbin Hill. These permanent pastures are seen as essential feeding areas providing a good supply of earthworms which are a major constituent of the badger's diet. The setts adjacent to Cold Hill are much more rambling and less well-organised affairs where the level of activity was much harder to assess. In some places, in the latter area, holes have been dug directly into solid Chalk indicating the power and digging ability of the animals. Very little evidence of badgers was found on the higher boulder clay area around Shaw Wood and this would be expected due to the difficulty of digging and lack of food supply in terms of pasture.

During the survey period watching was undertaken several times to try and ascertain population levels. Cubs were present at the Patmore Hall sett in 1985 but were not observed in 1986. They have been present in 1987 and 1988. All evidence in terms of hole numbers and distribution, suggests that the badger population is now at a lower level than in the past and probably consists of one adult pair with their offspring of the year. If one cub out of three survives on average into its second year then this would give a population commensurate with the level of activity observed.

Fox (Vulpes vulpes) Because of their wandering habits and irregular occupation of earths it is always difficult to ascertain the level of a fox population in all but the most intensive study. Fox cubs were present in the main Patmore Hall Wood sett during the early summer of 1986 and there is little doubt that at least one litter of cubs is born on the South West part of the estate every year. Fox tracks and scats were found over the whole area for the length of the study period and it is safe to assume that the ease of digging and food supply hold the same attraction as it does for the badgers.

Stoat (Mustela erminea) and Weasel (Mustela nivalis) During the study period one stoat was seen in the North Eastern part of Patmore Hall Wood. There is little doubt that both Stoat and Weasel are present in some numbers in this area as there is a good food supply and plenty of nest sites available in the old hedge and coppice banks.

Rabbit (Oryctolagus cuniculus) Present to the level of pest status although probably not as numerous as in the past. Once again the Patmore Hall Wood area was found to be liberally populated with rabbits where they caused considerable damage by eating the bark from the roots of hornbeams in the winter of 1985.

Brown Hare (Lepus europeus) A small number of hares were recorded from the Bush Pasture, Eight Acre Wood and Forty Acre areas where they were concentrated on areas of permanent pasture and grass ley. They were particularly in evidence by their tracks and droppings during the hard weather of 1986.

Grey Squirrel (Sciurus carolinensis) A survey carried out in Patmore Hall Wood in the winter of 1985 showed a sprinkling of drey sites with a concentration of fifteen in the South Eastern corner in hornbeam coppice. Accurate counting in the conifer sections was not possible due to the density of the cover. Drey presence is not, of course, an accurate method of counting animals as many will be unoccupied, some will be summer dreys etc. they do however, give an indication of the level of activity and hence, indirectly, the population level. It would seem that this evidence coupled with food remains (chewed fir cones, oak flowers etc) suggests that in spite of obvious control measures the grey squirrels are able to maintain a steady population level consisting of at least two breeding pairs in Patmore Hall Wood alone.

Small Mammals Results here were disappointing and a more intensive study on this topic alone would be needed to ascertain with accuracy the species present and their status. Baited tubes (as mentioned under "Methods") were laid in a line in the North Eastern corner of Patmore Hall Wood, fifteen in number and extending from recently felled woodland into mature hornbeam coppice. Wood Mouse (Apodemus sylvaticus) was recorded from the newly-cut area and nothing at all from the old coppice. Tubes were left in place for eight days. As might be expected, the new coppice provides greater cover and food supply for small mammals. Shrew (Sorex sp) were recorded from the Little Owl pellets although it should be mentioned, that hair analysis on this scale is time-consuming and laborious and hence it is possible that some species were present but not recorded.

During early September 1987 an attempt was made to assess the small mammal population of Shaw Wood. To this end a trap line, using standard Longworth small mammal traps, was laid out in a North-South direction. The line consisted of thirty baited traps at 5 metre intervals. The line ran from hornbeam coppice fringing the wood through a cleared or coppiced area which has become overgrown with stinging nettles, thistles etc. Due to bad weather no mammals were caught on the first two nights, the third yielded a catch of 3 Bank Voles (Clethrionomys glareolus) which might be considered typical of this type of habitat. There is, of course, little doubt that Shaw Wood in its present partly coppiced condition must provide excellent habitat for small mammals but a full evaluation of this population is outside the scope of the present study. Moles (Talpa europaea) were recorded as being generally distributed although their presence in woodland is often overlooked due to lack of molehills which makes them obvious on pasture.

BATS Two bat roosts were identified within the environs of the farm buildings. The first and main roost being in the roof of a high, black, corrugated iron roofed barn. Distribution of droppings here showed bats to have occupied the angle of the roof ridge as well as open joints in the structural timbers. Several dead specimens of Common Long-Eared Bat (Plecotus auritus) and Pipistrelle (Pipistrellus pipistrellus) were collected during the course of the survey and interestingly enough, they were found at all levels in the barn although the main roost occupied the top floor only. Only one Long-Eared Bat was observed live during the course of the study and this was hibernating for a short period in the open wooden joints mentioned previously. During the summer of 1986 the roost apparently remained deserted which was surprising as all the evidence from piles of droppings, insect wings etc pointed to a high level of occupation at some previous time, probably as a breeding or summer roost. The second roost, in the roof of the old dairy, was not accessible but evidence of occupation was seen by droppings and a dead juvenile Long-Eared in the summer of 1986. It would seem that at this site at least there had been some breeding success.

Deer Two species were recorded, Fallow (Dama dama) and Muntjac (Muntiacus sp) but only the latter was observed on the edge of Eight Acre Wood. Evidence of both species, in terms of tracks and droppings, was found to be concentrated in the North Eastern corner of Patmore Hall Wood ie the newly-cut area, the reason for this being the abundance of food in the form of new shoots coupled with dense cover. The Muntjac were almost certainly resident but the Fallow were probably part of a wandering herd based on a home range. One set of tracks almost certainly belonged to a large buck and as these lead a solitary existence outside of the rut it is quite possible that this animal could lie well-hidden and unsuspected in the thick cover.

Conclusions The Patmore Hall Estate supports a wide variety of mammals. There is no doubt that other species are present but have not been recorded in the present survey. Of any one species the badgers must rate as the most important not only because of their effect on the general ecology but also because of their increasing rarity. The Patmore Hall Wood sett must rate amongst the finest undisturbed local examples and all efforts should continue to maintain it in its present condition. It was noticeable that most mammals were concentrated within areas of freshly coppiced woodland and this combined with pasture and suitable geology must encourage a diverse and thriving mammal population.



## Discussion of the Results

In reading the foregoing accounts of the individual surveys and their accompanying species lists one recognises the depth of knowledge, experience and dedication needed to produce such results.

Have these results achieved the aims set out earlier on at the start of this report? Certainly the aim of compiling species lists for selected groups has been achieved in a comprehensive manner although those involved with certain groups eg moths, would be the first to admit that the success of their trapping visits were determined by weather and season. Further opportunities in this direction would certainly increase their species lists. Many groups have, of course, not been recorded eg grasshoppers and crickets, beetles and amphibia, the former needing specialised knowledge beyond our present capabilities to establish a species list with any degree of confidence. Only in a few instances has an attempt been made to assess status of species eg mammals and birds. This is a difficult aspect to study and needed greater depth and time commitment than the present study allowed, in an isolated context these figures are of little value except as a pure assessment of abundance at that time.

At the start of the project it was suggested that the study be ecological in nature. If by "ecological study" we mean the interrelationships between species and their habitat then it rapidly became obvious that this was not feasible for this particular study. To carry out a proper ecological study of even a small area would require resources and expertise outside the range of a local Natural History Society. The strength of our members lies in their wide knowledge of natural history. This, coupled with experience and enthusiasm for particular groups makes their expertise ideally suited to the recognition, identification and listing of species. This is a fundamental requirement of any detailed study and is amply illustrated by the extensive results section.

If there is one criticism of the study it is evident from the individual nature of the group reports. Each group has written up its report in an individual manner and whilst this reflects the individual nature of the disciplines it also displays a somewhat unco-ordinated approach, and this aspect has made it difficult to reach common conclusions and to draw the study together as a whole. In future, if a study of this type is repeated, then a more organised and common approach would probably yield results more efficiently and in a more easily collated form.

Regarding the recommendations for wildlife management it rapidly became apparent to the survey teams that the estate was already managed for wildlife with interest and sympathy. Hedgerows, woodlands and farm tracks all show evidence of management which seeks to encourage rather than to destroy wildlife. Conversations with Major Ness, Mr Waugh and others revealed a realistic understanding of wildlife management within the framework of a viable farm. During the course of the survey the teams have appreciated measures already taken and also have been able to make certain recommendations further to improve the wildlife value of the estate. These recommendations are outlined in the following section.

### Recommendations for Wildlife Management

It should be stressed that these recommendations are incidental to the main purpose of the study already covered. Whilst members have noted certain measures which may be of benefit to wildlife it is understood that a working farm is constrained by time, manpower and the need for efficiency but we would hope that at least some of the following could be implemented or considered for the future.

1. Continue to cut hedges to an "A" profile at a time least destructive to nesting birds, insects etc.
2. Cut trackways early or late in the season to allow for flowering and seeding of wildflowers.
3. Consider coppicing. Much of the woodland is intended to be coppiced; without this practice it becomes increasingly derelict. Professional advice needed here but process need not be wholesale felling of large areas.
4. Retain pasture where possible; this is a valuable food resource for many species.
5. Continue existing tree planting programme using native broadleaves. Consider starting a tree nursery using seed from the estate.
6. Seek to retain the regional nature of the woodland by resisting further planting of conifers.
7. Keep existing colonies of wild flowers pure by not allowing planting of cultivars nearby.
8. Tidy fallen timber but allow to lie and rot where safe and feasible.

### ACKNOWLEDGMENTS

The Society acknowledges the kindness and support extended to it by Major Patrick and Lady Bridget Ness in granting the Society permission to undertake this survey at Patmore Hall.

We also thank Mr Waugh for his help and forbearance in allowing us free access to the areas surveyed, and members of the Patmore Hall staff who, from their intimate knowledge of the estate, have been able to provide us with items of information on its natural history which have proved extremely useful during our survey.