

BIRDS OF THE PARKS, OPEN SPACES & WOODLANDS WITHIN

THE CITY OF SHEFFIELD

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Sheffield is fortunate in having a large number of public parks, open spaces and woodlands which amount to some 1372 hectares or 7 per cent of the total City area (boundaries before local Government reorganisation in 1974). This amenity open space provides a range of habitats which attract a variety of birds.

Very little has been published on the bird life in the urban and suburban parts of Sheffield. Such studies as have been undertaken on areas managed by the Sheffield Recreation Department relate to semi-natural woodland (Cutts & Hawley 1964, Herringshaw 1972, Smith A.H.V. 1968 and Smith A.T. 1965).

This report presents the results of a survey in 1975 and 1976 of 36 localities by members of the Sheffield Bird Study Group. The majority of returns were completed on a presence or absence basis, but some observers provided information on status, numbers and breeding success. Clearly the quality of the data collected from each locality varies according to the number of visits, time spent per unit area and the experience of the observer, but despite these limitations a considerable amount of information has been amassed which was not previously available and which will provide the basis for comparison in future years.

The results of this survey are compared with those from the Survey of Garden Birds in Sheffield made by S.B.S.G. members (Nolan 1974) and with the results of similar park surveys in other cities.

SURVEY AREA

The survey was confined to those localities within 6 km. (4 miles) of the City centre which are associated, at least in part, with urban and suburban development. Areas such as Loxley Chase and Blacka Moor, although managed by the Recreation Department, are therefore excluded since they are situated in predominantly rural areas. The localities surveyed are listed in Table I and their locations are shown in Fig. 1. All the sites surveyed are situated on Coal Measure rocks, with the exception of two woodlands in the west on Millstone Grit, and all sites lie below the 300 m. (975 ft.) contour.

CLASSIFICATION OF PARKS AND HABITATS

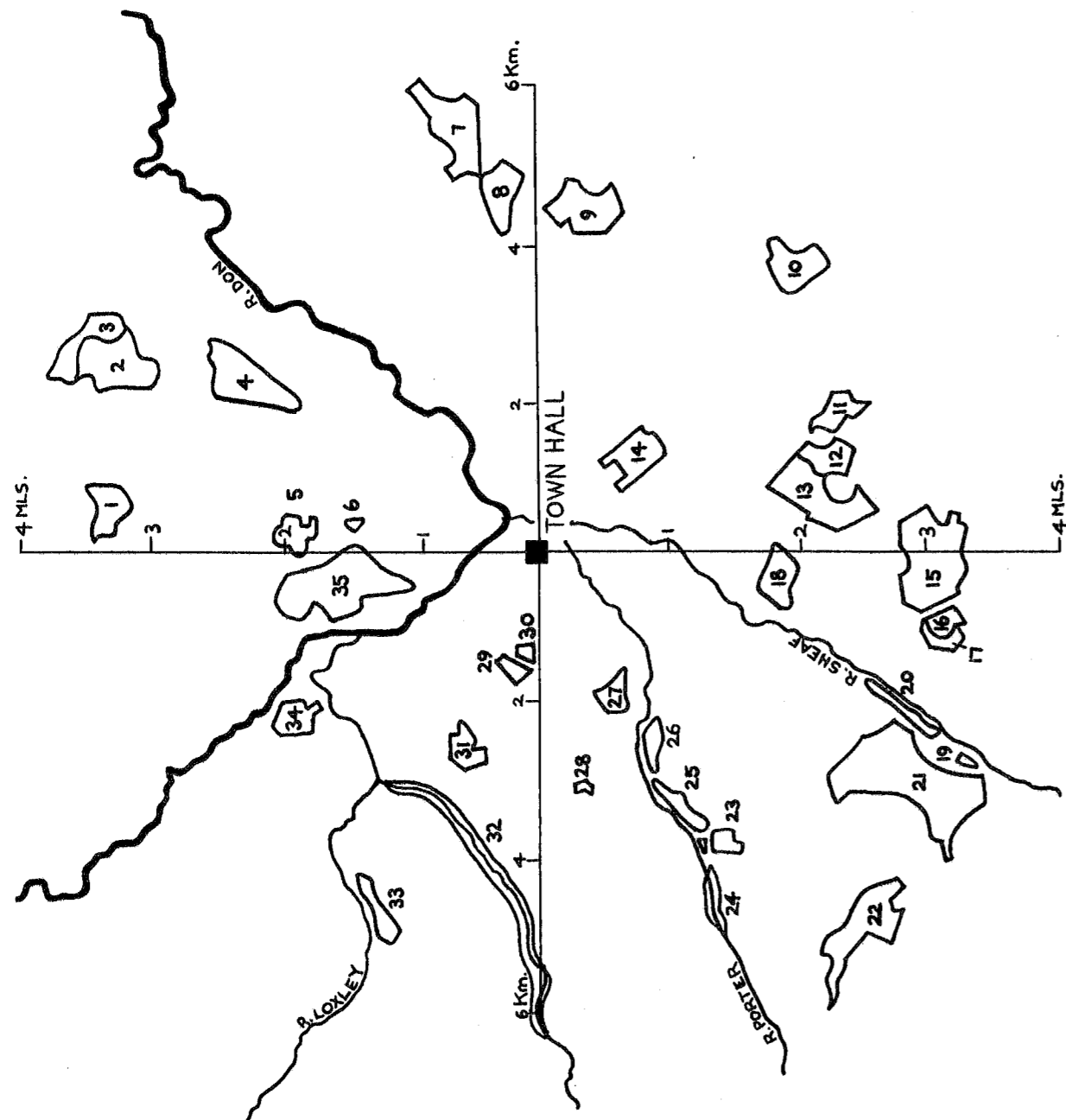
The localities surveyed fall broadly into the following categories which provide the basis for the subsequent analysis.

1. Ornamental parks and recreational areas without woodland.
2. Parks and open spaces incorporating areas of woodland.
3. Semi-natural woodlands.
4. Miscellaneous open spaces and waste ground.

Many environmental factors will determine the birds to be found in a particular area at different times of the year. No two areas will be alike in this respect. An attempt has therefore been made to characterise each locality in terms of the habitats both within (intrinsic in Table I) and adjoining (marginal) the site. These data are summarised in columns 5 and 6 of Table I. The simple classification of habitats used is shown in the Appendix. Various types of woodland can be recognised according to such features as the number of tree species, their age range, the richness of field and shrub layers and the amount of regeneration. The number of woodland types distinguished on a basis of one or more of these criteria are shown in brackets in Table I. For example, an area of deciduous woodland comprising in one part mature Beech with no shrub layer and in another part a mixture of species of varying age with a shrub layer is considered as two types and is designated as B 4(2).

BIRDS OF PARKS, OPEN SPACES AND WOODLANDS

In the following account the results of the survey are summarised for



KEY

1. LONGLEY PARK
2. CONCORD PARK
3. WOOLLEY WOOD
4. WINCOBANK
5. ROE WOOD
6. ABBEYFIELD PARK
7. TINSLEY GOLF CSE.
8. HIGH HAZELS PARK
9. BOWDEN HOUSTEADS WOOD
10. JAUNTY PARK
11. ROLLESTONE WOOD
12. LEES HALL WOOD
13. GLEADLESS VALLEY
14. NORFOLK PARK
15. GRAVES PARK
16. OLD ALLOTMENTS
17. CHANCET WOOD
18. MEERSBROOK PARK
19. BEAUCHIEF GDNS: TYZACK DAM
20. MILLHOUSES PARK
21. ECCLESALL WOOD
22. WHIRLOW PK: LIMB VALLEY
23. THE ROUGHS
24. WHITELEY WOOD
25. BINGHAM PARK
26. ENDCLIFFE PARK
27. BOTANICAL GARDENS
28. THORNBURY ANNEXE
29. CROOKES VALLEY PARK
30. WESTON PARK
31. BOLEHILLS REC. GROUND
32. RIVELIN VALLEY
33. LITTLE MATLOCK WOOD
34. HILLSBOROUGH PARK
35. SHIRECLIFFE

Fig. 1. LOCATIONS OF PARKS, OPEN SPACES & WOODLANDS SURVEYED

each of the above categories. Space does not permit the listing of the birds for each locality, but these data have been deposited with the Sheffield City Museum Natural History Records Centre.

CATEGORY 1 - Ornamental Parks & Recreational Areas without Woodland (14 sites)

The majority of these parks are situated in heavily built-up areas of the City. Typically they comprise formal flower beds and shrubberies, greensward with facilities for recreational sports, and tree-lined walks with scattered groups of trees. Water, if present, is usually confined within an artificial setting of limited size and used for boating or paddling.

The average number of species recorded from the localities in this category is 20. In the breeding season some of the species occurring in these parks, nest in adjoining property. The following species have been recorded from more than 75 per cent of the localities surveyed in this category.

- |          |               |           |          |               |
|----------|---------------|-----------|----------|---------------|
| Magpie   | Mistle Thrush | Blackbird | Dunnock  | Greenfinch    |
| Blue Tit | Song Thrush   | Robin     | Starling | House Sparrow |

The Feral Pigeon almost certainly should be included in this list, but it was omitted by some observers. The Swift (71 per cent) only just failed to be included in the list. The above species were all listed as occurring regularly in the majority of gardens in Sheffield (Nolan 1974). Other species occurring regularly in gardens, but which were less often recorded in the parks in Category 1 are the Great Tit (64 per cent), Collared Dove (64 per cent), Wren (57 per cent) and Bullfinch (36 per cent). The absence of warblers (except on passage), Willow Tit, Long-tailed Tit (except Beauchief Gardens) and certain other woodland species is to be expected.

Four localities (Beauchief and Botanical Gardens, Jaunty Park and Thornbury Annexe) are not typical. For various reasons such as the amount of cover and proximity to other favourable habitats, the number of species recorded was above average. Species recorded from some or all of these four localities include Tawny Owl, Kingfisher, Treecreeper, Goldcrest and Yellowhammer.

CATEGORY 2 - Parks & Open Spaces with Woodland (7 Sites)

Included in this category is an area of relict farmland (site of Lees Hall Farm, Gleadless Valley) close to the City and Tinsley Golf Course farther out to the east. Two of the parks have extensive greensward and two have very little. Roe Wood adjoins an area of acidic grassland being colonised by oak scrub. The woodlands in this category vary in size and composition and all are subject to disturbance. None are well structured, although the woodlands in Graves Park have a relatively rich field layer in parts. The parks were purchased by Sheffield Corporation from private landowners towards the end of the last and early part of this century and are all that remains of these former estates.

The average number of species recorded from the localities in this category is 39. The following species have been recorded from more than 75 per cent of the localities.

- |              |               |                |               |
|--------------|---------------|----------------|---------------|
| Wood Pigeon  | Treecreeper   | Robin          | Goldfinch     |
| Carrion Crow | Wren          | Willow Warbler | Bullfinch     |
| Magpie       | Mistle Thrush | Dunnock        | Chaffinch     |
| Great Tit    | Song Thrush   | Starling       | House Sparrow |
| Blue Tit     | Blackbird     | Greenfinch     |               |

The Kestrel, Swift, Jay, Coal and Willow Tits, Blackcap, Pied Wagtail, Linnet and Tree Sparrow were recorded almost as often (70 per cent of localities). Surprisingly 59 species were recorded from Graves Park (second highest total recorded in the survey), whilst Endcliffe Park, in a heavily populated suburban area, was not far behind with a total of 51 species. Norfolk Park, within 2 km. of the Town Hall, had 30 species including Willow Tit, Treecreeper, Redwing, Garden Warbler, Willow Warbler, Yellowhammer and, once, a passing Woodcock.

Although the total number of species gives an indication of the diversity

of bird life to be found in our parks and open spaces, it is misleading as an indication of the value of a woodland habitat in a locality, since the total for that locality may be influenced by other habitats in and around the area, particularly water or large areas of greensward which attract gulls in winter. Therefore, the number of woodland species in each locality has been expressed as the percentage of the total possible number of woodland birds. The 42 species included in this definition have been selected from the complete list of species observed in this survey and comprise birds which breed and feed regularly in woodland.

On this basis it appears that Graves Park, Endcliffe and Bingham Parks have the highest percentage of woodland species and compare favourably with some of the semi-natural woodlands considered in the next category.

### CATEGORY 3 - Semi-natural Woodlands (11 sites)

Sheffield is exceptionally well endowed with woodlands (557.9 hectares) as distinct from public parks. Certain of the woodlands to the north and south west of the City (not all surveyed) represent remnants of the natural climax oak woodland which once covered most areas up to 300 metres. Scurfield (1953) has described the vegetation of some of these woodlands. Many, such as Ecclesall Woods, have been clear felled and planted with a variety of trees for economic purposes and charcoal burning was practised here and elsewhere until late into the 19th Century. The management of some woodlands has resulted in dense stands of trees of similar age. A noticeable feature of most of the woodlands surveyed is the absence of a shrub layer, Blackthorn, Hawthorn, Hazel, Rowan and Bird Cherry being scarce or local in their occurrence. The Holly and Elder are the most common shrub species, but locally there is a dense undergrowth formed by regenerating saplings. Although the field layer is relatively impoverished in many woodlands because of the continuous canopy, the Bluebell survives in abundance.

The average number of species recorded from the woodlands in Category 3 is 39 the same number as from the localities in Category 2. The number would have been larger but for the inclusion of several small woodlands with low totals. Bowden Housteads and Whiteley Woods had just over 50 species each and Little Matlock Wood 74.

Species recorded from more than 75 per cent of the woodlands include all the species listed for Category 2 (except Carrion Crow, Magpie and Goldfinch) with, in addition, Jay Long-tailed Tit

Coal Tit Blackcap

Willow Tit.

Goldcrest, Redpoll and Tree Sparrow only just fail to be included in this list.

When the percentage of the total possible woodland species recorded from these woodlands is considered, the highest percentages are from the three woods referred to above, plus Ecclesall Woods. Rivelin and Woolley Woods are next in order. Little Matlock Wood and Whiteley Woods with the highest percentage of woodland birds are relatively narrow valley woods and both contain a variety of species of tree of varying age, including some large old trees. The canopy is fairly open and Little Matlock Wood has locally a well-developed shrub layer and relatively rich field layer.

### CATEGORY 4 - Miscellaneous Open Spaces & Waste Ground (4 sites)

Although they are not parks in the accepted sense, the four localities included in this category are accessible to the public and provide the opportunity to see species characteristic of a different type of habitat. Both Shirecliffe and Wincobank are exposed open habitats where the natural vegetation is acidic moorland grass. The Shirecliffe site also contains sandstone cliffs and an area of derelict land with rank vegetation. Unfortunately, large areas of this site were burnt in 1976.

The following species, typical of such a habitat, were recorded during the summer months.

Partridge Sedge Warbler Linnet Skylark Meadow Pipit  
Goldfinch Reed Bunting Willow Warbler plus 17 other species.

Passage visitors include Whinchat, Whitethroat and Spotted Flycatcher. Without doubt this list could be extended if the area is watched at the appropriate times.

In contrast, the two abandoned allotment sites, one above Chancet Wood and the other adjacent to Highcliffe Road ("The Roughs") provide a scrubland environment with dense thickets of privet, hawthorn, elder, willow and hazel separating strips of rank herbaceous vegetation comprising nettles, willow herb and various escaped garden species, interspersed with brambles and bracken.

The following birds were present at both sites in the breeding season as well as the more common species.

Long-tailed Tit Whitethroat Redpoll Blackcap Willow Warbler  
Garden Warbler Linnet.

Several interesting species including the Pied Flycatcher have visited "The Roughs" on passage.

### COMPARISON WITH OTHER CITY PARKS

Very little has been published on the bird life in city parks with the exception of parks in the London area (Cramp & Tomlins 1966, Brown 1972, 1973, Cramp 1973 and Wallace 1974). Recently W.G. Teagle has made a survey of the wild life of industrial and urban areas in part of the West Midlands Metropolitan County and has provided the author with a provisional list of birds for parks within the City of Birmingham.

Excluding species attracted by aquatic habitats, Teagle lists 16 species as being of frequent occurrence (some being present in every park) in Birmingham Parks. These are the 10 species listed as occurring in over 75 per cent of ornamental parks in Sheffield plus Swift, Great Tit, Wren, Wood Pigeon, Feral Pigeon and Carrion Crow. These last six species are also fairly common in such parks in Sheffield.

There are some differences in the status and numbers of birds in Sheffield and Birmingham parks. In Birmingham the Rook is an irregular visitor, there being no rookeries in the area. The Willow Tit is a scarce resident and there are only a few breeding pairs of Blackcap and Willow Warbler. These species are more usually recorded as passage migrants. There is only one small colony of Jackdaw and there are no recent records of Green Woodpecker or Dipper. As in Sheffield, the Grey Wagtail and Kingfisher are resident in small numbers being more in evidence in autumn and winter, whilst the Chaffinch is resident in surprisingly small numbers and much less abundant than the Greenfinch.

An analysis of the paper by Cramp & Tomlins (1966) shows that 19 species breed regularly in the inner London parks. The list includes all the species referred to above excluding the Magpie, but includes Tawny Owl, Spotted Flycatcher, Chaffinch (declining) and Jay. These last two species occur in most of our wooded parks. The Magpie has only recently colonised Inner London, breeding for the first time in 1971.

Although these surveys indicate that the same species occur commonly in city parks in various cities there are differences in relative abundance. For example, the Wood Pigeon and Black-headed Gull are more common in the London parks than those of Birmingham or Sheffield.

Generalisations are difficult because of differences in the size and in the range of habitats of the parks surveyed. Comparison is perhaps more easily achieved by considering individual parks. In Inner London, Holland Park, Kensington (21.9 hectares) is a mainly woodland habitat and like many of the Sheffield parks the absence of any substantial area of water limits the number of species. During the years 1964-71 a total of 62 species was recorded (Brown 1972). In any one year the total species varied between 41 and 46. A total of 26 species have bred, including Nuthatch, Long-tailed Tit and Goldcrest (Brown 1973) and 18 are regular breeders, including Blackcap and Spotted Flycatcher.

Admission of the public since 1951 has not markedly altered the status of the birds. The Willow Warbler and Great Spotted Woodpecker no longer breed, but are still recorded. It is possible that the absence of the

Flycatcher from the inner parks of Sheffield is due to atmospheric pollution. However it occurred in Inner London before the passing of the Clean Air Act in 1956 and has not increased subsequently (Cramp 1973). It is also worth mentioning that Simms (1971) lists the Goldcrest as a woodland bird which has been unable to make the transition to man's environment.

In Birmingham, Teagle (pers. comm.) has listed the species recorded from Cannon Hill Park on nine visits between February and October 1975. Cannon Hill is a conventional intensively managed park with no 'wild' areas. The total species recorded was 42. Fourteen species bred including Mallard, Moorhen, Canada Goose, Coot and Grey Wagtail. In addition young of Pied Wagtail, Goldfinch and Chaffinch were seen in the Park and may have bred there. Interesting occurrences were the Little Grebe and Kingfisher, although surprisingly there were no sightings of Feral Pigeon.

Teagle found that urban and suburban parks in other parts of his survey area were not as rich in bird species as those in Birmingham with the exception of West Park, Wolverhampton, which had breeding Tufted Duck, Coal Tit, Goldcrest and Chaffinch, as well as the more usual species. Like Sheffield, Birmingham has features which contribute to the variety of birds in its parks. Edgbaston Park, which is only two miles from the City centre, is a partly private area with a large lake with a good reed swamp margin and extensive woodland. This Park has a considerable influence on the bird life of the surrounding area. Another feature which is important for the bird life of Birmingham is the network of canals, some of which are disused, passing through or radiating from the City. There are also brooks and small rivers, the majority of which are relatively clean.

The surprisingly large list of birds occurring in city parks and particularly those of Inner London surrounded by many miles of industrial or urban development suggests that many species can co-exist with man if an adequately sized habitat is available to provide food and nesting sites without too much disturbance.

#### CONSERVATION MANAGEMENT

Ornamental urban parks without woodland are a stereotyped habitat which provides food and to a limited extent nesting sites for those species which have become adapted to living in close association with man. It is probable that the same species characterise similar city parks anywhere in the country. Even small parks will be visited by these species from their breeding territories in adjacent buildings or gardens. Little can be done to increase the numbers of species breeding in these parks, but by planting berry-bearing trees and shrubs the number of species visiting such areas in autumn and winter might be increased.

The larger Sheffield parks and municipal golf courses with their extensive areas of grassland and associated woodland attract a larger number of species by virtue of the greater variety of habitat provided by these sites.

Certain habitats are, however, poorly represented, particularly grass heath with scrub, rough grassland and hedgerows with or without trees. Such habitats are attractive to many forms of wild life which are at present rare or absent from our parks and open spaces. If well stocked with native flowering plants such habitats could become an added attraction to the public. Tree planting is being undertaken in many of our parks, but unfortunately is not usually accompanied by the planting of shrubs. Wild areas are not being set aside as reserves to attract ground and hedgerow nesting birds and to provide food for finch flocks in autumn and winter. There is an increasing tendency to lose such wild areas in the process of "tidying up" our parks since, as pointed out by Davis ('76), their existence is unacceptable in many urban situations open to the public on the grounds of safety and amenity. Their value is, however, clearly demonstrated in the present survey where quite small wild areas have augmented the list of species from several of our parks. There is, however, the need to adapt existing knowledge on the management of different habitats for wildlife diversity to the special problems of urban parks where natural areas are required (Gilmour 1974).

The woodland habitat has the greatest potential for bird species in our parks and reference has already been made to features possessed by those woods which attract the most species. Dense woodlands have fewer species than

those with a more open canopy. A long term survey of a Surrey oakwood (Bevan 1976) has shown that increased density led to the disappearance of the Willow Warbler and Whitethroat and to the decline of the Garden Warbler. In this case it was considered desirable to interfere with the natural succession and open up the woodland both for the sake of wild life conservation and of amenity.

Although there is sometimes opposition to tree felling it can bring many advantages for wild life, if carefully controlled, as well as create a more aesthetically satisfying environment. For example the opening up of woodland rides to expose broad strips of grassy verge to sunlight encourages the flowering and fruiting of shrubs and flowers. Such glades are biologically more valuable than tracks with overhanging vegetation (Nature Conservancy 1970). The creation of small clearings by removing small trees and leaving the larger trees to mature and decay can also be beneficial since the later stages of oak wood succession are richer in insects than the earlier stages (Nat. Cons. 1970). Woodland "edges" are valuable for wild life, particularly those with an irregular outline. These and many other aspects of management aimed at conserving wild life in woodlands are considered by Steele (1972).

The unique habitat comprising the Shirecliffe site has been mentioned and any attempt to improve the amenity value of this site on a large scale will regrettably result in the loss of several bird species from the urban area of the City. The clearance of the old allotment sites would also reduce the breeding population of certain of the less common species to be found in the City. It is possible that with increased watching these sites might reveal other species hitherto unsuspected within the suburban parts of Sheffield.

The creation of wild life areas for the benefit of the public also creates problems with regard to access and the control of numbers visiting an area. Numbers of animals other than man may also need to be controlled. For example, the uncontrolled spread of the grey squirrel in woodland may have a serious effect on the trees. This animal seems to be common in most, if not all, of the Recreation Department Woodlands and the cumulative effect of squirrels, magpies and jays may pose a threat to the bird life of our woodlands, due to their predation of the eggs and young of small birds.

#### STATUS OF BIRDS IN PARKS, OPEN SPACES & WOODLANDS IN THE CITY OF SHEFFIELD

The numbers in brackets refer to the number of sites (out of the total of 36 areas surveyed) from which the species has been recorded.

- Grebes. Two records of Little Grebe on passage in October, Graves Park (16 - 30.10.76.) and Hillsborough Park. Also recorded from Loxley Mill Ponds (in Little Matlock Wood).
- Hérons. Three sightings of Grey Heron, one of which was of a bird in flight.
- Ducks, Geese and Swans. Poorly represented. There are no large lakes to attract waterfowl in the Sheffield parks. Mallard (12), resident and winter visitor on most park waters with some breeding success. Numbers increase in winter, e.g. Graves Park, winter average 30, summer average 6; Endcliffe Park, winter average 140 dropping to 70 in early spring. Tufted Duck, irregular winter visitor, Tyzack Dam, Rivelin Mill and Loxley Mill Ponds. The following species of ornamental waterfowl have been introduced to various waters in Sheffield parks; Bahama Pintail, Wood Duck, Mandarin Duck, Muscovy Duck, Pochard, Barnacle Goose and Chinese Goose.  
Canada Goose, single occurrence Graves Park (23.2.76).  
Mute Swan, only recorded from Bingham and Endcliffe Parks and Loxley Mill Ponds.
- Hawks. Sparrowhawk, recorded from one woodland to the west of the City.
- Falcons. Kestrel (16), resident, seen mostly in outer parks, but not uncommon in the City centre.

Game birds. Scarce. Partridge, woodland (2) and waste ground (Shirecliffe). Pheasant (2) Little Matlock Wood and Limb Valley.

Rails. Water Rail (2), Porter and Loxley Valleys. Moorhen (11), resident on most park waters, some breeding success. Coot (3), scarce passage visitor, Loxley Mill Ponds, Graves Park and Tyzack Dam.

Wading birds. Lapwing, occurs in fields adjacent to sites in Rivelin and Loxley Valleys. Many records of birds flying over. 2 records of Snipe from Whirlow/Limb Valley and Loxley Valley (winter) and two of Woodcock from Norfolk Park and Little Matlock Wood (winter and passage). Common Sandpiper (1), on passage Graves Park.

Gulls. Great (1) and Lesser Black-backed (3) and Herring Gulls (2), passage and/or winter visitors. Recorded mainly in flight. Common Gull sightings from Bowden Housteads and Tinsley Golf Course. Black-headed Gull (12), frequent on many park lakes and open spaces July to March, e.g. Graves Park absent from 8.3.75. - 26.6.75.; numbers in winter generally 15 - 30 with max. 120 on 27.12.75. Tyzack Dam 80, 14.11.76.

Pigeons and Doves. Stock Dove (6), resident, small numbers in semi-natural woodlands. Feral Pigeon, common and locally abundant. Wood Pigeon (26), all parks with woodland, sometimes in large flocks. Less common in other parks and open spaces. Breeds locally. Collared Dove (21), resident, frequent in parks, scarce in some woodlands.

Cuckoo. Very few records (6), probably of passing birds.

Owls. Little Owl, Jaunty Park, Tinsley Golf Course (2 at winter roost) and Little Matlock Wood. Tawny Owl (8), resident, mainly woodlands. Probably more widespread than records suggest. Present in urban belt, e.g. Weston Park and Botanical Gardens. Long-eared Owl, max. 4 roosting at one locality in winter 75/76, (part of a larger roost nearby).

Swift. (23), common summer visitor.

Kingfisher. (6) Not infrequent at localities in valleys of Sheaf, Porter and Loxley. Has visited Graves Park. Breeding attempted.

Woodpeckers. Green Woodpecker (5), relatively scarce, found in more open woodlands. One record from Roe Wood within 3 km of City centre. Great Spotted Woodpecker (11), relatively common resident breeder. Occurs close to the City in Bingham and Endcliffe Parks.

Lark. Skylark (10), present in breeding season, but mainly recorded at times of passage and in winter from parks and open spaces with rough grassland and from waste ground close to the City (Shirecliffe).

Hirundines. Swallows (19) and House Martins (14), widely reported except from parks in urban and industrial areas. Some records refer specifically to birds on passage. Birds nest in properties adjacent to parks in which they feed.

Crows. Carrion Crow (22), resident most localities, breeds close to City in Weston Park. Rook (17), regular visitor to parks with extensive areas of greensward even in urban areas (Meersbrook). Jackdaw (10), not common, recorded from about half of the woodland localities, possibly breeding in nearby urban or suburban property. Magpie (33), ubiquitous, breeding in nearly all parks with suitable nesting sites. Outside breeding season parties of 6 - 9 birds not unusual even in areas such as Winco-bank. A flock of 20 in Graves Park (December '75) was exceptional. Jay (17), resident most woodlands and Botanical Gardens. Not numerous.

Tits. Great (28) and Blue Tits (35), common residents although Blue

Tits. Tit is more numerous. Coal Tit (19), most woodlands although not numerous. Breeds. Willow Tit, only woodlands (14) and waste land (3). Long-tailed Tit (15), woodlands, Beauchief Gardens and two abandoned allotment sites. Most records autumn and winter.

Nuthatch. (5) Scarce, records from woodlands in Porter Valley (including Endcliffe Park), Ecclesall Woods and Graves Park (winter).

Treecreeper. (17), widespread in woodlands and also Beauchief and Botanical Gardens. Recorded within 1½ km of Town Hall in Norfolk Park.

Wren. (28), all woodlands, not uncommon in ornamental parks and waste land.

Dipper. (5), confined to Loxley, Rivelin and Porter Valleys to west of the City. In winter recorded from Endcliffe Park within 3 km of City centre. Breeding attempted.

Thrushes. Mistle (31), Song Thrush (34) and Blackbird (36) in order of increasing abundance, all ornamental parks and woodlands. Fieldfare (8), uncommon winter visitor, recorded from woodlands associated with extensive grassland plus Jaunty Park and one old allotment site. Redwing (16), widespread winter visitor to City parks (Norfolk, Meersbrook, Weston Parks and Botanical Gardens) and several woodlands. Wheatear and Whinchat, scarce passage visitors, one record each from Graves Park and Shirecliffe respectively. Redstart, passage visitor Little Matlock Wood. Robin (32), common resident, breeding in some City parks.

Warblers. Sedge Warbler, two summer records, Shirecliffe and Bowden Housteads. Blackcap (16), migrant breeder, most semi-natural woodlands, passage visitor to several park woodlands. Garden Warbler (6), much less frequent than Blackcap, recorded from woodlands in south-west, from overgrown allotments and Norfolk Park. No records of Blackcap or Garden Warbler from ornamental parks without woodland. Whitethroat, migrant breeder Gleadless Valley, Little Matlock Wood and overgrown allotments. Passage visitor Shirecliffe and Tinsley Golf Course. Lesser Whitethroat, passage visitor, Little Matlock Wood and one allotment site. Willow Warbler (23), migrant breeder, all woodlands and two waste ground sites. Chiffchaff (13), migrant breeder, mature woodlands with undergrowth. Both Willow Warbler and Chiffchaff are passage visitors to ornamental parks (Jaunty Park, Weston Park and Botanical Gardens). Wood Warbler (7), confined to woodlands in Porter Valley (including Endcliffe Park) and Ecclesall, Bowden Housteads and Little Matlock Woods.

Goldcrest. (17), Most woodlands and some ornamental parks, more frequent in winter.

Flycatchers. Spotted Flycatcher (10), migrant breeder, woodlands in outer fringe (8), passage visitor Shirecliffe. Pied Flycatcher, passage visitor Bowden Housteads Wood and "The Roughs".

Dunnock. (35), common resident at all localities.

Pipits and Wagtails. Meadow Pipit (8), confined to localities with rough grassland in breeding season (Shirecliffe and Bowden Housteads). Elsewhere winter/passage visitor particularly where habitat is suitable (Wincobank, Tinsley Golf Course). Tree Pipit, only recorded from Little Matlock Wood. Pied Wagtail (20), resident breeder in most parks including Weston Park. Probably breeds in urban belt at Norfolk and Meersbrook Parks. Grey Wagtail (7), fairly widespread in breeding season in valleys to the west and south-west of City (Little Matlock Wood to Milhouses Park) appearing well into the City in Endcliffe Park. Elsewhere winter/passage visitor (Bowden Housteads, Graves Park). Yellow Wagtail, one record, Whiteley Wood.

Shrikes. Great Grey Shrike, one winter record, Whiteley Wood.

- Starling. (35), Ubiquitous resident breeder. Outside breeding season feeding flocks are common in most of the ornamental parks, but there are no roosts in City parks or woodlands.
- Finches. Hawfinch, recorded from Little Matlock Wood. Greenfinch (31), resident breeder, common both in parks and woodlands. Goldfinch (18), often recorded from ornamental parks including Abbeyfield Park and even breeding in Crookes Valley Park. Found in all parks with woodland, but not in all woodlands. In late summer and autumn will visit any small area of waste ground where suitable seed is available. Siskin (5), winter visitor to outer parks (Beauchief Gardens) and woodlands (Whiteley, Rivelin, Ecclesall, Little Matlock and Bowden Housteads). Max. 60 Ecclesall Woods. Linnet (15), few records in breeding season from ornamental parks and woodlands. Recorded from all waste sites and most parks with woodland to which the species is attracted by a suitable habitat. Max. 100+ Graves Park. Redpoll (16), resident breeder, seen in summer at several localities. In winter attracted to most woodlands with alder and birch. Elsewhere records only from Beauchief and Botanical Gardens. Max. 50/60 Ecclesall Woods. Bullfinch (26), resident breeder, all woodlands and most parks except some in the urban areas. Winter visitor to some of inner parks. Chaffinch (23), resident in most areas, but only passage visitor to Weston Park and winter visitor to Tinsley Golf Course. In breeding season in small numbers most woodlands and some ornamental parks being less common than Greenfinch. More common in winter when flocks occur particularly where there are Beech trees. Max. 100+ Graves Park. Brambling, three winter records, Graves Park, Ecclesall and Little Matlock Woods.
- Buntings. Yellowhammer (8), scarce summer and winter visitor mainly to areas near farmland. Has visited Norfolk Park and Wincobank. Reed Bunting (4), scarce resident and winter visitor to suitable open or waste land habitats (Bowden Housteads, Limb Valley, Loxley and Gleadless Valleys and Shirecliffe).
- Sparrow. House Sparrow (36), ubiquitous but not particularly abundant except in autumn in areas adjacent to farmland. Tree Sparrow (15), resident breeder, most woodlands. In the category, parks without woodland, only recorded from Bolehills Recreation Ground and Jaunty Park. More common than generally believed.

#### SUMMARY AND CONCLUSIONS

This survey has shown that the parks, open spaces and woodlands within the urban and suburban parts of Sheffield possess a varied assemblage of birds totalling 89 species. No systematic attempt was made to establish breeding species or the numbers of territories for comparison with other published data.

Future work might attempt to establish the precise status of certain species since little is known of their movements into or out of our parks at different periods of the year.

The variety of birds recorded compares favourably with the avifaunas of other city parks, but is not outstanding when compared with London parks situated many miles from open country. It is concluded that proximity to open country plays little part in determining the species present in our parks. The principal controlling factor is the suitability of the habitat and the absence of excessive disturbance.

Possible ways in which the environment of our parks, open spaces and woodlands could be made more attractive to wild life and birds in particular are considered.

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TABLE I - LOCALITIES SURVEYED, THEIR HABITATS AND TOTAL SPECIES OF BIRDS

Locality	Size	*Total	% Total	Habitats (see Appendix I)	
	Hectares	Species	Possible Woodland Species	Intrinsic	Marginal
<u>Category 1. Ornamental Parks &amp; Recreational Areas without Woodland</u>					
Abbeyfield Park	2.47	18	29	A1,3 D7	D2,3
Beauchief Gardens, Tyzack Dam.	1.75	29	38	A1 G2,3	B4(1) D3
Bolehills Rec.Grd.	15.30	22	31	A1	D2,3 F
Botanical Gardens	7.73	28	52	A1 B3	C5 D2,3
Concord Park	61.50	14	19	A1,2 G3	A2 B4 D2,3
Crookes Valley/ Univ. Play. Fields	6.75	17	26	A1,2 B3 G3	D2,3,7 F
High Hazel Park	19.03	11	17	A1 B3 D7 G1	A2 C4,5 D2
Hillsborough Park	20.32	11	12	A1 B3 D7 G1	D1,2
Jaunty Park	7.85	34	45	A2 B2 C4	C5 D1,3
Longley Park	20.69	16	19	A1,2 B3	C5 D3
Meersbrook Park	17.85	15	24	A1 B3,4(1) D7	C5 D2,3
Milhouses Park	12.87	20	26	A1,3 G3	B4(1) D3
Thornbury Annexe	2.43	26	40	A1 B3 D7	D4
Weston Park	5.18	25	36	A1 B3 D7 G1	D2,7
<u>Category 2. Parks &amp; Open Spaces with Woodland</u>					
Bingham Park	6.64	41	62	A1,2 B2,4(3) G2,3	C5 D2
Endcliffe Park	15.71	51	74	A1,2 B4(1) G1,3	B4 D2,6
Gleadless Valley/ Lees Hall	31.50	27	38	A2,3,4 B2, 4(1) C2,3 F G3	A2, B4(1) C5 D6
Graves Park	83.48	59	74	A1,2 B3,4(2) D5 G1,3	C5 D3,7
Norfolk Park	20.93	30	47	A1 B3,4(2) G3	A2,3 C3 D3,6
Roe Wood	10.93	23	40	A4 B2,4(2) G3	A2 C5 D2 F
Tinsley Golf Course	48.58	43	57	A1,4 B2,4(4)	A1,2,3 C5,2,4 F
<u>Category 3. Semi-natural Woodland</u>					
Bowden Housteads	33.12	54	78	B4(2)	A2,4 C5 D3 G2,3
Chancet	7.57	24	47	B4(1) G3	C6 D3 E F
Ecclesall	123.80	45	78	B4(3) 5(2) G3	A2 C2 D3,4 G2,3
Leeshall	10.00	23	50	B4(2) G3	A2,3 D6 F
Little Matlock (Acorn)	12.40	74	95	B2,4(2) G2,3 E F	B1,2 C2 F
Norwood Road	2.75	21	38	B4(1)	A2 D3,6
Rivelin Valley	52.11	42	69	B4(3) E G2,3	A1 B1,2,4 C2,5
Rollestone	13.60	23	45	B4(2) G3	A1 B2 D6
Whirlow/ Limb Valley	15.99	37	59	A1 B1,2,4(2),5,6 G1,3	C2 D4,7
Whiteley	39.47	54	83	B4(2) G1,2	A3 B2 C2,3,4,6 D3
Woolley	33.23	30	67	B4(3), 5 G3	A2 D1,3
<u>Category 4. Miscellaneous Open Spaces &amp; Waste Ground</u>					
Old allotments "The Roughs"	16.25	48	74	C5,6	A2 B4 D3,7
Old Allotments/ Chancet Wood	15.25	21	33	B2 C6	A2 B4 D3 E
Shirecliffe	41.50	25	26	A3,4 F	A2 C6 D2,3 E F
Wincobank	19.43	11	14	A4 B2,4(1)	D1,2 F

\* Excluding Feral Pigeon, ornamental waterfowl & species flying over locality.

The sizes given for Category 3 include the whole nominate area and not only woodland.

APPENDIX I - SIMPLE CLASSIFICATION OF HABITATS USED IN TABLE I

A. Grassland

1. Greensward (mown regularly) usually with formal flower beds and shrubberies.
2. Playing fields/golf courses.
3. Rough grass mown 1/2 year.
4. Natural acidic grassland (Bent, Fescue).

B. Woodland/Heathland

1. Bilberry/Heather Heath.
  2. Bush/Grass Heath.
  3. Isolated groups of trees/tree lined walks.
  4. Broadleaved woodland
  5. Mixed woodland
  6. Coniferous woodland
- Subdivide according to 1. Species Composition of Tree Layer. 2. Age Structure. 3. Diversity of Field/Shrub layer. 4. Amount of regeneration.

C. Farmland

1. Mainly arable.
2. Mainly pasture.
3. Hedgerows with trees.
4. Hedgerows without trees.
5. Allotments.
6. Abandoned allotments.

D. Buildings

1. Industrial.
2. Domestic - Terraced Houses.
3. Domestic - Semi-detached.
4. Domestic - Detached.
5. Domestic - Scattered farm/estate buildings.
6. Domestic - Flats with greensward.
7. Large houses/civic buildings, etc.

E. Cliffs and Quarries.

F. Waste Land.

G. Water

1. Ornamental lakes.
2. Mill ponds.
3. Streams.

APPENDIX II - SCIENTIFIC NAMES OF SPECIES MENTIONED IN TEXT

Birds

Little Grebe - Tachybaptus ruficollis, Grey Heron - Ardea cinerea, Mallard - Anas platyrhynchos, Tufted Duck - Aythya fuligula, Bahama Pintail - Anas bahamensis, Wood Duck - Aix sponsa, Mandarin Duck - A.galericulata, Muscovy Duck - Cairina moschata, Chinese Goose - Anser cygnoides, Canada Goose - Branta canadensis, Mute Swan - Cygnus olor, Sparrowhawk - Accipiter nisus, Kestrel - Falco tinnunculus, Partridge - Perdix perdix, Pheasant - Phasianus colchicus, Water Rail - Rallus aquaticus, Moorhen - Gallinula chloropus, Coot - Fulica atra, Lapwing - Vanellus vanellus, Snipe - Gallinago gallinago, Woodcock - Scolopax rusticola, Common Sandpiper - Tringa hypoleucos, Great Black-backed Gull - Larus marinus, Lesser Black-backed Gull - L. fuscus, Herring Gull - L. argentatus, Common Gull - L. canus, Black-headed Gull -

Larus ridibundus, Stock Dove - Columba oenas, Woodpigeon - C. palumbus,  
 Collared Dove - Streptopelia decaocto, Cuckoo - Cuculus canorus, Little Owl -  
Athene noctua, Tawny Owl - Strix aluco, Long-eared Owl - Asio otus, Swift -  
Apus apus, Kingfisher - Alcedo atthis, Green Woodpecker - Picus viridis,  
 Great Spotted Woodpecker - Dendrocopos major, Skylark - Alauda arvensis,  
 Swallow - Hirundo rustica, House Martin - Delichon urbica, Carrion Crow -  
Corvus corone, Rook - C. frugilegus, Jackdaw - C. monedula, Magpie - Pica pica,  
 Jay - Garrulus glandarius, Great Tit - Parus major, Blue Tit - P. caeruleus,  
 Coal Tit - P. ater, Marsh Tit - P. palustris, Willow Tit - P. montanus,  
 Long-tailed Tit - Aegithalos caudatus, Nuthatch - Sitta europaea, Treecreeper  
 - Certhia familiaris, Wren - Troglodytes troglodytes, Dipper - Cinclus cinclus,  
 Mistle Thrush - Turdus viscivorus, Fieldfare - T. pilaris, Song Thrush - Turdus  
philomelos, Redwing - T. iliacus, Blackbird - T. merula, Wheatear - Oenanthe  
oenanthe, Whinchat - Saxicola rubetra, Redstart - Phoenicurus phoenicurus,  
 Robin - Erithacus rubecula, Blackcap - Sylvia atricapilla, Garden Warbler -  
S. borin, Whitethroat - S. communis, Lesser Whitethroat - S. curruca, Willow  
 Warbler - Phylloscopus trochilus, Chiffchaff - P. collybita, Wood Warbler -  
P. sibilatrix, Goldcrest - Regulus regulus, Spotted Flycatcher - Muscicapa  
striata, Pied Flycatcher - Ficedula hypoleuca, Dunnock - Prunella modularis,  
 Meadow Pipit - Anthus pratensis, Pied Wagtail - Motacilla alba, Grey Wagtail  
 - M. cinerea, Yellow Wagtail - M. flava, Starling - Sturnus vulgaris, Hawfinch  
 - Coccothraustes coccothraustes, Greenfinch - Carduelis chloris, Goldfinch -  
C. carduelis, Siskin - C. spinus, Linnet - Acanthis cannabina, Redpoll - A.  
flammea, Bullfinch - Pyrrhula pyrrhula, Chaffinch - Fringilla coelebs,  
 Brambling - F. montifringilla, Yellowhammer - Emberiza citrinella, Reed Bunting  
 - E. schoeniclus, House Sparrow - Passer domesticus, Tree Sparrow - P. montanus.

#### Mammal

Grey Squirrel - Sciurus carolinensis.

#### Plants

Bird Cherry - Prunus padus, Blackthorn - Prunus spinosa, Bluebell - Endymion  
nonscriptus, Bracken - Pteridium aquilinum, Bramble - Rubus fruticosus,  
 Cow Parsley - Anthriscus sylvestris, Elder - Sambucus nigra, Hazel - Corylus  
avellana, Hawthorn - Crataegus monogyna, Holly - Ilex aquifolium, Lupin -  
Lupinus polyphyllus, Nettle - Urtica dioica, Privet - Ligustrum vulgare,  
 Rowan - Sorbus aucuparia, Willow - Salix spp., Willowherb - Epilobium Spp.

