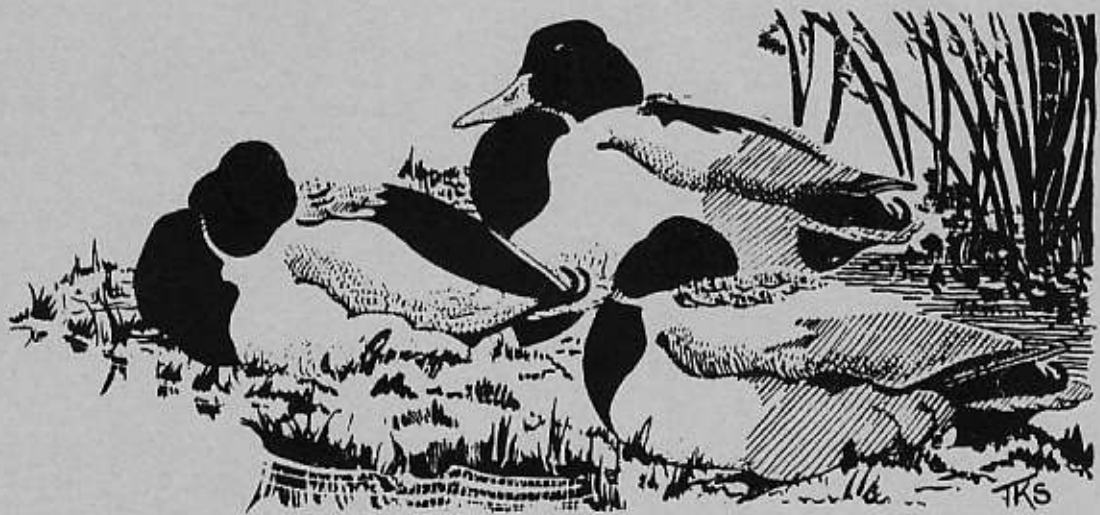


**DEESIDE NATURALISTS
SOCIETY**

**BIRDS OF THE
CONNAHS QUAY CEEB RESERVE
and OAKENHOLT MARSH**



**A Guide
and 1985-1987 Report
on the Birds Moths and Fungi**

CEGB NATURE RESERVE AT CONNHAS QUAY

The Nature Reserve, owned by the Central Electricity Generating Board, is situated between Connah's Quay and Flint (SJ.275.715), along the shoreline of the Dee, an estuary well known for its wintering and passage wildfowl and wading birds. The development of this reserve over a period of almost fifteen years is a splendid example of what can be achieved when industrial and conservation groups work in partnership.

The sequence of events leading to the development of the Reserve is of interest. In 1974, after a series of meetings with the administrators of the Secretary of State for the Environment's Quality of Life Scheme, the Deeside Naturalists' Society was allocated a grant to purchase a bird observation hide. Several members enrolled into the local High School woodwork class and the building of the hide commenced, whilst the committee set out to resolve the problem of its eventual location. Following discussions with the manager of the Power Station at Connah's Quay, the Society was invited to site the hide on C.E.G.B. land and to assist in the development of a nature reserve on the site. It was from such beginnings that this fine reserve on the banks of the Dee has developed.

Since that time a considerable amount of conservation management work has been undertaken to improve and diversify the habitat. The 90 acres of land comprised large areas of open water, saltmarsh and tidal mudflats, and one of the first management tasks was the construction of a marsh scape. The raised areas landscaped from the spoil remain dry on all save the highest tides, affording a roost for wading birds. It is here that spectacular flights of black-tailed godwit, oystercatcher and redshank may be seen in the two hours preceding high water when the tide is 9 metres and above.

Further management created an area of brackish water. An 18 acre salting bordering the river was enclosed within an embankment, and islands were created in the resulting lagoon. The bund, seeded with suitable grasses to prevent erosion, is now a well stabilised and mature part of the landscape. Water levels are maintained by two weirs, and the lagoon attracts a variety of migrant waders, including greenshank and green sandpiper, and provides a feeding area for heron, goldeneye and kingfisher.

A nature trail has been developed through a rough scrub zone, the paths created allowing the remainder of the area to develop naturally. Here the bramble, willow and osier provide cover for passerines such as whitethroat and sedge warbler. The scrubland is the only area of the reserve not wide open to the winds of the estuary, and the shelter it affords has combined with the growing field layer of leguminous plants, to make this part of the reserve particularly attractive to butterflies.

In 1978 in recognition of the management work undertaken, the C.E.G.B. and the Deeside Naturalists' Society jointly received a Prince of Wales Award for conservation.

The opening of the Field Studies Centre by H.R.H. the Duke of Edinburgh in June 1983 was a major landmark in the development of the Reserve. The Centre, designed and built for visitors, houses a display area of 26 ft. sq., containing interpretative material on the value of the various habitat types, and display cases which illustrate the ecology of saltmarsh, mudflat, open water, scrub and grassland zones. The display is designed to convey to visitors the international importance of the Dee Estuary as a refuge for waders and wildfowl.

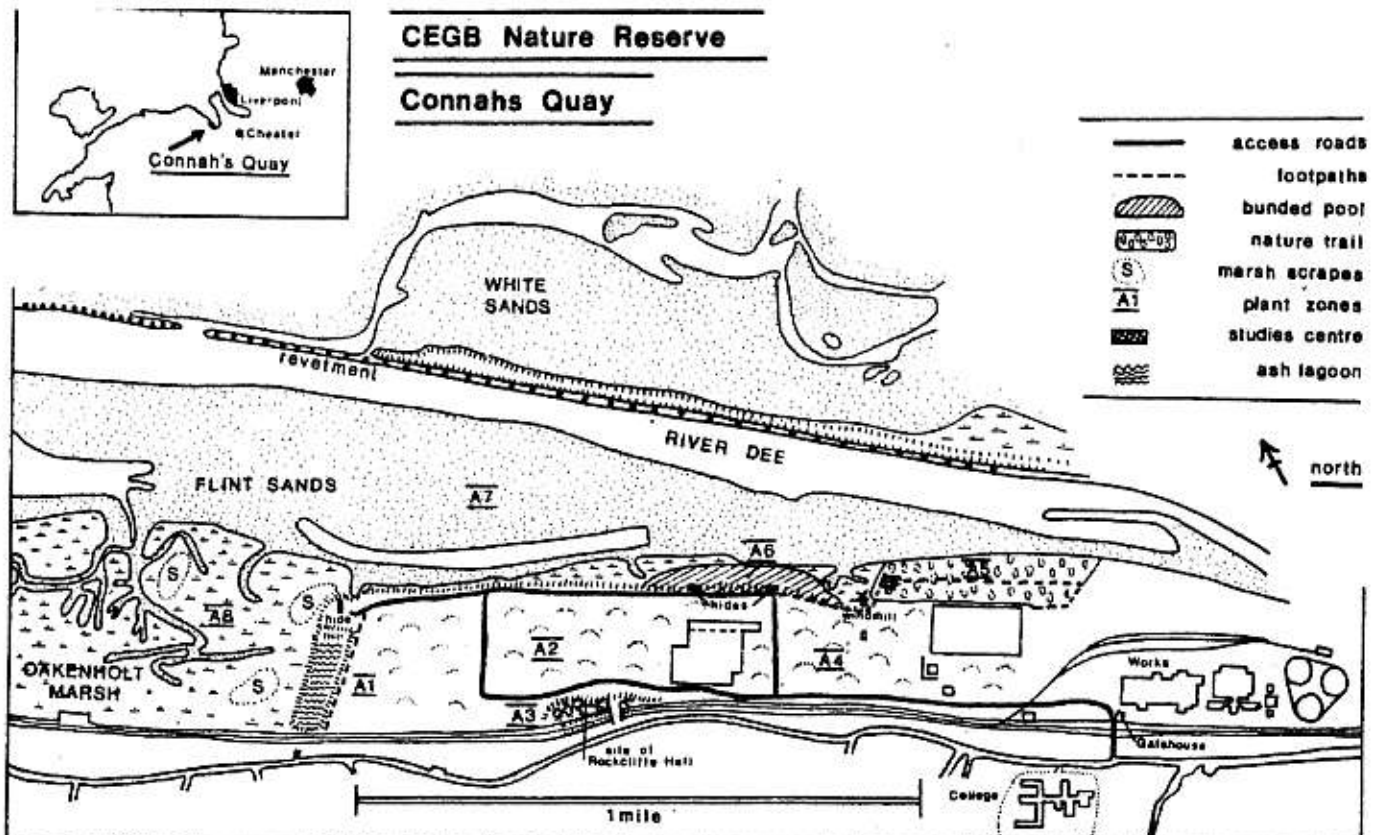
Recent management work involved an extension to the west hide which overlooks Oakenholt marsh. Now complete the hide can accommodate the disabled and their vehicles. An upper viewing deck has also been added.

Throughout the year Open Days/Evenings are arranged when members of the public are invited to visit the Reserve. It is hoped that schools and colleges, as well as natural history groups will continue to use the facilities that the Reserve offers. Organisations not directly associated with natural history are also welcome.

In 1988 the Royal Society for the Protection of Birds purchased a large section of Oakenholt Marsh from the Welsh Water Authority. This purchase will ensure for greater safeguards for the sanctuary area than hitherto and is a significant land mark in Clwyd shoreline conservation.

It has taken almost fifteen years to develop the Reserve and its adjacent to its present state. In that time many thousands of visitors have taken the opportunity to view and participate in the development of this wildlife sanctuary on Deeside. Much has been achieved, much still remains to be done, but the potential is enormous.

Arrangments to visit the Reserve can can be made through the Secretary, Deeside Naturalists' Society, 38 Kelsterton Road, Connah's Quay, Deeside, Clwyd, CH5 4BJ.



DEESIDE NATURALISTS SOCIETY

On 26 April 1973, a public meeting was held in the Civic Centre, Connah's Quay, to determine whether there was sufficient interest to form a natural history group locally. The twenty people who attended agreed that there was such interest and the Deeside Naturalists' Society was formed.

The aim of the Society "is to promote and advance the education of the public in natural history, and the conservation of flora and fauna on Deeside and the surrounding areas".

Now, 15 years on, a registered charity, with a membership of over 400, the Society is in a stronger position than ever to further these aims. It stimulates public discussion and concern through a wide ranging programme of lectures and field meetings, through open days on the Reserve at Connah's Quay, and through the facilities which the interpretative centre there offers to visitors, schools and societies. It co-operates with local authorities and local industry, providing biological information, and making reasoned judgements on sites of ecological importance locally, taking prompt and appropriate action to ensure their continued survival. The Society assists in surveys, on a national as well as a local level, sponsors books of natural history interest, and prepares and publishes pamphlets, reports and a quarterly newsletter.

Over the years the Society has been closely involved with the C.E.G.B., in the development of the nature reserve spanning the Connah's Quay/Flint boundary. Conservation work on the reserve is an important aspect of the Society's activities; working parties meet throughout the year to undertake a variety of management tasks. The Society has been instrumental in raising several thousand pounds to finance items within the Field Studies Centre, to extend the west hide and to provide machinery required for reserve management.

Members of the Society participate in the national wildfowl and wader census in association with the Wildfowl Trust and British Trust for Ornithology, by monitoring wildfowl and wader populations along the Dee Estuary shoreline between Connah's Quay and Gronant.

Information on the Deeside Naturalists' Society and its current programme may be obtained from the Secretary, Deeside Naturalists' Society, 38 Kelsterton Road, Connah's Quay, Deeside, Clwyd. CH5 4BJ.

ACKNOWLEDGEMENTS

The Society wishes to thank all those who have submitted the records which have made the compilation of this report possible.

The fungi and moth records obtained over a two/three year period are presented by Hazel Jones on behalf of a number of specialists in the Society and we are grateful to them.

Thelma K Sykes kindly designed the front cover.

In particular we are indebted to Dr. Glen Morris who has painstakingly computerised all of our ornithological data and has written the text.

THE BIRDS OF THE CONNAH'S QUAY CEGB RESERVE AND
OAKENHOLT MARSH

From the conservation viewpoint, the reserve is important for the wildfowl and waders which use the marsh and mudflats to feed and to roost during winter and the migration periods. Although it covers only a small proportion of the total area of the Dee estuary, the reserve is particularly important for certain species, as the following Table shows:

COMPARISON OF MAXIMUM NUMBERS OF WINTER (OCT-MAR) WILDFOWL AND
WADERS ON THE RESERVE WITH COUNTS FROM THE WHOLE DEE ESTUARY.

Note: Dee Estuary counts are made as part of the B.O.E.E. Wildfowl and Wader Count and are taken from DNS Newsletters Nos. 45 and 48. Reserve counts are the highest for each winter and not necessarily made on the same day.

	1985/86		1986/87	
	<u>Dee</u>	<u>Reserve</u>	<u>Dee</u>	<u>Reserve</u>
Blacktailed Godwit	430	375 (87%)	773	429 (56%)
Spotted Redshank (Nov-Feb)	17	10	6	15
(Aug-Oct)	21	35	2	39
Redshank	4510	1000 (22%)	9220	2000 (22%)
Lapwing	8185	1000 (12%)	5175	500 (10%)
Oystercatcher	38000	3000 (7.9%)	24600	780 (3.2%)
Curlew	4750	100 (2.1%)	4035	123 (3.0%)
Dunlin	11230	200 (1.6%)	12300	400 (3.3%)
Wigeon *	1230	800 (65%)	3660	3250 (87%)
Pintail *	6800	2000 (29%)	4620	2000 (43%)
Teal	5720	1500 (26%)	2940	1000 (34%)
Mallard	4455	600 (13%)	5325	1000 (19%)
Shelduck	5670	390 (7%)	6130	500 (8%)
Goldeneye	4	4	14	13

* Wigeon and Pintail are irregular on the reserve and often completely absent, but the figures show the reserve's importance as an alternative site to their more regular haunts.

Numbers of blacktailed godwit, wigeon, pintail and teal often approach and sometimes exceed internationally-important levels (1% of the NW European population). Spotted Redshank are of regional significance in autumn and winter, while Redshank are a substantial proportion of the total Dee population.

For the birdwatcher, there is the added interest of a variety of autumn passage waders from July to October and a remarkable array of winter raptors which have regularly included peregrine, merlin and sparrowhawk in recent years. Partridges

breed and common terns are present daily throughout the summer. Rarities have included Wilson's phalarope, white-rumped sandpiper and gyrfalcon. 185 species have been recorded over the past 12 years, including 31 species of wildfowl, 30 species of wader and 12 raptors.

In the report for 1985-87 which follows, the dramatic changes in populations which the reserve has seen over the past 10 years are discussed in detail under each species. In general, populations of the commoner wintering wildfowl and waders have increased considerably and there are also more records of most winter raptors. In contrast, the reserve has lost many interesting breeding passerines and unusual passage waders are recorded less often than a few years ago. These changes may reflect changes on the Dee estuary as a whole or more general population changes in the NW region. Equally, however, increases or decreases on the reserve may reflect local redistribution of birds as a result of habitat changes or changes in disturbance levels, on the reserve or elsewhere. For example, the presence of wintering teal on the reserve since 1983 is probably due to the sharp decrease on the Mersey which occurred at this time, while national and regional populations have hardly changed.

The report, like earlier reports prepared by TKS and JD, is based on records entered by Society members into logbooks kept in two of the hides on the reserve. Since the West hide was completed in summer 1977, the practice of counting the commoner species, as well as recording the unusual, has grown, leaving a continuous account of the birds which is more valuable than "folk memory" or personal recollections.

I have used the "bird-day" as the recording unit. If three different duck counts are made on a single day, the highest is taken. If a peregrine is seen 3 times in one day, the record is one peregrine (unless they clearly refer to different birds e.g. adult and immature), while the same peregrine present on 3 consecutive days appears as 3 peregrines in the records. Coverage of the reserve (the number of days in the year for which logbook entries exist) has increased from 50-60% ten years ago to 70-80% today. The actual figures are as follows:

	1985	1986	1987
West hide logbook	288(79%)	263(72%)	271(74%)
East hide logbook	270(74%)	254(70%)	231(63%)

Changes in coverage over the years will have a much greater effect on the "TOTAL" number of records than on the "PEAK" or "MAXIMUM" count for the month or year, so the latter method of comparison is adopted where possible. It is of no use, however, for species which occur only in ones and twos, such as raptors or unusual waders. Such species are also unlikely to be under-recorded, so "totals" are a better basis for comparison. I have not tried to "correct" for coverage changes, so the reader must bear in mind a likely increase of 30-50% in the "total" records of any species simply because the logbooks are being filled in more often now.

Several other assumptions have been made about the accuracy of counting and identification over the years. The highest bird counts are usually made by regular experienced observers and there is considerable continuity in this respect. At the same time, there is a danger of becoming complacent about one's ability to "guess" flock sizes and hopefully all aspiring counters take the opportunity to check their estimates by accurate one-by-one counting whenever it arises. The boundaries of the reserve for purposes of recording are difficult to define, especially out into the estuary. With a good telescope, many birds can be counted on Burton Marsh and even Gayton Sands but these have been excluded where known. Birds along the revetment in the river channel and just behind it at White Sands are often included in the counts and the whole of the river on this side of the revetment must be considered fair game.

Finally, records from the two hides are kept separately and are not added together (to avoid duplication of moving birds), except where a simultaneous count is noted. This is of little consequence for peak counts since most of the wildfowl and waders are found at the west end and most of the passerines at the east end. The East hide logbook contains records for the bunded pool, the upper river, the nature trail and all the wooded areas of the reserve and so provides useful separate information for conservation purposes.

1985-87 THE MAIN EVENTS

1985

Brambling flocks were absent during the 84/85 winter, but there was a regular flock of yellowhammer and over a hundred twite on passage in March. New birds for the reserve this year were a white-rumped sandpiper in January and a barnacle goose in June. Meadow pipits bred for the first time. Steadily-increasing peregrine records over recent years reached a peak in the autumn/winter of 85/86.

1986

A pair of Bewick's swans spent two weeks on the bunded pool in early March, followed by a pair of little ringed plover for a similar period in May. New birds were a white-phase gyrfalcon and a goosander in February and a redthroated diver in November. A poor breeding season generally.

1987

Over 3,000 wigeon stayed for a week during a spell of hard weather in January. Arrival of the first spring migrants was unusually early (as elsewhere in the country) and was followed by a good breeding season with a successful oystercatcher brood confirmed. A white-phase snow goose in Aug/Sep and a blackthroated diver in December were new species for the reserve.

WHERE TO FIND BIRDS ON THE RESERVE

The grassy areas between the power station entrance and signal box are good for winter thrushes and finches. Past the signal box, the railway line area has warblers in spring and is good for jays and bullfinches. The first grazing fields on the right have curlew, lapwing and wood pigeon in winter with jackdaws and chats in spring and stock dove in summer.

As the main motor road bears right towards the East hide and the willow screen, the Rockcliffe woodland lies on the road straight ahead, good for passerines generally and especially tree sparrow, goldcrest and longtailed and other tits in autumn. Also the most likely spot for collared dove.

Returning to the main road, the planted screen of trees which joins the brick field study centre and the two east hides often has mixed finch and bunting flocks in winter, with chaffinch, brambling and linnet, perhaps redpoll and yellowhammer, and is often hunted by kestrel and sparrowhawk. Spring warblers include lesser whitethroat. Between the willow screen and the river lies the "bunded pool", which can be watched from either hide or from the study centre. Although sometimes quite deserted, it can hold an excellent variety of ducks and waders and can give excellent views of goldeneye, spotted redshank, greenshank and godwits at the right time of year.

A good view of the river at low tide can be had from near the field study centre (please don't walk on the marsh). Beyond the centre a footpath leads to the nature trail which has fallen into "disrepair" at present but can be relied upon for whitethroat in summer and is good for butterflies and flowers.

At the other end of the willow screen lies the road to the West hide and Oakenholt marsh. Just before the iron gate is the sluice gate of the bunded pool, once the haunt of kingfisher. The road to the West hide is good for wheatear and wagtails on passage. Across the fields some remaining ruins of Rockcliffe Hall can be seen. Near the West hide lies the large fly ash lagoon, the only expanse of fresh water on the reserve (please don't walk on the banks). This is good for close views of hirundines in summer and passage waders, especially ruff and sandpipers.

From the two-storied West hide there is a panoramic view of the reserve. The front windows overlook Oakenholt marsh, with Flint castle in the distance. Immediately in front of the hide is the Gulley, which carries the Papermill stream to the main river and is good for duck and waders, including spotted redshank. Also directly in front is the "Near scrape", sometimes bare and dry but another haunt of duck and waders at high tide, often affording close views of raptors. Also directly ahead, but on the far side of the marsh, is the "Far scrape", rather overgrown at the present time. The row of fence-posts behind and just to the right are often used by kestrel, merlin, peregrine and even sparrowhawk as vantage points from which to launch their attacks. To the right again is the edge of the marsh.

along which the majority of waders, including blacktailed godwit, gather as the tide rises. A tide of over 9.0 metres is needed to flood the marsh and disturb all the waders and wildfowl from the marsh gulleys. Next to the marsh lies Flint Sands, an important feeding ground for blacktailed godwit and other waders, through which the course of the Dee river winds.

On the other side of the main river channel, the straight line of the "revetment" can be seen. Behind the revetment lies Burton marsh with Burton Point reaching into the estuary near the far end. Beyond Burton Point and towards the white houses of Parkgate lies the vast area of the Gayton Sands RSPB reserve. On a clear day it is even possible to see the Hilbre islands in the middle of the estuary mouth.

The small window on the south side of the hide gives an excellent view of the fly ash lagoon without disturbing the birds on it, while the windows on the north side overlook the main river channel with good views of grebes and other seabirds. Between the revetment and Burton marsh lies White Sands, another haunt of duck and waders. The back windows overlook the approach road and the strip of marsh which runs back to the bunded pool and the field study centre visible beyond.

Many birds can be seen on the reserve without leaving your car; generally, birds are much less disturbed by cars than by people on foot and closer views can be obtained.

A report on the mammals of the reserve will appear in 1989. Although anyone coming to look specifically for mammals on the reserve is likely to be disappointed, there's always a chance of a fox on the marsh, a weasel or stoat on the roads or a grey seal on the river.

Even as this report appears, improvements to the reserve are in hand which could change the pattern of birdlife. In October, 1987, the fly ash lagoon was dug out again at the North end to create a larger area of water and grass was removed from the edges to increase the fringe mud. Patches of sedge were left to provide refuges. The effects of this will be seen in 1988. Also planned for the summer of 1988 are similar improvements to the bunded pool area which has become overgrown with grass in recent years.

LOGBOOK CONTRIBUTORS

It would be impossible to list everyone who has recorded birds in the logbooks. The following list is for identification of observers from their initials in the main text.

K Byrne	MS Ball	C Bennett	D Coan
R Corran	G Crossley	J Davidson	RW Evans
N Friswell	B Griffiths	WE Griffiths	WS Griffiths
BK Hassall	D Hughes	TD James	H Jones
DB Keogh	CE Lynch	GE Morris	H Moss
A Mason	MG Neal	JC Peters	R Plummer
RJ Raines	MJ Ratcliffe	RA Roberts	G Robinson
K Shannon	D Small	TK Sykes	RG Thomas
JC Weldrick	D Williams	M Williams	

SYSTEMATIC LIST OF BIRDS

Birds recorded for the first time during 1985-87 are enclosed by asterisks (*....*). Birds recorded during 1977-84, but not during 1985-87, are enclosed in square brackets [....].

Observers initials are given in brackets to indicate where queries about the record should be directed. Although detailed descriptions of unusual birds are sometimes entered in the logbooks, it is unrealistic at present to require this as a condition for inclusion here. If rigorous standards were applied, many interesting and genuine records would be omitted and the aim of presenting as accurate an account of the birds as possible would not be well-served. A few logbook records have been quietly "forgotten".

REDTHROATED DIVER (Gavia stellata)

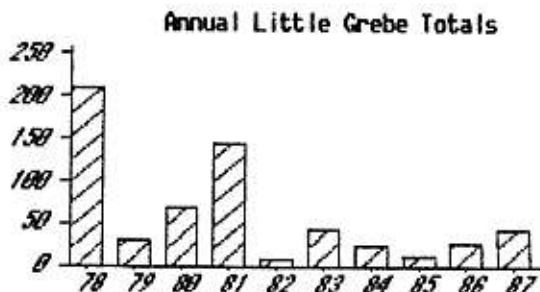
The first and only record was of an oiled bird which walked up onto the mudbanks of the gulley in front of the West hide on Nov. 8th, 1986 (KB,KS,BS,CB).

BLACKTHROATED DIVER (Gavia arctica)

The first and only record was of a bird on the river close to the West hide during the high tide of Dec. 8th, 1987. A detailed description of the bird, which still retained traces of summer plumage, is on record (CB).

LITTLE GREBE (Tachybaptus ruficollis)

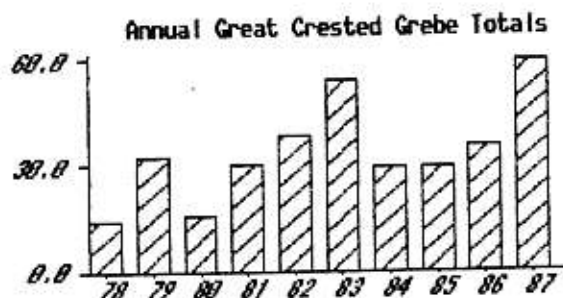
Individuals or small groups turn up regularly outside the breeding season, mostly in early winter. Numbers vary considerably from year to year, but there have been no really good years since 1981. They are usually seen on the pools.



GREAT CRESTED GREBE (Podiceps cristatus)

Individuals or small groups are seen on the river, carried up by the tide and often flying back on the ebb. Like the Little Grebe, it has occurred in every month but is commonest in early

winter. Total records have remained fairly constant over the past ten years at around 30-40 birds per year.



[SLAVONIAN GREBE. (*Podiceps auritus*)]

19/10/80; 28/10/80 (2); 30/10/80; 12/8/81.

FULMAR. (*Fulmarus glacialis*).

Six fulmars over the river during a NW gale on May 8th, 1987 (GEM) is the largest number seen on the reserve, previous records being of singles in April, 1981 and September, 1983.

[MANX SHEARWATER. (*Puffinus puffinus*)] 30/9/78 (RAR)

[STORM PETREL. (*Hydrobates pelagicus*)] 10/77; 11/77; 9/84 (5).

LEACH'S PETREL (*Oceanodroma leucorhoa*)

Occurs annually at the mouth of the estuary after westerly autumn gales, when it is often seen in large numbers at Hilbre island. On these occasions, one or two birds may come inland as far as the reserve. One flew over the flooded saltmarsh in front of the West hide shortly after high tide on Sep. 17th, 1985 (JCW, GEM) and a second on Oct. 8th, 1987 settled on the water briefly before flying back towards the sea (CB). There were previous records in '77, '78, '80 and '84, all in September or early October.

GANNET (*Sula bassana*)

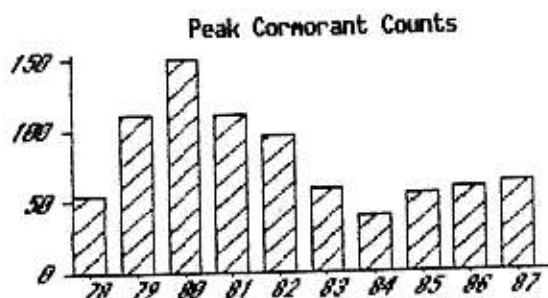
An adult bird was found dead on the reserve on March 26th, 1987. The previous record in June 1983 was also of a bird which died on the reserve. Live birds were seen in Aug '82 and Sep '78.

CORMORANT (*Phalacrocorax carbo*)

Cormorants can be seen at any time of year but are most abundant in mid-winter, as the monthly peak counts show. The nearest important breeding areas are on the Gwynedd coast. Individuals with light-grey heads are sometimes seen and are understood to be older birds (RC).

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	52	33	47	10	6	10	5	28	30	20	45	55
1986	30	18	24	35	1	4	3	21	20	20	58	33
1987	37	5	10	9	36	10	6	17	25	50	61	40

Numbers in this part of the estuary were high between 1979 and 1982 but have since decreased to a fairly-steady lower level with maximum counts of 50-60 birds.



[SHAG (*Phalacrocorax aristotelis*)] 19/12/79; 24/10/80

GREY HERON (*Ardea cinerea*).

The following monthly maximum counts illustrate the autumn influx, which includes many juvenile birds, from June/July onwards, followed by a fall-off in numbers as the cold weather sets in during December/January.

MONTHLY MAXIMUM COUNTS

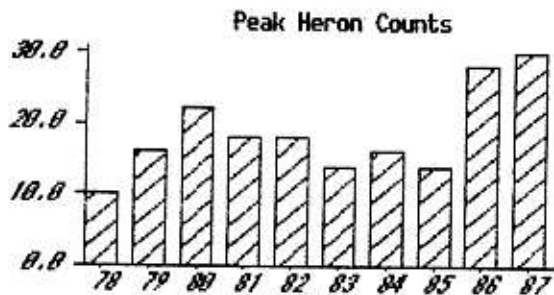
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	3	3	1	1	2	6	6	10	8	14	8	5
1986	1	1	2	2	3	4	4	14	18	28	12	6
1987	6	2	2	3	3	16	12	22	30	19	9	4

The autumn influx and, especially, the scarcity of birds during their March nesting season is even better illustrated by the total monthly heron counts. The nearest breeding colony is across the estuary in the Wirral.

MONTHLY TOTAL COUNTS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	20	19	6	3	6	30	75	85	98	118	54	27
1986	7	12	9	17	23	18	37	120	112	216	57	40
1987	17	7	5	20	21	118	120	212	280	105	47	45

There is no evidence of any decrease in heron numbers over the past 12 years; indeed, there are signs that larger numbers are being attracted to the reserve in recent years.



It is interesting to note that the hard winter of 81/82 did not reduce heron numbers dramatically, as it did for the Kingfisher (q.v.).

MUTE SWAN. *Cygnus olor.*

Individuals or small parties occur infrequently, but at any time of year. They often merely fly over or stay very briefly though a male spent nearly three weeks on the reserve in April, 1986. Maximum counts of seven birds on the fly ash lagoon on May 7th and on June 17th, 1987 included one female, two males and four immatures.

No evidence of a decline in records over the past ten years.

Year:	78	79	80	81	82	83	84	85	86	87
Total records:	21	18	15	18	33	22	34	50	24	55

BEWICK'S SWAN (*Cygnus columbianus bewicki*)

The only record for the period is of a pair on the bunded pool from Feb. 28th to Mar. 18th, 1986. Previously recorded in '78, '79 (28 birds), '80, '82, '84.

[WHOOPEE SWAN. (*Cygnus cygnus*)] 3/1/84; 14/11/84; 24-25/11/84.

PINKFOOTED GOOSE (*Anser brachyrhynchus*)

This is the commonest goose of the NW region with 25,000 currently wintering in Lancashire.

A single in Feb, 1986 and five records of singles in Jan/Feb 1987 were followed by two together in Oct, 1987, though records of 60 grey geese in flight on Jan 11th, 1985 and 80 on Oct. 26th, 1987 may also have been this species.

Previously recorded in '78, '79, '80 and '82, when 400 flew over in hard weather on Jan. 9th.

[WHITEFRONTED GOOSE (*Anser albifrons*)] 27/12/84 (3) (MGN, BKH).

[GREYLAG GOOSE (*Anser anser*)] 9/4/83; 16/4/83; 29/10/84; 11/11/84.

SNOW GOOSE (*Anser caerulescens*)

A single white phase bird was present on the estuary in Aug and Sep, 1987. It was seen on Burton Marsh across the river several times in August but also flew across the reserve in front of the West hide on Sep. 18th. This was the first and only record for the reserve and is likely to have been an escape.

CANADA GOOSE (*Branta canadensis*)

Singles were seen on Jun. 23rd, 1985 and Feb. 27th, 1987 and two across the river on Aug. 21st, 1985. A flock of 16-20 was seen regularly in 1987 from Nov. 17th onwards, mostly across the river towards Parkgate, but occasionally overflying the reserve.

BARNACLE GOOSE (*Branta leucopsis*)

One bird present from May 30th to June 7th, 1985 and another on Oct. 29th, 1985 were the first records for the reserve.

Once abundant on the Dee in winter, it virtually disappeared over a hundred years ago and is now very scarce indeed. Our records are likely to have been escapes.

BRENT GOOSE (*Branta bernicla*)

Previously recorded only in 1982 and 1983, a single with shelduck on the edge of the marsh on Dec. 5th, 1986 was followed by two on Nov. 5th, 1987 and three on Nov. 12th, all on the river. All records appear to be of the Dark-bellied race (*B.b. bernicla*) reaching us from the rapidly-expanding winter population in southern England, rather than the much smaller populations of *B.b. hrota* in the NE and W.

EGYPTIAN GOOSE (*Alopochen aegyptiacus*)

Previously recorded in Dec, 1984, the second record for the reserve was of an individual resting on the banks of the fly ash lagoon on March 23rd, 1986. Probably a local escape.

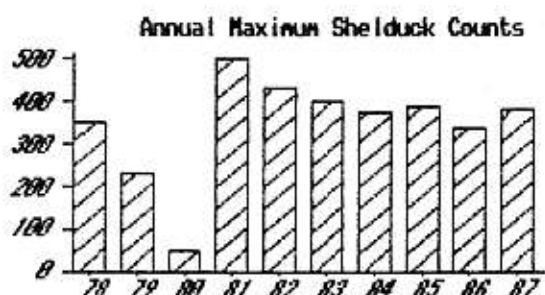
^{Rudolf Shelduck}
SHELDUCK (*Tadorna tadorna*)

This species can be seen from the reserve throughout the year and evidence of local breeding, in the form of broods of young ducklings, has been obtained in 7 of the last 10 years. Thirteen young in 1985 included 8 which were introduced. Three young were seen in 1986 but none in 1987.

The following monthly peak numbers for 1985-87 are fairly typical in showing a later winter maximum in this part of the estuary, but the substantial summer presence on the mudflats in 1986 and 1987 has not been noted previously.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	350	174	185	91	50	70	46	50	85	83	90	390
1986	250	130	65	46	28	300	110	50	50	40	53	336
1987	380	148	70	77	208	237	380	18	150	85	300	300

Winter peak numbers have remained remarkably constant at about 400 since 1981, about 7-8% of the total Dee population.



On the Dee as a whole, and even nationally, numbers have changed little since the early 70s.

Shelduck may be seen on the intertidal mudflats, along with Mallard and Pintail, looking for snails, and during the breeding season, in pairs on the marsh or the bunded pool. Interestingly, they disappear from the bunded pool from July to November and are seen there in greatest numbers in Feb/Mar.

[RUDDY SHELDUCK (*Tadorna ferruginea*)] 6-7/7/80 (TKS,JD)

MANDARIN (*Aix galericulata*)

Two males and a female on Oct. 5th, 1987 (RAR). The only previous records were a male in Jan, 1980 and a female in Nov. 1983.

WIGEON (*Anas penelope*)

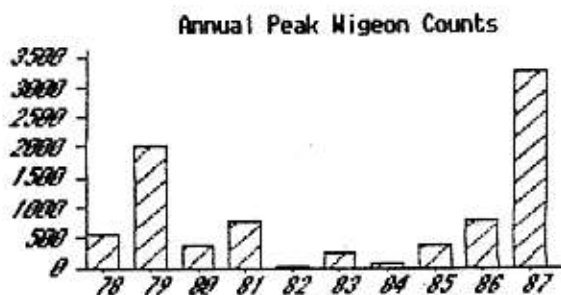
This species is found during occasional, and often brief, influxes of a few hundred birds in mid-winter. The presence of up to 3,250 on the reserve for over a week in mid-January, 1987 was a quite extraordinary event and they made a magnificent wintry sight (and sound) amid a bleak landscape of snow and ice, some of them roosting on ice-burges floating down the river.

During major influxes, the reserve marshes may hold the great majority of wigeon on the Dee since this is the least abundant of the five main duck species. It is also the only one of the five which is completely vegetarian. Monthly peak numbers during 1985-87 show how irregular these influxes are:

MONTHLY MAXIMUM COUNTS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	300	400	75	2	-	-	-	-	-	10	20	50
1986	250	800	510	7	-	-	-	-	8	11	-	14
1987	3250	50	3	3	1	-	-	-	-	1	15	40

There is no consistent trend in numbers over the past ten years, though 1985-87 was certainly better than the preceding three year period:



The national population has also changed little over the past ten, or even twenty, years.

GADWALL (*Anas strepera*)

1985 was an exceptionally good year for this uncommon species, with seven separate records between Jan 28th and Feb 20th of up to 3 birds. There were further records of singles on Aug 11th, Nov 13th and Dec 31st and two together on Jan 19th, 1986. The only subsequent record was of 3 on the fly ash lagoon on Sep 2nd, 1987 (RWE).

Previously recorded twice in Nov 1983 and three times in 1980 (Jan and Sep).

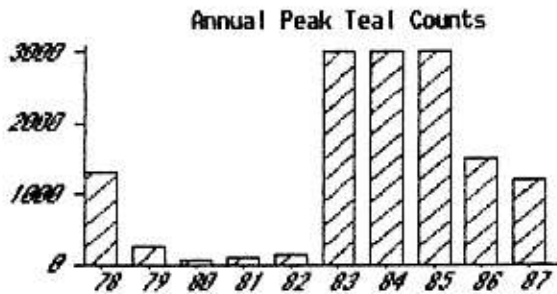
TEAL (*Anas crecca*)

The commonest duck on the reserve in winter. There is a resident mid-winter core population of about 500 (10-20% of the Dee total) which has increased to as many as 3000 at times; on these occasions the reserve marshes may hold well over 50% of the Teal on the Dee. They feed in the many gulleys in the marsh so that most may be hidden from view except on the highest tides or when put up by a raptor or by some other disturbance. Although mostly on the marsh, substantial numbers can occur on the banded pool and nearby river (several hundred in January).

Although Teal have bred elsewhere on the estuary, they are almost completely absent from the reserve after the third week in April, reappearing in early August in eclipse plumage.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	3000	400	300	50	-	2	-	60	200	500	1250	600
1986	1500	500	550	80	6	-	-	15	250	1000	750	500
1987	600	550	200	200	-	-	-	30	200	500	600	1200

The annual peak numbers over the past ten years reveal the dramatic increase which occurred in 1983:



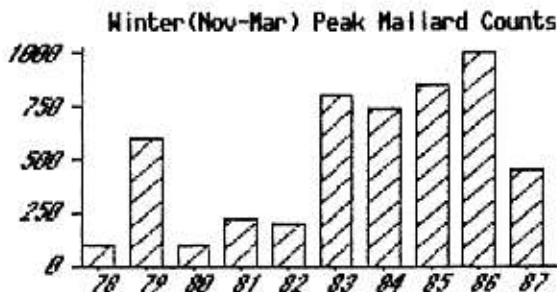
This increase coincides with a sharp decrease in numbers on the Mersey at this time from 35,000 to 11,000 and so may reflect a redistribution within the north-west region. Nationally, teal numbers have increased by over 30% during the past decade.

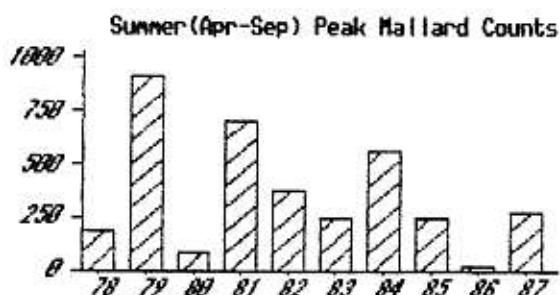
[GARGANEY (*Anas querquedula*)] 4/10/81 (RJR).

MALLARD (*Anas platyrhynchos*)

Present throughout the year. No evidence of breeding in 1985 or 1986, but in 1987 two separate females each brought seven ducklings onto the fly ash lagoon. Breeding was also confirmed in six of the previous nine years.

Wintering numbers build up from September onwards, but there is often also a summer influx of several hundred birds. Until 1983, this summer peak exceeded the wintering numbers. In 1983, however, there was a significant increase in the winter maximum count from around 200 to over 800.





The monthly pattern for 1985-87 is typical of recent years with summer peaks in 1985 and 1987 but not in 1986:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	850	450	70	80	43	150	200	200	250	600	600	344
1986	600	200	160	11	9	2	7	20	230	1000	300	300
1987	350	250	50	20	267	96	171	200	300	300	250	272

Although the national population appears fairly constant, numbers wintering on the Dee have increased recently and the figures for the reserve are a reflection of this, continuing to represent up to 15% of the total population of the estuary at times. Although mainly on the marsh and river, over 100 can occur on the bunded pool in winter.

PINTAIL (*Anas acuta*)

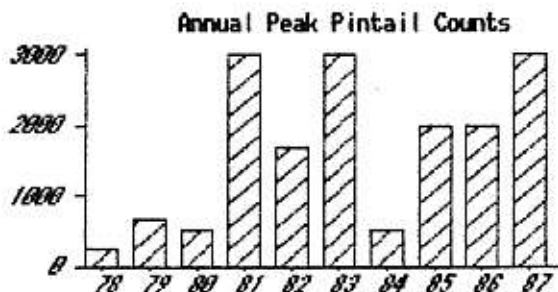
Although many thousands are visible in winter in the far distance at Gayton Sands, they come up to the reserve only occasionally, sometimes in ones and twos, sometimes in hundreds or thousands. The reserve marshes and mid-river sandbanks may hold half the Dee population on just a few occasions each year, but Pintail are not a constant feature. Early arrivals on the estuary may be in eclipse plumage and difficult to distinguish at a distance, but from mid-October onwards large flights can be seen in mid-estuary, put up by the changing tides.

MONTHLY MAXIMUM COUNTS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	250	78	30	-	-	-	-	-	9	200	2000	12
1986	12	90	1000	-	-	-	-	-	8	6	30	2000
1987	60	3	12	-	-	-	-	-	-	2000	3000	2000

Pintail numbers on the Dee have increased 3-fold over the

past 10 years and this is reflected in the annual peak counts for the reserve:



SHOVELER (*Anas clypeata*)

An occasional visitor between August and April. 1985 was a very good year with records in 8 months and a maximum of 20 on Mar.3rd. Maximum counts in 1986 and 1987 were 2 on Aug.15th and 11 on Jan.16th.

MONTHLY MAXIMUM SHOVELER COUNTS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	5	4	20	1	-	1	-	1	10	-	2	-
1986	-	-	1	-	-	-	-	2	-	1	-	-
1987	11	4	1	1	-	-	-	2	-	-	2	-

POCHARD (*Aythya ferina*)

An occasional winter visitor, possibly when disturbed from the pools at Shotton and Sealand. Usually singles or small groups and usually on one of the pools. 1987 was unusual in having 11 males on the bunded pool on Feb.1st (one of which stayed until the 15th) and a female on the fly ash lagoon from April 19th to May 2nd.

Totals for the 3 years are 3,5 and 30 respectively.

TUFTED DUCK (*Aythya fuligula*)

An occasional visitor, like the previous species, but larger groups are sometimes seen. There are two records of 20 birds on Nov.17th,1985 and Feb.28th,1986. The maximum for 1987 was 4 on May 17th.

Totals for the 3 years are 24,22 and 18 respectively.

[SCAUP (*Aythya marila*)]

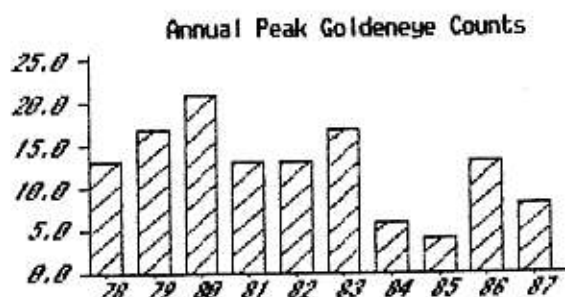
30/10/77 (2); 12/11/78 (17); 4-12/12/82; 5/11/83

[LONGTAILED DUCK (*Clangula hyemalis*)] 24/10/80 until 7/11/80

[VELVET SCOTER (*Melanitta fusca*)] 23/10/83 (6) (TKS,JD et al)

GOLDENEYE (Bucephala clangula)

A regular winter visitor to the bunded pool, with greatest numbers usually in November. Also seen on the river at high tide. Up to 1983, the annual peak count averaged 16 birds, but numbers have since fallen to about half that figure:



In a good winter (e.g. 86/87), birds may arrive on the bunded pool in mid-October and stay in smaller numbers until February/March. In poor winters, however, they may be present only in Nov/Dec. Odd birds turn up in April/May and may even spend a couple of weeks on the reserve as in April (1987).

MONTHLY MAXIMUM GOLDENEYE COUNTS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	3	1	4	-	-	-	-	-	-	-	1	4
1986	-	1	-	-	1	-	-	-	-	3	13	5
1987	2	3	-	1	-	-	-	-	-	1	8	6

SMEW (Merqus albellus)

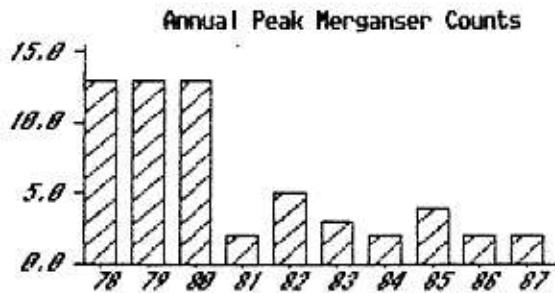
A male was seen on the river on Feb.23rd,1986 (RJR,RWE). The only previous records were of a female seen on 4 occasions during the 1983/84 winter.

GOOSANDER (Merqus merganser)

A female was recorded 4 times on the bunded pool between Dec 31st,1985 and Feb 16th,1986. There were further records in 1986 of groups of 2 or 3 females seen from the West hide on Feb 23rd and 28th and 4 males on April 25th.

REDBREASTED MERGANSER (Merqus serrator)

There has been a marked decline in records of this species since 1980. Once seen in groups of up to 13 on the river and the bunded pool, it now occurs only in ones and twos.

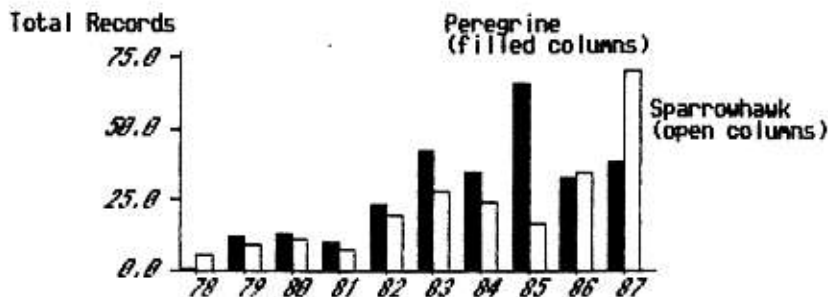


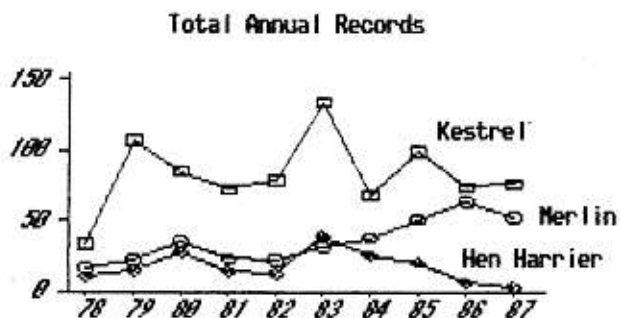
[RUDDY DUCK (*Oxyura jamaicensis*)] 4/8/82 (MW,JCW).

THE FIVE COMMON RAPTORS

Peregrine, Merlin, Hen Harrier and Sparrowhawk are essentially winter visitors (Aug-Apr) and only the Kestrel is also seen regularly during the summer. The Kestrel is by no means the commonest raptor in mid-winter, though even at this time it is the species most likely to be encountered by the casual visitor.

The following diagrams show that annual total records of peregrine and sparrowhawk have increased strikingly over the past 10 years. Merlin records have also increased, while kestrel numbers have remained fairly constant and hen harrier records declined dramatically after 1985.





Peak counts have little meaning for raptors which only occur in ones and twos. Total records are more meaningful, but increases in observer coverage have to be considered. During 1985-87, the logbook entries were made on 72% to 79% of the days compared with 50-60% in the early 1980s. This modest increase in coverage is insufficient to affect the conclusion that peregrine and sparrowhawk now occur more frequently on the reserve than before. The merlin is at least holding its own, in spite of its decline in other parts of Britain and the kestrel is certainly not increasing. On the other hand, the decline in hen harriers is likely to be even more dramatic than the simple figures suggest.

[MARSH HARRIER (*Circus aeruginosus*)] Female on 3/5/80 (RAR)

[MONTAGU'S HARRIER (*Circus pygargus*)]

Males on 28/12/79 (WG) and 22/7/80 (RWE)

HEN HARRIER (*Circus cyaneus*)

Numbers have declined to such an extent in the last 2 years that it seems difficult to believe that this was once one of the commonest winter raptors on the reserve. It appears late in the winter with few records before November. Individuals seen on the reserve are presumed to roost at Parkgate where numbers have also declined.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	1	6	6	-	-	-	-	-	-	4	1	3	21
1986	2	4	-	1	-	-	-	-	1	-	-	-	8
1987	2	1	-	-	-	-	-	-	-	-	-	-	3

GOSHAWK (*Accipiter gentilis*)

There are two logbook records, on Mar. 17th, 1986 (CEL) and Aug. 13th, 1987 (RWE), but no details were supplied.

At 10.05 a.m. on Sept 30th, 1984, a female crossed the river mobbed by gulls and landed in the grazing fields where attacks by crows, gulls and magpies continued. A much smaller female sparrowhawk came out from the Rockcliffe woodland, divebombed it and pursued it over the woods and off the reserve. This was followed shortly afterwards on Oct 7th by a report of a goshawk putting up a shorteared owl from the marsh.

These were the first reasonably-convincing descriptions of this species on the reserve.

SPARROWHAWK (Accipiter nisus)

Records of this species have increased remarkably over the past 3 years and in 1987 it was present in every month of the year for the first time. This suggests the establishment of a breeding territory close to the reserve.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	1	3	3	2	-	-	1	2	1	2	2	-	17
1986	-	5	3	-	1	-	-	3	7	5	6	5	35
1987	5	4	4	6	2	1	2	10	12	11	10	3	70

Both males and females regularly hunt the open marshes, using a similar technique to that of the merlin, a fast, low flight in and out of the gutters. They also hunt the wooded areas and partial display flights have been observed. Attacks have been recorded on redshank (3; 1 success), starling (3; 2 successes) and blackbird (2; 1 success).

BUZZARD (Buteo buteo)

A rare autumn visitor, even though they are fairly common less than 10 miles inland.

On Sep 18th, 1986 a buzzard soared briefly over the bunded pool area (GEM, GR).

Only two previous records: 21/8/79 and 1/9/83.

KESTREL (Falco tinnunculus)

Kestrels once bred on the reserve and being a common sight at that time may have been under-recorded. It is now most often seen during the post-breeding period of July-September and is still the commonest raptor, but only just.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	4	7	7	4	-	5	8	21	12	16	11	4	99
1986	6	7	4	1	3	3	11	15	11	5	3	6	75
1987	3	-	1	-	2	6	12	15	23	5	4	5	76

Prey items recorded include mice/voles and a male took a linnet from the ground on June 21st, 1987 and partly plucked it before taking it off to the hills. A set of 3 pellets found near the West hide contained the remains of one field vole and one large dung beetle.

MERLIN (Falco columbarius)

Records of this species continue to keep up well, with both males and females/immatures present from August to early April. This is encouraging, since they are thought to be birds which breed in North Wales. There are records of two females together, as well as records of male and female.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	5	10	3	1	-	-	-	1	4	6	11	10	51
1986	9	11	5	-	-	-	-	2	8	13	8	7	63
1987	11	5	6	1	-	-	-	2	8	7	9	3	52

Aerial chases with skylark, meadow pipit, wheatear, starling and a large bat (!) were all unsuccessful, but merlins have been seen taking unidentified prey on the ground by surprise attack, confirming the view that they rely largely on this latter technique.

HOBBY (Falco subbuteo)

First recorded in 1981, it has occurred almost annually on autumn passage since then, mainly during August and September. A detailed description of an immature bird is on record for Sep. 10th, 1987 (CB). Other records on Oct. 1st, 1985 (RP) and Aug. 13th, 1987 (RWE,BG) are understood to have been adults.

LANNER (Falco biarmicus)

An escaped falconer's bird was present on the marsh on Sep. 11th, 1986 (DC).

GYRFALCON (Falco rusticolus)

A white bird ("candicans") was recorded twice on Feb. 23rd, 1986 over Oakenholt marsh (RJR,RWE). Shortly afterwards, a similar, possibly the same, bird appeared in SW England where it stayed for several weeks.

This is the first record in the reserve logbooks, though an earlier record for Connah's Quay was accepted by British Birds (RJR).

PEREGRINE (Falco peregrinus)

Peregrine records increased rapidly and steadily from just one or two in the late 70s to an average of 30-40 since 1983, though 1985 was a particularly good year with 66 records. It may be relevant that teal and mallard also began to winter in greatly increased numbers in 1983, but the main reason for the increase is likely to be the expansion of the North Wales breeding population over this period.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	13	12	7	3	-	-	2	5	10	7	4	3	66
1986	8	5	6	4	-	-	-	1	2	4	1	2	33
1987	4	3	-	1	3	-	-	2	11	4	8	2	38

There has always been a distinct autumn passage (or post-breeding dispersal) and the increased records in the 1980s were due to increases both in this passage and in overwintering birds. Low numbers in the 1986 autumn and in the following winter may be a reflection of poor breeding in the cold and wet spring of that year. The high numbers in Jan/Feb 1985 are partly due to an immature bird almost-permanently resident on Oakenholt marsh.

The regular appearance on the reserve roads in August of dead pigeons with breast meat neatly removed may be the first evidence of peregrine activity. A curlew was found killed in a similar manner on Mar. 29th, 1987 and attacks on blacktailed godwit have also been recorded. An immature bird took a teal from the water on the marsh scrape on Jan 5th, 1985, after it had tried to escape by diving several times. On Oct 10th, 1986, an adult took off from the mid-river sandbank and flew slowly over the revetment before rising suddenly to take a solitary wader from below. It carried its prey towards Shotton pursued by crows. On Oct 22nd, 1987, a mid-air exchange of prey was observed over Oakenholt marsh, with the smaller male dropping an unidentified bird to the female.

REDLEGGED PARTRIDGE (Alectoris rufa or alectoris spp.)

Two records in 1986 on Jan 6th (?) and Mar 17th (GEM) were the first for the reserve, apart from one released on the reserve in 1983 and never seen again. *Alectoris* hybrids (e.g. x Chukar) have been widely released on farmland in recent years and might account for these records.

GREY PARTRIDGE (Perdix perdix)

At least two pairs breed on the reserve. Post-breeding coveys of adults with young are seen from August onwards and the size of these through the winter gives an idea of the success of the preceding breeding season. 1985 and 1987 were good years with post-breeding maxima of 18 and 16 respectively while the cold and wet 1986 was poor with only 8 birds. In the long term, however, the reserve population seems stable, unaffected apparently by the habitat loss and pesticides which may be responsible for its general decline throughout Europe.

Year	78	79	80	81	82	83	84	85	86	87
Maximum	7	10	12	8	20	11	21	18	8	16

PHEASANT (Phasianus colchicus)

An irregular visitor to the reserve, although common enough on farmland locally. There were 4 records in Oct/Nov 1986, including one of 3 birds together near the East hide. Only one record in 1985 and none in 1987.

WATER RAIL (Rallus aquaticus)

One record only of 2 birds on the marsh scrape on Feb 23rd, 1986 (RJR).

Previous records (in 9/77, 12/80 and 1/84) are few considering the numbers that have wintered at Parkgate.

MOORHEN (Gallinula chloropus)

Not often seen on the reserve. Two in 1985 (Jan 25th and Apr 7th) and one found dead on the farm road on Sep 14th, 1987 are the only records.

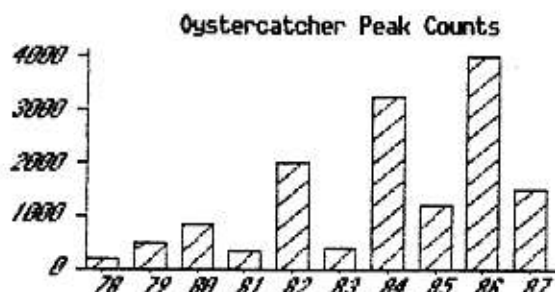
COOT (Fulica atra)

Singles occur occasionally on the fly ash lagoon or the river. No records in 1985, 12 in 1986 and 2 in 1987.

OYSTERCATCHER (Haematopus ostralegus)

Present throughout the year. Every years 3 to 5 pairs nest on the marsh with no attempt at concealment, but there has been little evidence of successful hatching. In 1987, chicks were seen for the first time since 1977 (RC). High tides in May and the high density of predators in June (herons, corvids and gulls) may reduce breeding success.

One or two hundred birds can be found roosting on the marsh almost all year, but there is an early summer presence, the peak of which has increased to over 3,000 in recent years, though with some hesitancy as the following chart shows:



[AVOCET (Recurvirostra avosetta)] 1st-5th, April 1984.

LITTLE RINGED PLOVER (Charadrius dubius)

A pair of spring passage adults were present on the bunded pool almost daily from May 6th-17th, 1986. Also recorded on autumn passage on July 28th (DBK) and Aug 31st (HJ), 1985. There were previous spring records in 1979 and 1983 and autumn records in 1977, 79, 81 and 82.

RINGED PLOVER (Charadrius hiaticula)

Occurs on both spring and autumn passage, though more frequent and in larger numbers in the autumn. The largest flocks were of 25 on Aug 16th, 1985 and Aug 7th, 1986 and of 30 on Aug 21st, 1986.

GOLDEN PLOVER (Charadrius apricaria)

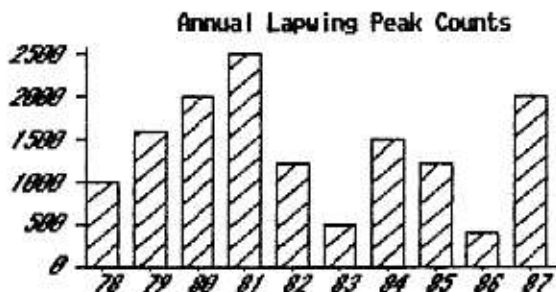
Occurs infrequently on passage in late Sep/Oct and again in winter (Nov-Feb), often in flocks of 10-50 birds. The largest flock was of 100 birds during hard weather on Jan 8th, 1985 and 46 were roosting on the snow-covered bunded pool the following day.

GREY PLOVER (Charadrius squatarola)

This species used to occur regularly outside the breeding season, in singles or small flocks, such as that of 22 birds on Dec 31st, 1985. Since Feb 1986, however, the only record has been of 4 birds on Jan 18th, 1987.

LAPWING (Vanellus vanellus)

Present throughout the year. Display flights over Oakenholt marsh are seen in Apr/May but no further evidence of breeding. Between July and February, 100 to 1000 birds are regularly present on the marsh, sandflats and grazing fields with 1 or 2 pale, or leucistic, birds amongst them. Larger numbers than usual were present during the mild winter of 1987/88 (up to 2000 on Dec 20th). Peak numbers have changed little over the years.



KNOT (Calidris canutus)

Up to 1986, knot were recorded only on 2 or 3 occasions each winter, even though they are abundant (but declining) on the outer estuary. Numbers were usually small with occasional records of up to 50 birds. The flock of 150 on Dec 1st, 1985 was larger than usual but did not prepare us for the flock of 400 birds which appeared just before Christmas, 1987 and roosted regularly on Oakenholt marsh throughout the 1987/88 winter. This is a very significant change, though it remains to be seen whether they will return in the coming winters.

[SANDERLING (Calidris alba)]

29/8/77 (20); 20/5/78 (2); 26/5/79 (2); 13/8/79; 21/3/81
2/8/81 (20); 6/5/84 (15).

LITTLE STINT (Calidris minuta)

There are good years and bad years for this species, but there have been no good years recently. A single on Sep 22nd, 1985 (RAR) and a very late passage of two on Nov 22nd, 1987 (GR) were the only records.

[TEMMINCK'S STINT (Calidris temminckii)]

4/9/78; 20/8/81; 20-22/7/82.

WHITERUMPED SANDPIPER (Calidris fuscicollis)

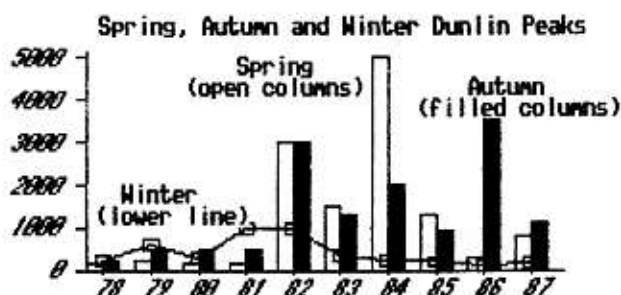
This American wader was recorded on Jan 12th (RJR,MSB) and 20th (RWE,REG,AG), 1985 and finds its way into the reserve report for the first time. No details were recorded in the logbooks so nothing more can be added.

CURLEW SANDPIPER (Calidris ferruginea)

One record only of a single on Aug 9th, 1987 (RWE).

DUNLIN (Calidris alpina)

Large numbers occur on both spring and autumn passages, with peaks usually in late April/early May and late July/early August.



In winter, dunlin are seen only irregularly and in relatively small numbers, considering that this is the commonest winter wader in Britain and is present in large numbers elsewhere on the estuary.

The figures suggest that dunlin passage numbers increased dramatically from 1982 onwards, but that there are fewer birds in winter than there used to be.

There were signs in 1986 of a distinct late passage in mid-September of 100-400 birds, 5 weeks after the end of the main passage and 7 weeks before the first winter record.

On passage, they frequently roost at the tip of the revetment across the river channel directly opposite the West hide.

RUFF (Philomachus pugnax)

Recorded in August in each of the three years, but only singles. Two records in 1985 on the 3rd and 25th and two in 1986 on the 6th and 7th. In 1987, a reeve was present on the fly ash lagoon from the 24th to the 30th.

Between 1981 and 1983, ruff used the lagoon more regularly though only in 1981 were there more than two at a time.

[JACK SNIPE (*Lymnocyrtes minimus*)] 31/7/79 (3); 1/9/83

SNIPE (Gallinago gallinago)

Seen from July to March in very small numbers with a distinct autumn passage in August. 1985 and 1986 were fairly typical years with totals of 67 and 43 birds and peak numbers of 9 and 8 respectively. 1987 was relatively poor with only 16 birds altogether and never more than two together.

[LONGBILLED DOWITCHER (*Limnodromus scolopaceus*)] 9/12/79 (RJR)

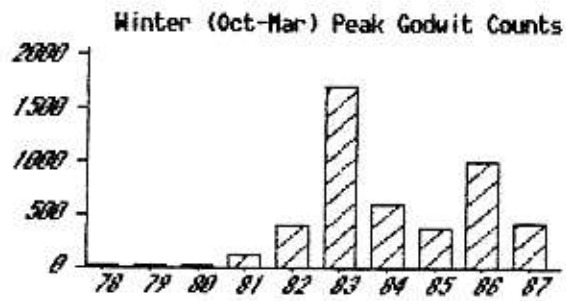
[WOODCOCK (*Scolopax rusticola*)] 19/12/82 (AM)

BLACKTAILED GODWIT (Limosa limosa)

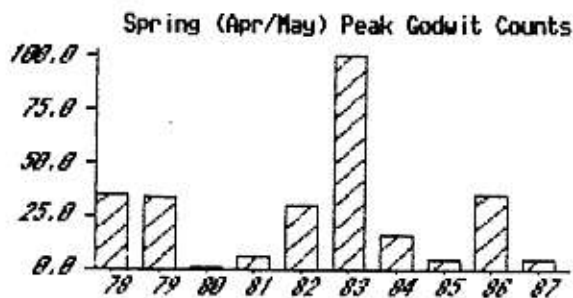
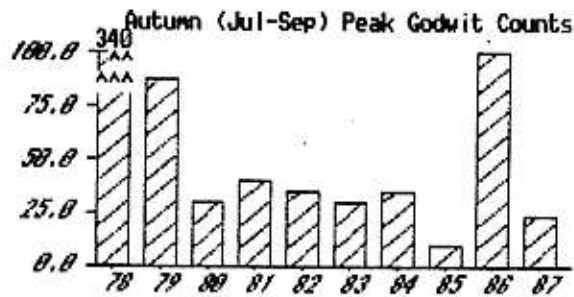
The pride of the reserve, these winter visitors from Iceland alone would justify its existence. The resident flock forms about 1% of the NW European population and 10% of the British from November to February. They roost on Oakenholt marsh during the high tides and feed on Flint Sands, often in a tight flock along the water's edge.

For good views in winter, a 9.8m tide is recommended, but closer views can often be had of autumn passage birds, when they use the bunded pool and fly ash lagoon more regularly.

It was not until 1982/83 that the godwits returned to winter in such significant numbers. Over 1,000 were recorded regularly in 1983/84 with 300-500 being regularly present in subsequent years. Total numbers on the Dee have almost recovered to those of the early 1970s.



Both the distinct timing of the passages in Apr/May and Aug/Sep and the fact that most birds are in summer plumage suggest that the migrants may be a different population from the wintering birds. These passages also occurred before 1981 when there were no overwintering birds.



BARTAILED GODWIT (*Limosa lapponica*)

There was an exceptionally good autumn passage in 1985 with 11-60 birds recorded on 7 dates between Sep 21st and Oct 31st (maximum on Oct 4th). Otherwise, only 1-4 birds on passage and on a few winter dates (Dec, Feb, Mar).

Vast flocks wintered at the mouth of the Dee until they recently deserted the estuary. Even in the old days, however, few birds came to the reserve in winter. In earlier years, an autumn passage of 10-30 birds occurred in 1979 and good spring passages of around 100 occurred in May, 1978, 1979 and 1982.

WHIMBREL (*Numenius phaeopus*)

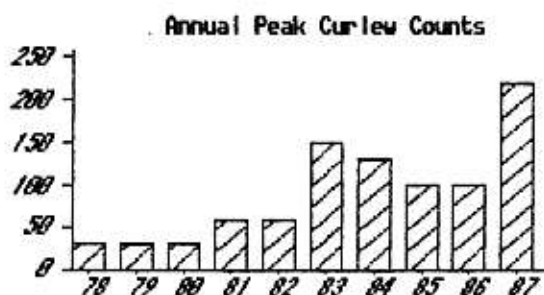
Strictly a migrant, most spring records being in late April and early May while the main autumn passage can last from mid-July to mid-September. Usually singles, but groups of up to 7 birds have been recorded, often using the grazing fields and banded pool as much as the marshes.

There is no evidence of any significant trend in numbers over the past 10 years, though 1982 and 1983 were particularly good years.

CURLEW (*Numenius arquata*)

Present throughout the year, widely scattered over fields, marsh and sandflats. Numbers are not high, though they have been increasing fairly steadily over the past 10 years.

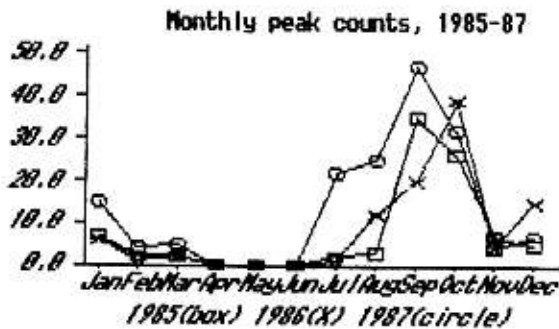
Numbers are usually rather higher in autumn and early winter, but there was a large summer presence in May/June, 1987, which provided the highest ever count of 220 on June 16th. The fields near the East hide are a favoured gathering place in autumn with a high count of 50 on Aug 31st, 1985.



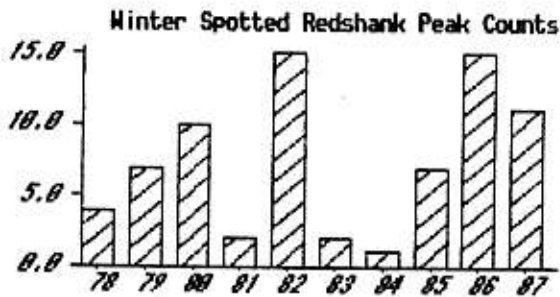
On Nov 3rd, 1985, a fight between two curlews resulted in one killing the other.

SPOTTED REDSHANK (*Tringa erythropus*)

One of the special attractions of the reserve from mid-July to early October and, in smaller numbers, throughout the winter. Spring passage is rare, with records only in 1978 and 1982 of one or two birds.



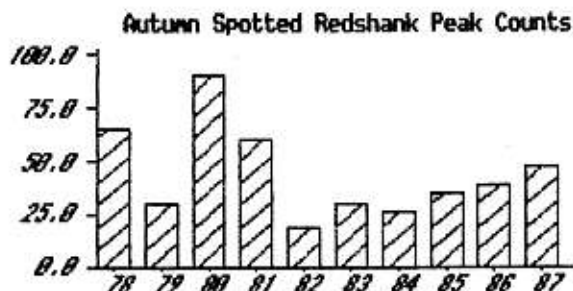
The reserve appears to shelter the majority of spotted redshank on the Dee estuary for much of the time. The present importance of the Dee is underestimated in the Winter Atlas (Lack, 1986) since surveys for this were done when records were unusually few (1981-84).



The 1987/88 winter, in contrast, had many records of half a dozen or more and several of 10 or 11 birds. The highest winter count was of 15 on Dec 31st, 1986.

There appears to have been a sharp decline in autumn peak numbers in 1982, down to 18 from 60-90 in earlier years. Since then, the autumn peak has been steadily recovering and 1987 had

a long passage with many counts of 20-30 and a maximum of 47 on Sep 28th.

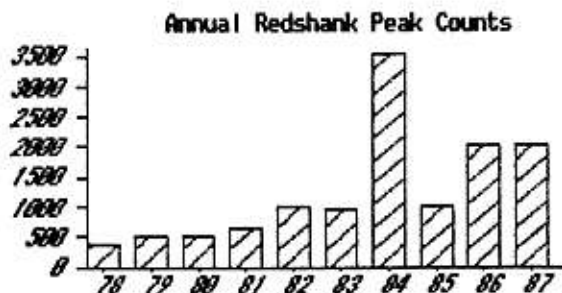


They feed in shallow water on the pools or in the gulleys on the marsh and the frantic communal feeding activity, characteristic of this species, is sometimes observed. They often move into the gully in front of the West hide on rising tides and most high counts come from here. The early arrivals in July are often in full or partial summer plumage.

REDSHANK (*Tringa totanus*)

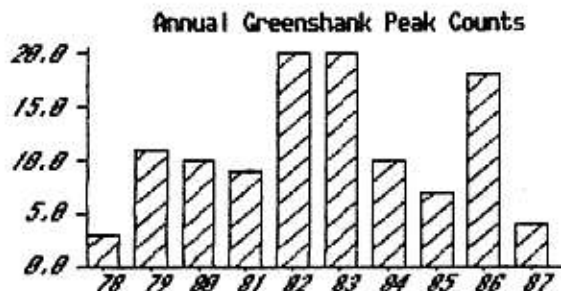
Present throughout the year, though numbers are highest from July to February. Numbers during the breeding season are very small and, although displays have been observed, breeding has never been proved.

Wintering numbers are continuing to increase, with 4 counts of 1000 or more in 1985, 9 in 1986 and 15 in 1987. The main winter roost is on Oakenholt marsh, but quite large flocks also occur on the bunded pool during passage in Aug/Sep (maximum count of 200 on Aug. 31st, 1985).



GREENSHANK (*Tringa nebularia*)

Present on autumn passage throughout July and October, with an occasional June and November record. Although 1987 was a poor year, numbers have not changed a great deal over the past 10 years.



The highest counts usually come from the banded pool, as in 1986 when there were 6 counts of more than 10 birds here.

GREEN SANDPIPER (*Tringa ochropus*)

Autumn migrant in small numbers and scarce in winter. In 1985, there were a total of 12 birds seen in autumn (maximum of 2 together), 24 in 1986 (maximum 3) and 18 in 1987 (all singles). There were winter records during the 1985/86 winter only, with singles on Dec 8th 1985 and Mar 5th and 17th, 1986.

It was previously recorded each autumn from 1979-84 with 4 on July 30th, 1980 the highest count.

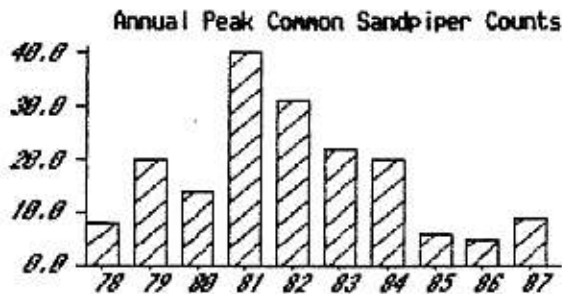
WOOD SANDPIPER (*Tringa glareola*)

The only record for the period is also the first spring record for the reserve on May 14th, 1985 (GEM). Although there is a danger of confusion with Green Sandpiper at this time of year, this bird on the fly ash lagoon was a well-marked individual with a broad eyestripe extending to the back of the head and distinctly yellow legs. It also gave its shrill "monotone" call.

It was an annual autumn visitor up to 1984, usually in ones or twos, though up to 4 birds were present on the lagoon in 1980 and a total of 27 birds were recorded during Jul/Aug that year.

COMMON SANDPIPER (*Actitis hypoleucos*)

There has been a considerable decline in records since the early 1980s when flocks of 20-40 were found roosting together, often in the banded pool.



Greatest numbers are always in autumn with the highest counts occurring on Aug 10th in 1985, Jul 7th in 1986 and Jul 6th in 1987. Spring records are also declining with 17 records in 1985, 4 singles in 1986 and only 2 in 1987.

The odd bird occasionally overwinters (singles on Jan 10th and Feb 27th, 1985 and on Jan 1st, 1986).

TURNSTONE (*Arenaria interpres*)

Although common at the mouth of the estuary, only an uncommon passage migrant on the reserve. Three together on Aug 9th, 1986 and singles on Jul 12th 1986 and on Jul 30th and Aug 22nd, 1987 are the only records.

[WILSON'S PHALAROPE (*Phalaropus tricolor*)] Aug 31st-Sep 6th, 1982

ARCTIC SKUA (*Stercorarius parasiticus*)

Skuas, like many other seabirds on the reserve, are usually associated with W or NW gales and high tides. Three birds in mid-estuary on Oct 8th, 1987 (CB, GEM) included two light-phase adults and there is a record from the bunded pool on Oct 30th, 1986 (DC).

All previous records were of singles in 1977, 82, 83 and 84. There were several records of skua spp. during September gales in 1984.

[GREAT SKUA (*Stercorarius skua*)] 7/9/80 (RWE)

THE GULLS

The five common species, blackheaded (3 million in Britain in winter), common (700,000), herring (500,000), lesser (70,000) and great (50,000) blackbacked, are all underrecorded on the reserve and not consistently counted. The attention paid to them

is very erratic and it would be absurd to draw any conclusions from the records about changes in numbers over the years.

Tens of thousands fly over to roost on the estuary on autumn and winter evenings. All five species have been recorded in every month of the year.

[MEDITERRANEAN GULL (*Larus melanocephalus*)] 9/12/79 (RJR)

LITTLE GULL (*Larus minutus*)

One on May 8th 1985 (TDJ) and an adult with a immature on Aug 9th 1985 (RGT).

Only 3 previous records, all between January and March 1983.

BLACKHEADED GULL (*Larus ridibundus*)

Easily the commonest gull. A nesting attempt was recorded in 1979 (RAR). An adult dyed bright pink was present on the bunded pool in Jun/Jul 1985. The highest count was of 2000 on Sep 18th 1987.

COMMON GULL (*Larus canus*)

Common. The highest daytime count was 60 On Dec 11th, 1986, but over 1000 were roosting on the sandflats by 7.30 pm on Aug 28th, 1987.

LESSER BLACKBACKED GULL (*Larus fuscus*)

Commoner than the Herring Gull on the inner estuary. Daytime flocks of over 100 appear on the sandflats in late summer (Jun-Aug). Maximum count of 500 on the evening of Aug 28th 1987

HERRING GULL (*Larus argentatus*)

Small numbers all year. Maximum counts of 100 on Nov 25th, 1985 and Nov 13th, 1987. A ringed bird was noted on Feb 2nd 1985 and a yellow-legged bird was present from Nov 24th to Dec 25th, 1985.

[ICELAND GULL (*Larus glaucoides*)] 21/8/77 (RJR)

[GLAUCOUS GULL (*Larus hyperboreus*)]

29/11/79; 12/2/83; 16/10/83; 29/12/84

GREAT BLACKBACKED GULL (*Larus marinus*)

Most common in autumn and early winter. Maximum count of 60 on Sep 24th, 1986.

[KITTIWAKE (*Rissa tridactyla*)]

9/9/79; 4/1/81; 15/12/82; 1/2/83 (2); 15/1/84; 30/9/84 (2)

SANDWICH TERN (*Sterna sandvicensis*)

Two on Jun 20th 1986, six on Jul 12th 1987 (resting on the dried-out bunded pool) and two on Jul 14th 1987 are the only records.

Also recorded in 1977, 79, 81, 83 and 84.

COMMON TERN (*Sterna hirundo*)

Birds from the Shotton colony are a daily sight on the reserve throughout the summer. They arrive from mid-April onwards and it is not unusual to find 50-100 feeding at high tide by the end of that month.

A pair nested in 1977 on the bunded pool for the last time, though various display activities can still be observed here, as well as the feeding of newly-fledged young in late summer.

ARCTIC TERN (*Sterna paradisaea*)

There are logbook records in 1985 on May 12th (2), Jun 24th (resting on the bunded pool), Aug 20th and Sep 1st and in 1986 on April 25th. A bird on Jul 25th 1987, flying with common terns, was identified by the lack of dark primaries and distinctive call as well as by all-red bill (CB).

Previously recorded in 1977, 78, 81, 82 and 84.

LITTLE TERN (*Sterna albifrons*)

In 1985, 1 on Jul 27th, 4 on Aug 14th, 5 on Aug 16th and 2 on Aug 20th. None in 1986. In 1987, 1 on Jun 12th, 20 on Jun 24th and 1 in Sep 25th.

Previously recorded in 1977, 80, 81, 83 and 84.

BLACK TERN (*Chlidonias niger*)

No records for 1985 or 1986, but at least a dozen birds were feeding and roosting with common terns on the Flint edge of Oakenholt marsh on April 28th 1987, an unusually large number for the Dee estuary. In the autumn of the same year, there were singles on Sep 5th and 6th and 4 on Sep 20th.

The first reserve record was of a single on May 18th 1979 with subsequent September records of 1-2 birds in 1982, 83 and 84.

GUILLEMOT (*Uria aalge*)

A single on Dec 28th, 1985 (CB) was only the second record for the reserve, the earlier one being on Feb 23rd, 1980.

RAZORBILL (*Alca torde*)

Previously recorded only once (7/1/84), razorbills occurred regularly on high tides during the 1987/88 winter. The records on Sep 25th, Oct 9th and 25th, Nov 20th, 21st and 22nd corresponded to very high daytime tides and appeared to involve more than one bird since both adult and immature were described.

DOMESTIC/FERAL PIGEON (Columba livia)

Most records are for the summer months and probably domestic birds. The 220 birds flying west on Aug 5th 1987 were presumably racing birds released locally.

STOCK DOVE (Columba oenas)

A flock of up to 60 frequented Oakenholt marsh in Feb/Mar 1987 but otherwise more often seen at the East end of the reserve, especially during June and July (up to 40) when juvenile birds can be identified. A hole-nesting species, it must breed locally, possibly on the reserve itself.

Numbers have increased considerably during the past 4 years.

WOODPIGEON (Columba palumbus)

It seems likely, from song and display, that a few pairs breed in the Rockcliffe woodland. Most common in late winter and from late May to July. Maximum counts of 50 on Feb 27th, 1986 and May 21st, 1987.

COLLARED DOVE (Streptopelia decaocto)

Nearly all records come from the Rockcliffe woodland in summer but are infrequent and usually of 1-4 birds. This is one of several species which are common across the railway line to the south of the reserve but rarely visit the reserve itself. They include rook and house sparrow. A winter flock of 20 was noted at Rockcliffe during the 85/86 winter but this appears to be unusual.

[TURTLE DOVE (Streptopelia turtur)]

12/5/79; 16/6/79 (2); 31/7/80

CUCKOO (Cuculus canorus)

Not common with only 4 or 5 records each year in May and June. In 1985, the breeding pair of meadow pipit were seen to chase off a cuckoo. Possibly less common than in the early 1980s. August juveniles were seen in 1980 and 1983 only.

ANNUAL CUCKOO TOTALS.

78	79	80	81	82	83	84	85	86	87
2	4	10	10	12	7	14	4	5	5

[BARN OWL (Tyto alba)] 5/3/77

LITTLE OWL (Athene noctua)

Rarely seen now and no longer breeds. There were 11 records in 1985, including 2 of a pair in May and August, none in 1986 and 2 singles in 1987. Breeding was proved in 1980, 81 and 83.

[TAWNY OWL (*Strix aluco*)] 16/2/77; 14/3/83; 27/3/83; 4/4/84.

SHORTEARED OWL (*Asio flammeus*)

There were two singles in 1985 (Apr 5th and Aug 18th) and two in 1986 (Jan 14th and Apr 11th), but none in 1987.

1982-84 was an unusually good period for this species, though many (14 out of 21) of the numerous records in 1983 were due to what may have been just a single spring passage bird.

ANNUAL SHORTEARED OWL TOTALS.

78	79	80	81	82	83	84	85	86	87
0	1	2	0	7	21	5	2	2	0

SWIFT (*Apus apus*)

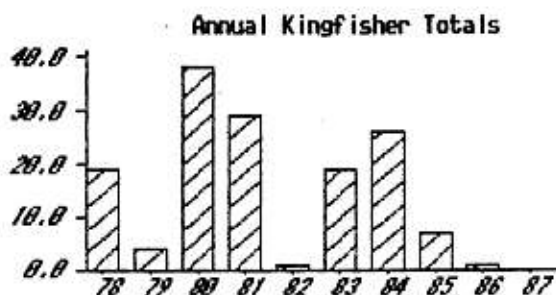
During 1985-87, swifts showed their usual consistency in arriving towards the end of the first week in May and leaving by mid-August, with the odd straggler in September (May 5th-Sep 16th, May 4th-Aug 16th and May 11th-Sep 14th in the 3 years).

The highest count was of 300 on Aug 7th, 1985.

KINGFISHER (*Alcedo atthis*)

There has been a sharp decline over the past 4 years and in 1987 there were no kingfisher records at all for the first time. In 1985 and 1986, only singles were recorded between Oct and Feb mostly near the west sluice of the bunded pool as usual.

The figures show that kingfishers have recovered rapidly from hard winters in the past (e.g 81/82), so the prolonged absence may have other causes.



GREEN WOODPECKER (*Picus viridis*)

An immature was seen on Aug 18th and 20th, 1986. The only two previous records were on April 15th and 17th, 1983.

GREAT SPOTTED WOODPECKER (Dendrocopus major)

Frequently recorded at the east end of the reserve from late June to early March with totals of 14 in 1985, 6 in 1986 and 10 in 1987. There were 3 records of 2 birds together in 1985. Often found in the willow screen or on fence-posts, sightings are now more frequent than during 1977-84.

78	79	80	81	82	83	84	85	86	87
1	4	9	3	0	3	1	14	6	10

LESSER SPOTTED WOODPECKER (Dendrocopus minor)

A male was feeding in the willow screen near the East hide on Dec 2nd and 22nd, 1987.

The only previous record was on Oct 21st, 1979.

SKYLARK (Alauda arvensis)

Probably the most numerous breeding bird on the reserve, 10-30 pairs would seem a reasonable estimate. Winter flocks of 200-300 are not uncommon on the marsh, though the 87/88 winter had a high count of only 70. Feb 13th is the earliest record of the period for a bird in full song. There are 4 records of an adult carrying food (May, June and July) and one record of a newly-fledged juvenile on Aug 8th, 1987.

SAND MARTIN (Riparia riparia)

Usually present from late April to late July, with stragglers in Aug/Sep, as on Aug 30th, 1987 when 10 were seen. Most spring migrants were unusually early in 1987 as the following time-spans show: Apr 20th-Jul 25th in 1985, Apr 24th-Aug 6th in 1986 and Apr 7th-Aug 30th in 1987. The highest count was of 12 on May 13th, 1985 and nearly all records come from the fly ash lagoon. The highest counts in 1986 and 1987 were 8 and 10.

It is difficult to draw any conclusions from changes in hirundine numbers over the years, since they often pass through very quickly and no doubt often unobserved.

SWALLOW (Hirundo rustica)

Probably breeds in nearby buildings since many immatures are seen from July onwards and on July 1st, 1985 an adult was feeding 4 young on a barbed wire fence.

The maximum count was of 100 on Aug 31st and Sep 7th, 1985. Usually present from mid-April through September, with the odd late bird (Apr 15th-Oct 22nd in 1985, Apr 15th- Sep 18th in 1986 and Apr 6th- Sep 30th in 1987).

HOUSE MARTIN (Delichon urbica)

Usually present from late April to mid-September (Apr 16th-

Sep 16th in 1985, Apr 25th-Sep 15th in 1986 and Apr 7th-Sep 11th in 1987).

The maximum count was 60 on May 6th, 1985 and Sep 10th, 1987.

[TREE PIPIT (*Anthus trivialis*)] 23/4/83 (NF, RWE)

MEADOW PIPIT (*Anthus pratensis*)

Breeding was proved for the first time in 1985. Song flights were observed in 1986 but only up to mid-June and in 1987 there were no summer records.

There is a passage in April, which often coincides with White Wagtail, and a small winter presence of 10-20 birds. There was a substantial September passage in 1985 with a high count of 100 on the 27th.

ROCK PIPIT (*Anthus spinoletta petrosus*)

There was one January record each year (GEM; WSG; MGN) and an October record in 1985 (CEL).

[WATER PIPIT (*Anthus spinoletta spinosus*)] No records since 1978

YELLOW WAGTAIL (*Motacilla flava*)

Bred every year until 1985 when a ringed male displayed until early June but failed to find a mate. In 1986 and 1987, there were passage records only and these are also getting fewer. The highest count was 15 on May 6th, 1985.

YELLOW WAGTAIL MAXIMUM COUNTS.

78	79	80	81	82	83	84	85	86	87
12	8	16	5	20	26	17	15	5	6

GREY WAGTAIL (*Motacilla cinerea*)

Singles only on Sep 9th (DW) and 14th (DBK), 1986, a significant decline.

ANNUAL GREY WAGTAIL TOTALS.

78	79	80	81	82	83	84	85	86	87
6	7	12	2	3	12	5	0	2	0

WHITE WAGTAIL (*Motacilla alba alba*)

There were 9 spring records of 1-3 birds in April, 1985, none in 1986 and only one in 1987, though this was the highest count of 6 on April 16th (TKS, JD). There was a 1986 September record of a female and immature on the 7th (CW, MW, RH).

The spectacular passages of 1979/80 have not recurred recently.

ANNUAL WHITE WAGTAIL MAXIMUM COUNTS.

78	79	80	81	82	83	84	85	86	87
12	60	39	1	6	22	2	3	2	6

PIED WAGTAIL (Motacilla alba yarrelli)

There was evidence of breeding nearby in 1985 and 1986, with adults carrying food or feeding young on the fly ash lagoon. The highest count was of 16 on the lagoon (Nov 17th, 1987).

WREN (Troglodytes troglodytes)

A common resident breeding bird.

DUNNOCK (Prunella modularis)

A common resident breeding bird.

ROBIN (Erithacus rubecula)

A common resident breeding bird.

(BLACK REDSTART (Phoenicurus ochruros))

Single birds overwintered in 76/77, 77/78 and 78/79. Also recorded 1/12/82 and 2/12/82 (2).

REDSTART (Phoenicurus phoenicurus)

A male near the East hide on May 5th, 1985 (JCP) was the only record since 1978 and 1979 when there were two spring records each year.

WHINCHAT (Saxicola rubetra)

Now essentially a spring migrant in April/May with only a few autumn records, though a juvenile was seen twice near the fly ash lagoon in late July, 1987. Usually seen on the fences around the grazing fields.

Three pairs bred in 1976 and a pair appears to have bred in 1982 near the field study centre. Over-enthusiastic grasscutting and "tidying-up" of the fields may be one reason for the evident loss of habitat.

STONECHAT (Saxicola torquata)

There were singles on Feb 16th, 1985 (RAR) and Mar 23rd, 1987 (CEL) and a group of 4 on the banded pool on July 21st, 1985.

Several pairs bred in the nature trail area up to 1980, but the area is now more suitable for whitethroats than for stonechats. Stonechats like bare ground with a few thickets of

low scrub. The area appears to have gone through a phase favourable to sedge and grasshopper warblers before the development of the present hawthorn/birch scrub and hedgerow.

WHEATEAR (Oenanthe oenanthe)

A very early arrival in 1987 (Mar 11th) was followed by a pair with a male in song as late as June 11th, followed by several records of a juvenile bird in July. While this doesn't prove breeding on the reserve, it is the best evidence in over 10 years.

The species is better known as a spring migrant from late March onwards and again in Aug/Sep. Individuals of the Greenland race are sometimes identified in late April/May (TKS,JD).

ANNUAL MAXIMUM WHEATEAR COUNTS

78	79	80	81	82	83	84	85	86	87
2	5	6	10	14	20	14	6	6	13

BLACKBIRD (Turdus merula)

A common resident with at least 6 pairs breeding locally. Numbers increase in early winter along with other thrushes. A small flock of 10-13 males was present at Rockcliffe for most of November, 1987.

FIELDFARE (Turdus pilaris)

Mostly present irregularly from December to March with an occasional November record. Usually found at the east end of the reserve or near the power station entrance. There were very few in the 86/87 winter and the highest count for the period was of 300 passing through on Dec 20th, 1987.

SONG THRUSH (Turdus philomelos)

Probably 2-3 pairs breeding on or near the reserve and evidence of a second brood in 1985 with an adult carrying food on Aug 5th. An unusually large winter flock of 10 birds was present near the power station entrance on Dec 19th and 21st, 1986.

REDWING (Turdus iliacus)

Often in company with Fieldfare in winter but stays longer, with a few records in October and April. 1986/87 was also a poor winter for this species. The highest counts were of 100 birds on Feb 8th, 1985 and Feb 7th, 1986.

MISTLE THRUSH (Turdus viscivorus)

A common resident breeding bird on or near the reserve. Two

or three pairs, with adults seen carrying food to young as early as April. The highest count was of 16 overflying on Aug 14th, 1985.

[GRASSHOPPER WARBLER (*Locustella naevia*)] 8/5/79; 19/7/80

[SEdge WARBLER (*Acrocephalus schoenobaenus*)]

24 and 25/5/81; 29/8/81; present May-July 1982; 6/5/83

LESSER WHITETHROAT (*Sylvia curruca*)

A male sang from the willow screen for one week in May, 1987 and two were present in August, but there were no Jun/Jul records. In 1986, there were only two records (May and Sep) and none in 1985.

This pattern is similar to that of previous years, with no proof of breeding.

WHITETHROAT (*Sylvia communis*)

First bred in the nature trail scrub in 1979 and 2 or 3 pairs have occurred here in most subsequent years. In 1986 and 1987, a male also sang regularly at Rockcliffe and they have also been found in the willow screen on passage. Maxima of 4 males in song in 1985, 2 in 1986 and 4 again in 1987.

BLACKCAP (*Sylvia atricapilla*)

A male sang regularly in May from scrub woodland near the railway line in 1987, but there were no subsequent records. In 1985 there was only one record of a female on Oct 11th, while in 1986 there were single records on Apr. 16th and Sep 14th.

Previously recorded only in 1977, 78, 83 and 84. The 1983 records were of a wintering male in January.

CHIFFCHAFF (*Phylloscopus collybita*)

A spring migrant in April with the first records of singing males on Apr 6th in 1985, Apr 22nd in 1986 and Apr 12th in 1987. In 1987, a wintering bird was recorded several times from Nov 20th to the end of the year.

WILLOW WARBLER (*Phylloscopus trochilus*)

Present from April to September in Rockcliffe/railway line area and may breed since song continued well into June in 1985 and 1986.

GOLDCREST (*Regulus regulus*)

Groups of 1-3 birds were recorded during Sep-Dec in 1985 (on 5 occasions) and 1987 (on 3 occasions). No records in 1986.

Most years have 1 or 2 winter records from Rockcliffe or the willow screen.

SPOTTED FLYCATCHER (Muscicapa striata)

Three were present near the power station entrance on Aug 13th, 1987 with one juvenile being fed by an adult. This was the first and only record for 6 years and the species last bred on the reserve in the Rockcliffe area in 1979.

LONGTAILED TIT (Aegithalus caudatus)

Flocks were recorded each winter in the Rockcliffe area. Maximum counts were 18 in 1985, 6 in 1986 and 10 in 1987. Before 1983 (when up to 11 birds occurred), this species was rarely recorded.

COAL TIT (Parus ater)

Singles were recorded in the Rockcliffe area on Jan 8th and May 12th, 1987.

The only previous records were on 6/6/77; 10/80; 19/12/83.

BLUE TIT (Parus caeruleus)

A common breeding resident, sometimes using nestboxes. Parties of young birds are seen from June onwards with a maximum count of 13 on July 3rd, 1987.

GREAT TIT (Parus major)

Breeds at Rockcliffe, but less numerous than the Blue Tit. Family parties were recorded in Jun/Jul 1985 and 1986, but not in 1987. Maximum count of 6 on July 3rd, 1985.

[NUTHATCH (Sitta europaea)] 6/5/77; 1/10/83

TREECREEPER (Certhis familiaris)

The only record was of one at Rockcliffe on Oct 24th, 1987, though it is probably often overlooked.

Only 3 previous records: 18/3/77; 1/78; 1/11/83

[GREAT GREY SHRIKE (Lanius excubitor)] 12/1/77; 16/8/84

JAY (Garrulus glandarius)

The most secretive of the corvids, but it can often be seen, or heard, in the Rockcliffe woodland or crossing the railway line and grazing fields at the east end of the reserve. The increase in numbers of records in recent years may be due to their breeding closer to the reserve. Up to 3 birds have been seen at almost any time of year.

ANNUAL JAY TOTALS.

78	79	80	81	82	83	84	85	86	87
0	2	0	2	5	11	10	13	19	18

MAGPIE (Pica pica)

A common breeding bird with young out of the nest in June. Mostly seen on the grazing fields, sometimes in considerable numbers. The highest count was of 22 birds on Sep 16th, 1987.

JACKDAW (Corvus monedula)

A spring visitor to the reserve with 10-20 often present in the grazing fields near the East hide in April/May. Apart from an occasional winter record, otherwise scarce, although a common breeding bird at Kelsterton to the south. There seem to be fewer now than in the early 1980s when there were records of 40-80 birds.

ROOK (Corvus frugilegus)

Another "vagrant" from across the railway line at Kelsterton. Very few records and no change in status.

CARRION CROW (Corvus corone)

The other common breeding corvid of the reserve with young out of the nest in June. In 1985, a pair nested near the field study centre and often mobbed visiting birdwatchers - a chilling experience for Hitchcock fans. Numbers on the marsh and grazing fields can be quite large in early winter and 38 were counted on Nov 21st, 1986.

RAVEN (Corvus corax)

Ravens started to winter on and around the reserve in 1987. There were two records in February but they were recorded regularly (on 13 occasions) from October onwards, with 4 records of a pair and two remarkable records of 4 together (HJ;CB).

Only previously noted during the 82/83 and 83/84 winters.

STARLING (Sturnus vulgaris)

A common resident, breeding on various power station buildings. Flocks of several hundred juveniles appear on the reserve in June and stay until September, though larger numbers were present in 1987 with several records of 1000 and one record of 3000 birds. Mid-winter flocks on this side of the river are generally fairly small, but the highest count for the period was of 5000 overflying on their way to roost on the evening of Dec 7th, 1986.

HOUSE SPARROW (Passer domesticus)

Occasional records in 1985 and 1987 in May-July and Dec-Feb with a maximum of 20 on Feb 3rd, 1985 (TKS,JD). Amazingly, there were no records at all in 1986. The species is, of course, abundant in the urban areas just across the railway line.

TREE SPARROW (*Passer montanus*)

In 1985, up to 6 birds were in February and a flock of 20-40 birds was present at Rockcliffe from Oct 16th to Dec 8th. In 1986, there was only a single June record and no records at all in 1987.

Recorded every year previously, in variable numbers.

CHAFFINCH (*Fringilla coelebs*)

Probably breeds in the Rockcliffe area since a male was seen carrying food on May 26th, 1987. Winter flocks usually consist of 100-300 birds, often accompanied by brambling, but there were no records of flocks of either species in the 1987/88 winter. They are usually present from mid-November to February and the maximum count was of 450 on Nov 11th, 1985.

BRAMBLING (*Fringilla montifringilla*)

After an absence of flocks in the 1984/85 winter, they were continually present for periods in both the 1985/86 and 1986/87 winters, with 5 records of 100-200 birds between Dec 4th 1985 and Feb 16th, 1986 and 7 records of 50-350 between Dec 16th 1986 and Jan 18th 1987.

Previous good winters were 78/79, 79/80 and 83/84. They invariably associate with chaffinches.

GREENFINCH (*Carduelis chloris*)

An occasional visitor in both midsummer and midwinter, with young birds recorded in June, 1985. Maximum count of 7 on June 3rd, 1985.

GOLDFINCH (*Carduelis carduelis*)

Present throughout the year. Evidence of breeding in 1985 included a male in song, a bird carrying nest material and 4 young in the willow screen on July 1st. In 1986, a singing male was also recorded but in 1987 there were no Jun-Sep records.

Autumn passage flocks of up to 50 birds were present in Oct/Nov 1985 and spring passage flocks in April/May consisted of up to 50 birds in 1986 and 60 in 1987. Winter flocks were present in 1985/86 (up to 40) and in 1986/87 when the maximum count of 70 was made on Jan 10th. The largest flocks are found in the middle of the grazing fields at the western end of the reserve.

[SISKIN (*Carduelis spinus*)] 31/7/79 (2); 14/3/81; 6/4/83.

LINNET (*Carduelis cannabina*)

One or two pairs may breed since a nest was seen on May 4th, 1987 and recently-fledged young on June 22nd, 1985. Post-breeding flocks of 20-40 birds appear on the fields in June and flocks of 100-200 are sometimes seen between August and March. The highest count was of 400 on Nov 11th, 1985.

TWITE (*Carduelis flavirostris*)

Twite are essentially passage migrants with most records from late February to early April.

The largest flock ever recorded on the reserve was present on Mar 8th, 1985 when 110 with 3 linnets were perched on the barbed wire fences near the West hide (GEM). There were 4 other records of 30-75 birds during the same period of Mar 6th-12th and a further 1985 record of 70 on Oct 25th (GC, HM). 1986 had only 2 records of 20 on Feb 23rd (RJR) and 13 on Feb 28th (GC, HM), while there was only one record of 2 birds in 1987 on April 6th (GEM).

Previously recorded every year except 1982, in variable numbers (up to 50).

REDPOLL (*Carduelis flammea*)

Five birds on Nov 21st, 1986, 2 on Jan 15th, 1987 and singles on Jan 19th and Oct 25th, 1987. All records were from the willow screen. During the 1986/87 winter, a flock of up to 100 birds wintered nearby in the Flint Castle birchwoods (RAR).

Previously recorded only in 1983 when a single was seen on Apr. 18th and 20th.

BULLFINCH (*Pyrrhula pyrrhula*)

Recorded only 4-5 times each year in March, May and Sep-Nov, most records coming from the Rockcliffe/railway line area and always of small numbers.

SNOW BUNTING (*Plectrophenax nivalis*)

One record only of a single on March 12th, 1986 (DW). No details. Only two previous records on 10/1/82 (3) and 25/1/84.

YELLOWHAMMER (*Emberiza citrinella*)

A large flock of 40-80 birds was present throughout Jan/Feb 1985. No more than two were seen the following winter, but in 1987 a small flock of up to 10 birds was seen regularly in January. Most records come from near the East hide.

REED BUNTING (*Emberiza schoeniclus*)

One resident pair bred in 1985 and 1987 and possibly 1986 also, after a 3-year absence of May/Jun records during 1982-84. Winter flocks were seen in 1985 only, when 25-50 were recorded on 4 occasions. Such flocks were also recorded in 1980/81.

CORN BUNTING (*Miliaria calandra*)

Reported on 7 occasions (maximum 7 birds) between Jan 11th and Mar 4th, 1985 and again on Aug 9th that year, but no records at all in 1986 or 1987. It occurred every year from 1977-84.

REFERENCES.

In addition to the reserve logbooks, the following sources have been used in the preparation of the Bird Report.

Atlas of breeding birds in Britain and Ireland (1976)
J.T.R. Sharrock B.T.O.

Atlas of wintering birds in Britain and Ireland (1986)
P. Lack Poyser

Hilbre (1982) J.D. Craggs, Liverpool University Press.

Estuary Birds of Britain and Ireland (1981) A.J. Prater
Poyser

Dee Estuary Research Review (1976) N.C.C.

DNS Reserve Report 1976 R.A and E. Roberts, DNS.

DNS Reserve Reports 1977-84 T.K. Sykes and J. Davidson, DNS.

HEPIALIDAE:

Orange Swift

Hepialus sylvina

ZYGAENIDAE:

= Six-spot Burnet

Zygaena filipendulae stephensi

LASIOCAMPIDAE:

= The Drinker

Philudoria potatoria

THYATIRIDAE:

Buff Arches

Habrosyne pyritoides

DREPANIDAE:

Chinese Character

Cilix glaucata

GEOMETRIDAE:

August Thorn

Ennomos quercinaria

Barred Rivulet

Perizoma Bifactiata

Bordered Pug

Eupithecia succenturiata

Brimstone Moth

Opisthograptis lutoelata

Common Carpet

Epirrhoe alternata alternata

Common Marbled Carpet

Chloroclysta truncata

Chevron, The

Eulithis testata

Dark-barred Twin-spot Carpet

Zanthorhoe foerrugata

Dark Spinach

Pelurga comitata

Flame Carpet

Xanthorhoe munitata munitata

July Highflyer

Hydriomena furcata

Lesser Cream Wave

Scopula immutata

= Lime-speck Pug

Eupithecia centaureata

Magpie, The

Abraxas grossulariata

Scalloped Oak

Crocallis elinguria

= Shaded Broad-bar

Scotopteryx chenopodiata

Small Phoenix

Ecliptopera silaceata

Small Seraphim

Pterapherapteryx sexalata

Tawny Speckled Pug

Eupithecia icterata cognata

Treble-bar

Aplicera plagiata plagiata

Twin-spot Carpet

Perizoma didymata didymata

Willow Beauty

Peribatodes rhombidaria

Wormwood Pug

Eupithecia absinthiata

= Yellow Shell

Camptogramma bilineata bilineata

DEESIDE NATURALISTS' SOCIETY

MOTHS - continued / 2

NOTODONTIDAE:

Pebble Prominent
Swallow prominent

Eligmodonta ziczac
Pheosia tremula

LYMANTRIIDAE:

Yellow-tail

Euproctis similis

ARCTIIDAE:

= Cinnabar, The
Common Footman
= Garden Tiger
= Ruby Tiger

Tyria jacobaeae
Eilema lurideola
Arctia caja
Phragmatobia fuliginosa fuliginosa

NOCTUIDAE:

= Angle Shades
Antler Moth
Broad-bordered Yellow Underwing
Cabbage Moth
Cloaked Minor
Coast Dart
Common Rustic
= Common Wainscot
Copper Underwing
Crescent, The
Crescent Dart
= Dark Arches
Dog's Tooth
Dotted Rustic
Dun-bar, The
Ear Moth
= Flame, The
Flame Shoulder
= Flounced Rustic
Feathered Gothic
Frosted Orange
Gold Spot
Gothic, The
Grey Chi
= Heart and Dart
Hedge Rustic
= Ingrailed Clay

Phlogophora meticulosa
Cerapteryx graminis
Noctua fimbriata
Mamestra brassicae
Mesoligia furuncula
Euxoa nigricans
Mesapamea secalis
Mythimna pallens
Amphipyra pyramidea
Celaena leucostigma leucostigma
Agrotis trux lunigera
Apamea monoglypha
Lacanobia suasa
Rhyacia simulans
Cosmia trapezina
Amphipoea oculea
Axylia putris
Ochropleura plecta
Luperina testacea
Tholera decimalis
Gortyna flavago
Plusia festucae
Naenia typica
Antitype chi
Agrotis exclamationis
Tholera cespitis
Diarsia mendica mendica

DEESIDE NATURALISTS' SOCIETY

MOTHS - continued / 3

NOCTUIDAE continued/

- = Large Yellow Underwing
- Lesser Broad-bordered
- Yellow Underwing
- Lesser Yellow Underwing
- Marbled Beauty
- Merveille due Jour
- Mouse Moth
- Olive, The
- Pink-barred Sallow
- Purple Clay
- Rosy Minor
- Rosy Rustic
- Sallow, The
- Saltern Ear
- Setaceous Hebrew Character
- = Shuttle-shaped Dart
- = Silver Y
- Six-striped Rustic
- Small Square-spot
- Small Wainscot
- Smoky Wainscot
- Snout, The
- Spectacle, The
- = Square-spot Rustic

PYRALIDAE - MICRO MOTHS:

- Garden Pebble
- Gold Fringe
- Grass Moth
- Mother of Pearl

- Noctua pronuba
- Noctua janthina
- Noctua comes
- Cryphia domestica
- Dichonio aprilina
- Amphipyra tragopoginis
- Ipimorpha subtusa
- Xanthia togata
- Diarsia brunnea
- Mesoligia literosa
- Gortyna micacea
- Xanthia icteritia
- Amphipoea fucosa
- Xestia c-nigrum
- Agrotis puta puta
- Autographa gamma
- Xestia sexstrigata
- Diarsia rubi
- Photodes pygmina
- Mythimna impurs impura
- Hypena proboscidalis
- Abrostola triplasia
- Amathes Xanthographa
- Evergestis forficalis
- Hypsopygia costalis
- Agriphila tristella
- Pleuroptya ruralis
- Orthopygia glaucinalis
- Elachista cerusella
- Cochylis Dubitana
- Plutella Xylostella
- Caloptilia elongella
- Epinotia ramella
- Acleris variegana
- Acleris comarience

PYRALIDAE - MICRO MOTHS continued

Epinothis nisella
Mompha raschkiella
Clepsis spectrana
Agriphila latistria

All the moths listed - with the exception of the PYRALIDAE - MICRO

MOTHS - may be found in the book:-

Colour Identification Guide to MOTHS of the British Isles,
by Bernard Skinner, published by Viking. (available from
the Treasurer, Price £18 - list price £25).

The PYRALIDAE may be found in:-

British Pyralid Moths,
by Barry Goater.

Species marked = are displayed in the Field Studies Centre, on the
Reserve.

Total number of species 102

D.N.S. RESERVE FUNGI LIST - 1985 - 1987

<u>Species</u>	<u>Location</u>	<u>Season</u>
<u>AGARICALES:</u>		
Agaricus campetris (Field Mushroom)	Common throughout the Reserve	Summer to late Autumn
Agrocybe dura	Occasional, singly in grass at path edges or in meadows	Spring to late Summer
Agrocybe praecox	Shady places in grass	Spring to late Autumn
Clitocybe dicolor	Uncommon on the Reserve, more a woodland species.	Autumn
Conocybe ochracea	Common in short grass	Summer
Conocybe Tenera	In grass	Spring to early Winter
Coprinus atramentarius (Common Ink Cap)	Common, tufted, terrestrial but associated with buried wood.	Spring to late Autumn
Coprinus comatus (Shaggy Ink Cap)	Common in a variety of open habitats	Summer to Autumn
Hygrocybe nigrescens (Blackening Wax Cap)	Occasional: in grass, open fields, path edges	Autumn
Leccinum scabrum (Brown Birch Bolete)	Occasional: with birch in the Nature Trail Area	Autumn
Marasmius oreades (Fairy Ring Champignon)	Very common, forming large rings in meadows	late Spring to late Autumn
Melanoleuca arcuata	In grass under trees in Nature Trail area	Autumn
Paxillus involutus (Brown Roll Rim)	Poisonous: found under birch - Nature Trail	Autumn
Psathyrella candolleana	Frequent: Tufted on or near deciduous trees	Spring to Autumn
Russula delica (Milk White Russula)	Single fruit body found under trees - Nature Trail	Autumn
<u>GASTROMYCETALES:</u>		
Bovista nigrescens	Uncommon: through grass in meadows and path edges.	late Summer to Autumn
Calvatia excipuliformis	Occasional in grassy areas, meadows, path edges.	late Summer to Autumn
Lycoperdon ericetorum	Occasional along path edges.	late Summer to late Autumn
Lycoperdon perlatum	Common: under trees in area of Nature Trail	Summer to Autumn
Lycoperdon spadiceum	Occasional throughout the Reserve.	Autumn
Scleroderma areolatum	Uncommon: damp places, bare ground, short grass, moss	Autumn
<u>AURICULARIALES:</u>		
Auricularia auricula-judea (Jew's Ear)	Common on Elder trunks and branches.	All year.