BTO Research Report No. 29

FARMLAND HABITAT

FEATURES AND BIRDS

Peter C. Lack*

A report from the British Trust for Ornithology
to the Nature Conservancy Council
in respect of work done under
Contract No. HF3 03 192

Nominated Officers:
Dr J.J.D. Greenwood, British Trust for Ornithology*
Dr. M.W. Pienkowski, Nature Conservancy Council
Northminster House, Peterborough PE1 1UA.

FEBRUARY 1988

*British Trust for Ornithology
Beech Grove, Tring,
Herts HP23 5NR

Introductions and Scope

This report is designed to identify the main habitat features in farmland which are of interest to birds and how these features can be best managed for the benefit of the birds. After a short general section each of the main habitat features is considered in turn. In each case some general comments are made which apply to a variety of bird species. Specific examples are included where appropriate, and some regional differences are noted.

There are some aspects of the habitat requirements of birds in farmland, and particularly of the effects of management, about which we currently know very little in detail. These are identified below.

Throughout this report figures for bird densities refer to the number of breeding territories as defined by the Common Birds Census. Details of this are available on request (Marchant, J.H. 1983. Common Birds Census Instructions. British Trust for Ornithology, Tring). Very little is known about how birds use their territories and any other areas, in particular where they feed. Similarly there are no figures available at present for wintering densities on specific areas or field types although relative abundance in different parts of Britain and Ireland can be gleaned from `The Atlas of Wintering Birds in Britain and Ireland' (Lack, P.C. 1986. T & A.D. Poyser, Calton).

Specific references are quoted in the text as necessary if a paper is used to illustrate particular points. However much of what follows consists of fairly general statements which are from several sources. Notable among these are: O'Connor, R.J. & Shrubb, M. 1986. 'Farming and Birds'. University Press, Cambridge; Fuller, R.J. 1982. 'Bird Habitats in Britain'. T. & A.D. Poyser, Calton; Pollard, E., Hooper M.D. & Moore, N.W. 1974. 'Hedges'. Collins, London; several papers by BTO staff in Bird Study and other journals (notably by R.J. O'Connor and K. Williamson); reports by R.J. Fuller and G.S. Cracknell respectively from the BTO to the Game Conservancy on the work on passerines for the Cereals and Gamebirds Research Project; and annual reports of the Common Birds Census -- in Bird Study till that for the 1981-82 comparison and subsequently in BTO News.

Some General Points

The largest numbers of individuals and of different species of birds in an area of farmland are on farms with the largest variety of farming types, and diversity of habitat type, vegetation and other features.

In particular, mixed farms hold more bird species than farms with only one major agricultural practice. Intensification of farming generally reduces numbers of individuals and species of birds.

There are regional patterns within Britain. This applies to farming practice, some habitat features and the distribution of bird species. For example: eastern England is dominated by cereals, western England and Wales by grass; there tends to be a higher density of hedges in the west than the east; the Chaffinch is commonest in Wales and southwest England, the Skylark in eastern England, the Lesser Whitethroat is almost absent from western and northern Britain.

Each individual bird species has its own specific requirements and preferences for habitat features. Therefore one cannot hope to be beneficial to all species at once, although there are some general factors which apply to many. For example, the majority of, but not all, hedgerow nesting species prefer tall, wide, thick hedges with some trees to short, narrow, treeless ones full of gaps although each bird species may respond mainly to only one of these features.

Management Suggestions

Retain as much diversity as possible both in fields and surrounding features.

Fields and Crops

Until recently the fields and crops were unlikely to be managed specifically for birds or other wildlife on anything but a very small scale. However with the talk about set-aside and extensification they are now potentially much more available. Some of the points which follow are only really applicable in situations like this but others can be incorporated into most agricultural situations. These latter do not involve either a great deal of effort or cost in terms of real input costs or yield but can have quite a major benefit for birds and other wildlife.

a) Nesting

Relatively few species nest in fields.

Several species of conservation interest e.g. Snipe and Redshank, are commonest in wetter, poorly drained, rough grass fields without heavy grazing.

Lapwing nests are most successful in spring sown cereals, but they like to move their chicks to grass fields and hence prefer areas with both types of farming. Winter sown cereals, improved ungrazed grass, and grassland grazed by cattle have the lowest densities of nesting Lapwings. In recent years the largest numbers have been in the uplands nesting on sheep walk and other grassland. The nesting success is however low there.

Skylarks nest in all arable crop types with no conspicuous preferences. It also nests in grassland. It is commoner in eastern England (density in East Anglia is 3 times that in Wales and southwest England).

Reed Buntings normally breed near water or in hedges but will breed in barley and oilseed rape fields later in the season (June onwards) when the crop has grown sufficiently.

Yellow Wagtails (commonest in northern and central England, rare in Wales and southern England and very rare in Scotland) prefer grassland with tussocks.

Meadow Pipits prefer grassland especially in the uplands.

b) Feeding -- breeding season.

All the species nesting in fields also use them as feeding sites.

Birds nesting in hedgerows make very limited use of cereal fields as feeding sites. Grass is used more often, especially where grazed. Strips of bare ground or short vegetation around the edge of arable fields are also used more heavily than the crops themselves.

Fields of oilseed rape are apparently used as feeding sites more than other arable crops as long as the birds can enter. Tramlines or a clear area at the edge of the field are the best means.

Conservation headlands around cereal fields (a 6m strip left unsprayed around the edge, as per the Game Conservancy's Cereals and Gamebirds Research Project) double the survival of Grey Partridge and Pheasant chicks but seem to have little effect on hedgerow birds, either positive or negative. Perhaps this is because they do not feed there regularly (see above).

Rough grass areas around fields or near watercourses have been shown to be prime feeding sites for Barn Owls.

c) Feeding -- outside breeding season.

Fields are used as feeding sites much more outside than in the breeding season. Plovers, thrushes, gulls, crows, starlings and finches are especially prevalent. Exact preferences, which vary over the autumn and winter period and will probably vary regionally, are uncertain as yet although a few general statements are possible.

a) Stubble fields attract many birds.

b) Newly ploughed and newly cultivated fields attract birds for a short period after the cultivation.

c) At least in England winter sown cereal fields are used less than most other types although they may be used as roosting sites especially in the autumn and early winter.

d) Oilseed rape and some other broad leaved crops will harbour birds which may become pests by eating the crop itself (e.g. Skylark and Woodpigeon).

d) Pesticides

Pesticides reduce the available food and therefore will have an effect on birds, although the direct effects of modern pesticides in the field are uncertain. Several seed eaters (e.g. Linnet, Tree Sparrow) and some ground feeding invertebrate eaters (e.g. Song Thrush) have declined greatly over the last 10 years, perhaps due to pesticides reducing their food supply. Whether this operates mainly in the breeding season or outside or both is unclear.

e) Fertilizers

The direct effects of fertilizers are unknown. In grass fields the denser vegetation that results is shunned by Lapwings for nesting although some smaller birds such as Yellow Wagtail prefer it.

Management Suggestions

a) Cultivated fields

Leave harvested fields as stubble for as long as possible.
Leave a strip of ground around cereal fields, bare or with short grass even only 0.5m wide.
Leave conservation headlands - 6m or one spray-boom-width is sufficient for the effects shown.
Do not overdo pesticides.

b) with `set-aside´ or extensification.

If land is to be taken out of production for a long period (20-30 years), plant scrub and/or trees of mixture of species (see below).
Reduce drainage.
If land is to be fallow only temporaily leave the stubble and perhaps scatter some `wild seed´ mixture.
Do not use fertilizer or pesticides.

Field Margins

The commonest form of field margin in many parts of the country is a hedge and hedges are probably the most productive of all kinds of field margin for birds and other wildlife. They are also the most variable and the one on which more different management practices can be adopted. Other kinds of margin include walls, ditches, banks, grass strips and fences. These are each discussed below in turn.

At present we know where birds hold their territories (from the Common Birds Census) but we do not know what are the main feeding areas and we know very little about the important features for wintering birds. There are currently pilot studies under way for both aspects.

a) Hedges

i) Density

In general the greater the length of hedge per unit area the greater the density of breeding birds present. This occurs at least up to a hedge density of about 130 m per hectare. However within this range the highest number of species on a whole farm occurs at between about 45 and 70 m per hectare, as this retains some of the open country birds while providing enough woody vegetation for the majority. Lapwings and Skylarks for example, as field species, prefer larger fields and those with smaller hedges.

ii) Physical Structure

Wide hedges (more than 2m) with a dense ground herb layer are preferred especially by Partridges, Pheasants and Reed Buntings.

Tall hedges (more than 2m) are preferred by most small passerines especially those which are primarily woodland species such as Chaffinch, Blackbird and Robin. However, tall unmanaged hedges with a thin base are often less attractive.

Birds which are more specialist on farmland e.g. Yellowhammer, Whitethroat and Dunnock seem to be less fussy and occur quite commonly also along shorter hedges although they still need somewhere out of immediate sight from any edge as cover for their nests. Normally this will be at least 0.5m in.

The hedges which hold the most birds are those of a box shape  or A-shape  at least 2m high and which retain the density of woody vegetation throughout. Tree-shaped hedges  with little vegetation near the ground are much less good. There is some evidence that hedges with outgrowths i.e. untrimmed, hold more birds. Certainly the outgrowths hold most of the berries which attract birds in winter (see below).

iii) Shrub Species Composition

Hedges containing more species of shrubs hold more species of birds.

Hedges which are dominated by hawthorn tend to hold more birds of more species than hedges of other shrub species.

In autumn shrubs bearing berries are much sought after by birds especially starlings and thrushes and including Redwing and Fieldfare. Shrubs such as hawthorn, sloe, and elder all contribute to these. Many of the berries are on the outermost twigs and outgrowths. Such hedges should be left untrimmed until the berries have been eaten.

iv) Trees

The positive influence of trees in a hedge is considerable. Overall, 75% more birds are recorded in hedges with one or more trees than in those without. The greatest addition comes with the introduction of the first trees and even small trees only a little taller than the hedge have some positive influence.

Bird species benefiting most include Blackcap, Song Thrush, Wren, Blue Tit, Great Tit and Chaffinch. In contrast Corn Buntings seem to avoid trees and Dunnock, Whitethroat, Reed Bunting and Yellowhammer are fairly neutral to them.

Both a group of trees in a short stretch and trees regularly spaced exert a positive influence, but the shrubs in the hedge must be retained and not be allowed to be either shaded out or left unmanaged.

There is little information on the differences between tree species but broad-leaved trees, especially oak, attract more birds than conifers.

v) Hedgerow Distribution

Although there is little positive evidence it is thought that birds prefer to use hedge lines as a corridor to move from e.g. one wood to another, rather than cross open ground.

The parts of a hedge within 25m of intersections hold 70% more birds per unit length than straight sections. Wren, Dunnock, Song Thrush, Willow Warbler, Blue and Great Tits and Chaffinch all show nearly double density there.

Numbers breeding along hedges immediately adjacent to woods are lowered a little (thought to be because of increased predation coming out of the wood).

vi) Hedgerow Management Methods

Little is known about the effects of different management techniques on birds.

Coppicing of hedges greatly reduces numbers of breeding birds in the short term but has rather little longer term effect as the hedge grows back.

Laying is also likely to cause a short term reduction, but again little, if any, longer term effect.

To retain some birds do not manage all hedges in an area in the same year. Most birds will relocate and maintain a slightly higher temporary density in those hedges left uncoppiced or unlayed.

Trimming seems to have rather little effect unless it removes the berries before they are eaten.

The benefits and drawbacks of H-shaped or A-shaped hedges are unclear for most passerines. At least Partridges, Pheasants and Reed Buntings prefer those with much basal vegetation for nests.

Hedges need managing if they are to retain bird populations. A hedge left to run with no management will often become thin, especially near the base, and will then hold fewer birds. Regular management is needed to retain a high bird population in the long term even though the short term may mean a temporary reduction.

Management Suggestions

Leave trimming till after berries have been eaten.
Don't cut all your hedges in the same winter. Leave a longer rotation.
Keep the base of hedge thick with both woody and herb layer vegetation.
Don't spray herbicides or insecticides into the base of the hedge.
If no trees are present leave one or more saplings uncut to grow up.
Leave grassy layer underneath.
Retain in particular hedges connecting e.g. copses.

b) Grass strips

A grass strip between crops of at least 1 m wide and left unmowed will hold a few Grey Partridge nests if there is no other suitable habitat available. (This species is relatively scarce in the west of Britain and at higher altitudes.) Skylarks also seem to use grass strips preferentially for nesting in otherwise cereal dominated areas. Grass strips with or without a hedge are much used by Barn Owls.

Grass strips are better than nothing but are best converted to hedges either naturally or by planting shrubs.

Management Suggestions

If a grass strip is to remain the only field boundary only mow it every 3-5 years.

c) Fences

Fences on their own hold very few birds although the posts may be used as songposts, especially by Corn Buntings within their rather limited range in the eastern half of England and parts of Scotland. Fences within a hedge have no particular effect on birds.

If a grass strip accompanies the fence the same as above applies.

d) Stone Walls

Stone walls do not hold many birds.

In the uplands a few Wheatears may nest especially in wider walls but more often Wheatears nest in crevices in parts which have fallen down.

A wide grassy strip may attract as above.

Management Suggestions

Consider leaving a pile of stones/rocks e.g. in a field corner.
Retain a grass strip along arable fields.

e) Banks

On its own a bank does not attract many birds. Even under a hedge it has little effect.

The ground vegetation on an open bank should be allowed to grow. South facing banks in particular will attract insects and other invertebrates and therefore potentially are a food source for birds.

f) Ditches

Ditches, whether or not with a hedge, can be important at certain seasons.

If there is water many species will use a ditch as a water source (drinking and bathing) particularly in very dry weather and in freezing conditions.

The softer ground helps probing species again especially in dry or cold conditions. Snipe, Blackbird, Song Thrush, Starling and Reed Bunting make significant use, as do Woodcock in winter when the fields are frozen.

Moorhen and Mallard may use ditches as a refuge or escape route at all seasons especially if some vegetation cover is left. Mallard occasionally take their chicks along them.

Sedge Warblers may use them if riverine sites cease to be available. They and Reed Buntings prefer such sites to dry hedges if given the choice.

Management Suggestions

Don't clear the sides of ditches more than necessary.

Woodlands

At least in the breeding season woods and small copses hold a higher density of birds and more species on a given area than do other habitats in farmland. In one farm landscape in North Hampshire 11.4% of the area was woodland and it held 52.4% of the passerine bird territories.

Much detailed information on the features of woodland which are most important for birds exists in for example Fuller (1982 noted above) but it is really outside the scope of this report. Two particular features of farm woodlands are firstly that they are usually small and secondly often relatively isolated from other patches. The following notes are concerned mainly with these features although a few other general comments relating to management practices are included. Most of the figures here are from Ford, H.A. (1987, Bird Study 34:205-218) who investigated the effects of size, isolation and vegetation in Oxfordshire, Moore, N.W. and Hooper, M.D. (1975, Biological Conservation 8:239-250) who investigated the effects of size of woods in Britain, and Opdam, P., Rijsdijk, G., and Hustings,F. (1985, Biological Conservation 34:333-352) who investigated the effects of area and isolation in the Netherlands.

In the Netherlands it was found that the total number of species present in an isolated patch of woodland was not affected by the distance from a source area. However, those species normally restricted to mature woodland were less common in those small woods which were farther from such a potential source wood (usually a large forest). The species included in this category were e.g. woodpeckers, Nuthatch, Marsh Tit and Pied Flycatcher. Also such species were more often in larger woods than smaller. In Britain in order to double the number of species present the area had to multiplied by 10.

The minimum size of wood for each species is dependent on the minimum territory size it requires. In general the larger the bird the larger the territory required. For example a Nuthatch requires at least 1 ha and a Great Spotted Woodpecker will require at least 2 ha to survive and breed though the latter can be reduced slightly if there are many large hedgerow trees nearby.

In Britain Blackbird, Song Thrush, Wren, Woodpigeon and Chaffinch occurred in at least half of woods of 1 ha or more, and these and Dunnock, House Sparrow and Robin were in at least 30% of woods between 0.1 and 1 ha. In Oxfordshire these plus Great Tit, Blue Tit and

Blackcap but excluding Song Thrush (now much rarer everywhere) and House Sparrow (not studied by Ford) were in all or most woods of more than 0.1 ha, and Treecreeper, Marsh Tit, Chiffchaff and Willow Warbler in at least half those of more than 1.0 ha.

In the Dutch study woods consisting of predominantly oak or oak/beech mixtures held more individual birds and more species than those woods dominated by other species of tree. This study did not encompass conifers but usually these hold smaller numbers of birds and species although of a rather different species composition. Conifers in particular attract Goldcrests and Coal Tits.

In general, woods which have more variety of vertical structure hold more birds and species than simple ones. For example a thick understorey is important for such as Blackcap and Garden Warbler and some dead timber improves the habitat for woodpeckers.

Managing woodland for wood production is not necessarily detrimental to the bird population. In particular managing in blocks either by coppicing or by clearing and replanting adds variety to the whole wood and introduces more species. There will be a succession of bird species as the trees grow up.

Management Suggestions

Don't remove dead branches and timber.
Encourage the development of the shrub understorey at least in parts.
Plant native broad-leaved trees for preference.
Do employ active management, e.g. coppicing, to enhance diversity.
Put up some nest boxes especially in areas of younger trees where there are few natural holes.

Ponds

Ponds are in general an attractive feature for birds and in many cases the reason is as much the surrounding vegetation as the water itself.

The water will attract Moorhens and the breeding density of this species is closely correlated with the density and size of ponds. They will nest even on very small ponds although they need some overhanging vegetation to hide their chicks, and preferably some reeds or equivalent in the water to support and hide their nest. They feed on nearby land.

Coots only occur on ponds larger than about 1000 m^2 as they need water in which to feed as well as nest.

Mallards prefer streams for nesting but will use the larger ponds.

Areas of open water of 0.5ha or more will sometimes attract Little Grebes and other ducks, e.g. Tufted, especially in winter.

Kingfishers and/or Grey Herons will appear at some ponds if there are fish present. For feeding, Kingfishers need perches within 1-2 m of the water surface. Fenceposts or walls will serve although the ideal is overhanging twigs. Grey Herons need an area of shallower water (less than about 20 cm deep) or an area of shore only just above

water level to stand on. To nest Kingfishers need a vertical earth bank, which is more often found along a river than by a pond. Grey Herons nest in trees in traditional sites.

The water will attract other birds of all kinds to drink or bathe, in particular in dry weather, and in freezing conditions as long as some of the pond remains free of ice.

Ponds are often placed next to hedges, in field corners or in association with a farmyard and may be part of a larger complex including larger trees or even a small wooded area (see below). They are rarely surrounded only by field vegetation. The presence of the pond may also mean that the hedges around will be less intensively managed and therefore more attractive to birds in their own right (see above).

Pollarded trees e.g. of ash, willow, or black poplar are often near a pond or along a stream. These provide good nest sites for Mallard, owls and tits.

Management Suggestions

Don't take out all vegetation from around pond.
Don't let the pond become completely overgrown so as to exclude light.
Leave or make some shallow parts around one or more edges.
Leave a few overhanging twigs.
In larger ponds (more than 2-3 ha) the provision of one or more islands, if necessary using anchored, floating rafts, can add attraction.

Rivers and streams

There is very little detailed information on the effects of rivers and streams on the distribution of birds in farmland though it is clear some birds would not occur on farmland without them. As with ponds it is not just the water which is important but the surrounding vegetation.

Different bird species are associated with the various types of streams. Rate of flow and the state of the vegetation are the most important features.

Mallards are very likely to occur in the breeding season as long as there is a suitable potential nest site e.g. a pollarded tree or sufficient ground vegetation to hide it. The chicks will be taken onto the water although they need some cover to retreat behind if necessary.

Moorhens become less common as the flow speed increases.

Kingfishers will nest in a suitable vertical earth bank which is well clear of the water surface. They need perches as above from which to fish.

Grey Wagtails and, in the north and west, Dippers may occur, especially on faster flowing streams but both need a bridge, a hollow in a bank or under a waterfall in which to nest.

A river or stream with no woody vegetation alongside will not attract many birds. Even Moorhens will leave a newly dredged river

whose banks have been denuded of vegetation.

A reed margin in southern and eastern England may attract Reed Warblers.

Sedge Warblers and Reed Buntings are commonest along streamside vegetation but will occur in drier areas as well.

In winter a variety of birds are attracted to feed at the edge of a river or stream because of the softer ground e.g. Song Thrush, or because of the continual renewal of food brought in by the river e.g. Pied Wagtail. In hard weather such areas become especially important.

Many of the statements about ditches above apply also to streams and rivers.

Management Suggestions

Leave any trees alongside although dense forestry should not be planted within 10-20 m or so.
Don't clean out all emergent vegetation such as reeds.
Leave some overhanging woody vegetation.

Buildings and Surrounds

Many of the small passerines which occur in farmland occur at a higher density around farm buildings than out in the hedgerows. On a farm in Sussex 46% of the hedgerow and garden birds in the breeding season occurred around the buildings which occupied only 2% of the total area of the farm. These were particularly species which are very widespread in all habitats especially woodland and surburban areas, including Wren, Dunnock, Robin, Blackbird and Chaffinch.

Small passerines which are more specialist farmland species, including Yellowhammer, Linnet and Whitethroat, are not particularly attracted towards farm buildings in the breeding season, although they do not seem actively to avoid them either. Yellowhammers are, however, attracted to stockyards in the winter.

Birds which use the open fields for feeding rather than the woody vegetation or hedgerows, e.g. Grey Partridge, Kestrel, Carrion Crow, Lapwing and Skylark, seem to avoid the vicinity of buildings especially in the breeding season. This is probably because of the disturbance. A Dutch study of nesting Lapwings and Black-tailed Godwits showed that the avoidance extended further from an active farmyard than from a house or other building (Zande, A.N. van der, Keurs, W.J. ter, & Weijden, W.J. van der (1980, Biological Conservation 18:299-321)).

Farm buildings and their immediate surrounds provide a complex of different habitats each of which may be relevant for the distribution of some birds. These are considered in turn.

a) Farmhouses

The house itself probably has little positive effect although House Martins will nest under eaves, House Sparrows and Starlings in the roof if they can gain access through a hole, and Jackdaws will

sometimes nest in the chimneys. Occasionally Swifts will nest especially in old thatch.

A few other species will nest in vegetation against houses e.g. Blackbirds, but this is dependent on thick creepers rather than the building itself. Such creepers at times harbour roosting birds in the winter.

b) Outbuildings and barns

In the breeding season most groups of outbuildings will have a pair of Swallows. They will nest on a beam in any building as long as there is an accessible, permanently open entrance for them to fly in and out of. When prospecting initially they usually prefer a door or equivalent, but when established they will use a much smaller entrance as long as they can fly straight in (minimum about 50 cm wide by 15 cm high).

Traditionally Barn Owls nest in a secluded corner of a barn usually near the roof. They require a small entrance through the wall - ventilation holes of 15-30 cm square are sufficient - and a flat floor or platform for the nest. Boxes can be provided - tea chests or old barrels are ideal - behind such an entrance. The essential is that the actual site is undisturbed. This species has greatly declined in numbers over the last few decades.

House Sparrows and Starlings use outbuildings extensively as nest sites, and more so than houses because outbuildings usually have more suitable holes. Favourite sites are near gutters they can block drains.

Outbuildings containing hay, straw, feed or animals will attract birds into them looking for food especialy in the winter. House Sparrows and Starlings are especially prevalent and Collared Doves as well in many places, especially in the south although these last are a little more wary. Occasionally other birds enter as well. All these can reach pest status and consequently measures may have to be taken to prevent birds entering the buildings.

c) Farmyards

Farmyards attract many birds in to feed especially in winter, as at that time there is more spilt grain and other potential food supplies. House Sparrows, Collared Doves, several finches and buntings are the most common.

The farmyard area is likely to be somewhat warmer than the surrounding countryside and it is probably this last which attracts a wide variety of other species especially during cold weather. The water supply may also attract birds especially in dry or cold weather.

Yards which contain stock seem especially attractive to Yellowhammers. They move into such yards from quite a wide area to feed on the food given to cattle.

Many yards have odd corners containing almost anything from old rusty machinery, through piles of wood and/or rubbish, to 'waste' ground containing e.g. brambles and weeds. All these areas provide cover which may be used as nesting sites or roosting sites and,

depending on the weeds, feeding sites. Thistles will attract Goldfinches in particular and other seed eaters as well. Robins may nest in corners of only a few metres square but larger birds may require a somewhat larger area. Brambles attract Wrens and some warblers and the fruits may be eaten by a variety of species.

d) Gardens

Gardens are attractive to those birds which can tolerate some disturbance (i.e. usually not the larger species) whether in farmland or elsewhere.

Bushes or hedges provide nest sites for several hedgerow birds.

Fruit, both for human consumption (e.g. apples) and berries (e.g. sloes, hawthorn etc) will attract thrushes in particular. In larger gardens, especially in colder weather later in the winter, Redwings and Fieldfares will often come in from fields to join the other species.

Lawns provide feeding sites for thrushes, Robins, Dunnocks, Magpies and several other birds which feed on invertebrates, but which are not easily disturbed and this is both summer and winter.

e) Other surrounds

Farm buildings may be surrounded by hedges, and may have a small wood or collection of trees or a pond. All these attract birds.

The hedges are often less intensively managed and larger than those out in the countryside and therefore again attract more birds.

Many of the same comments apply as in earlier sections on appropriate features.

Management Suggestions

Provide nestboxes especially in an area with trees.
Retain trees and don't 'clean up' too much.
Don't do any 'cleaning' up between April and July.
Plant bushes which bear berries.
Dig a pond.
Provide a bird table.
Leave part of the roof area of a barn undisturbed and hope for a Barn Owl!