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# DEESIDE NATURALISTS

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## SOCIETY

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Report on the CEGB Nature  
Reserve at Connahs Quay

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1979 - 1980

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## CEGB Nature Reserve at Connahs Quay

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The Dee estuary is well known for its wintering and passage wildfowl and waders, but is also under pressure for industrial and agricultural development. The Reserve at Connah's Quay has proved an excellent example of what may be achieved by cooperation between industry and conservation.

It was in November 1975 that the Manager of the Connah's Quay Power Station invited the Deeside Naturalists' Society to help in the development of a nature reserve on C.E.G.B. land situated along the River Dee shoreline between Connah's Quay and Flint. A management committee was formed with representatives from the Central Electricity Generating Board, the Deeside Naturalists' Society, the Nature Conservancy Council and the Royal Society for the Protection of Birds.

The Reserve comprises 90 acres of land at the head of the Dee Estuary, which has large areas of open water, saltmarsh and tidal mudflats. It was proposed, by careful management, to provide a yet greater variety of habitat.

One of the first tasks undertaken was the construction of a marsh scrape. Saltmarsh vegetation was removed to form a shallow pool of gradually increasing depth, and the resulting spoil was landscaped into raised areas which remain dry on all save the highest of tides. This scrape now affords a high tide roost for wading birds and has proved particularly successful in attracting spotted redshank, for some of the largest autumn concentrations in Britain have been recorded here.

Further management created an area of brackish water. An 18 acre salting close to the river channel was enclosed within a bund or embankment, and within this islands were made in pools of varying depth. Water levels are maintained by two weirs, and although the attempts to control the salinity by means of pumped fresh water are not yet fully successful, the area attracts a variety of migrant waders, including greenshank and green sandpiper. The pool is particularly favoured by fish eating species and heron, red-breasted merganser, and kingfisher are regular visitors.

The grassland on the Reserve is itself an example of earlier changes in land management, being a saltmarsh reclamation made possible by the use of PFA (pulverised fuel ash), the waste produced by burning coal in the generation of electricity. Now well established it attracts small numbers of skylark and yellow wagtail to nest, and offers feeding for insectivorous as well as seed eating birds, since it is both grazed and cut for hay.

Areas of scrub have been allowed to develop naturally to provide ideal nest sites for species such as stonechat. The whitethroat has recently made a return to the Reserve, and now breeds in the scrubland.

Other conservation tasks have included the development of a small phragmites reedbed; the thinning of undergrowth and saplings in an area colonised by the common spotted orchid; and the planting of many hundreds of trees. A natural, but narrow belt of trees on the landward side of the banded pool has been extended and further planted with alder, willow and birch to provide shelter on the pools, cover for passerine birds, and a source of food for the finch flocks which concentrate here.

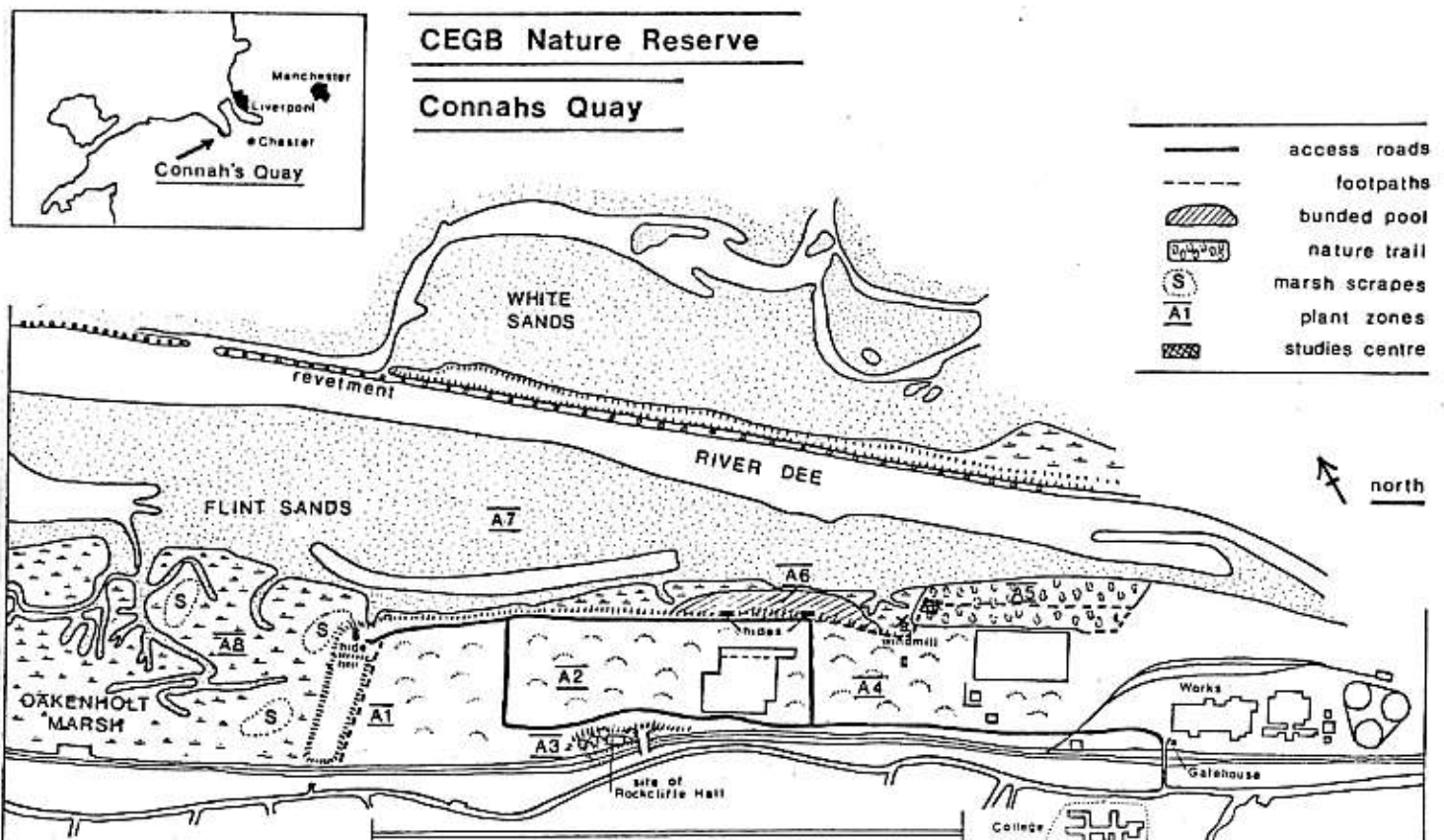
In recognition of the management work undertaken at Connah's Quay, the C.E.G.B. and Deeside Naturalists' Society jointly received a Prince of Wales Award for conservation in 1978.

A considerable amount of work has also been carried out to improve visitor facilities. Three hides are now available for public use, one overlooking the scrape on Oakenholt marsh and the estuary towards Wirral and Hilbre Island, and two giving onto the bunded pool. The opening of the Field Studies Centre, too, will be a major landmark in the development of the Reserve.

Built under a government Manpower Services Scheme over a three year period commencing in 1978, the Centre will house an interpretive display designed to convey to visitors the value of the habitat types associated with the Reserve and the adjacent Dee estuary, and to give some understanding of the ecology of its wildlife. School groups and natural history societies will be given every encouragement to visit the Field Studies Centre, but it is also hoped that the Centre will stimulate public interest and that many organisations not directly associated with natural history will wish to visit.

It will take several years to realise the full potential of the Reserve both for wildlife and for education but much has been achieved as is shown by the increasing number and variety of species recorded. By continuing the management techniques practised so far it is hoped to increase still further the natural history interest at Connah's Quay.

Arrangements to visit the Reserve can be made through the Secretary, Deeside Naturalists' Society, 38 Kelsterton Road, Connah's Quay, Deeside, Clwyd, or the Station Manager, C.E.G.B., Connah's Quay Power Station.



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## Deeside Naturalists Society

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Deeside Naturalists' Society was formed in 1973, its objective being to stimulate interest in natural history and to play a part in the conservation of flora and fauna on Deeside and the surrounding area.

Membership of the Society has grown steadily, due to the wide ranging programme of activities available to members, and also to the Society's close involvement with the development of the C.E.G.B. Nature Reserve.

Members receive a quarterly newsletter and a programme of events. Field meetings are held monthly throughout the year to visit places of special ecological importance, and during the winter a series of illustrated lectures gives the opportunity to hear specialists in a variety of subjects. Conservation groups are also arranged to help with management tasks on the Reserve.

Deeside Naturalists' Society members work closely with both local and national organisations. The Society is active in its membership of the Dee Estuary Conservation Group and the Clwyd Ornithological Association. For a number of years the Society has been host to the Royal Society for the Protection of Birds for the successful showing of its new release films in the Civic Hall, Connah's Quay and at Theatre Clwyd, Mold.

During recent months the Society has been actively involved with the development of the Field Studies Centre, and is very much indebted to the Central Electricity Generating Board, and to the Manager and staff of the Power Station for their commitment and interest in developing this Centre. The Manpower Services Scheme afforded the means whereby the Centre could be built, and financial assistance has been given by:

Alyn and Deeside District Council  
Central Electricity Generating Board  
Clwyd County Council  
Connah's Quay Town Council  
Council of Museums in Wales  
Manpower Services Commission  
Nature Conservancy Council  
Prince of Wales Committee  
Welsh Development Agency  
Welsh Water Authority

all of whom have contributed to what is an outstanding development.

Every two years the Deeside Naturalists' Society produces a Reserve Report which lists birds, plants and butterflies recorded in the two year period. The report is based on the observations of those visiting the Reserve and the Society would like to thank all who have submitted records and maintained the logbooks. Particular thanks go to two members, Joan Davison and Thelma Sykes, who have compiled, illustrated and produced the report.

Information on the Deeside Naturalists' Society, and its current programme, may be obtained from the Secretary, 38 Kelsterton Road, Connah's Quay, Deeside, Clwyd, CH5 4BJ. (telephone Deeside 818339)

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## Classified list of Birds

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In each of the three hides on the Reserve a logbook is kept in which members and visitors are invited to record their field notes. During the course of the year information from these logs is extracted and included on 'species sheets', one sheet for each bird species, covering a two year period and giving details of sightings by month and locality. From these sheets detailed information is readily available for any species on the Reserve, including its frequency and distribution, any fluctuation in numbers or its migration times. The sheets also form an index to the logbooks so that an original field note may be quickly referred to.

Four of the sheets from 1979-1980 have been reduced and are shown together overleaf. These cover the three species of wagtail, *Motacilla cinerea*, *flava* and the two races of *alba*, and give some example of how clearly the status of each becomes apparent with this method of recording.

The Society now has 'species sheets' covering four years from 1977-1980, together forming a valuable work of reference on a site of considerable ecological importance.

Logbook entries for 1979-1980 show that the Reserve is watched more frequently than ever before, a factor perhaps indicated by the growing number of incidental species recorded.

In all, 141 species are included in the 1979-1980 report. The Reserve list now totals 157 species, and the 16 not represented in these two years are shown below with the date on which they were recorded if the incidence was on one occasion only.

Manx Shearwater	30 Sept.75	Arctic Skua	
Storm Petrel		Iceland Gull	21 Aug.77
Gannet	17.Sept.75	Arctic Tern	
Garganey	11 Sept.76	Barn Owl	5 Mar.77
Scaup		Tawny Owl	
Greylag Goose		Nuthatch	6 May 77
Pheasant		Treecreeper	
Temminck's Stint	4 Sept.78	Great Grey Shrike	12 Jan.77


The classified list of birds which follows has been compiled from information contained in the logbooks so that every member of the Society or visitor to the Reserve who has recorded his observations here is a contributor to the report.

### Key to the status of species on the Reserve

B	breeds	PM	passage migrant
R	resident	V	vagrant
SV	summer visitor	S	sporadic visitor
WV	winter visitor		



CLASSIFIED LIST OF BIRDS RECORDED IN 1979 AND 1980

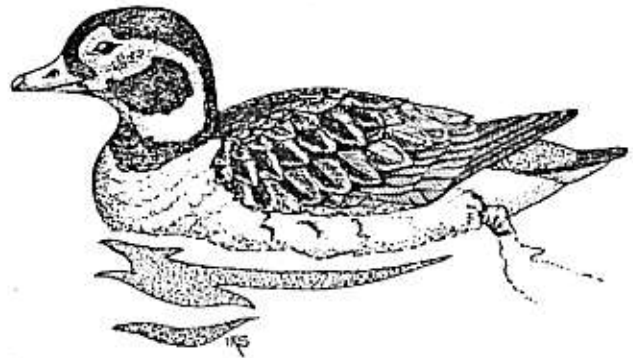
- GREAT CRESTED GREBE WV Usual records are of single birds present at full winter tides from October through to February. An exceptional count of eight was made on 4 November 1979 whilst in 1980 there were four records from the summer months of July and August.
- SLAVONIAN GREBE V A first record for the Reserve from October 1980, with single birds present on 19th and 30th and two observed on 28th.
- LITTLE GREBE WV R? Regularly seen during winter months, though not in the numbers previously reported, three being the maximum at any one time. In 1979, two birds were present in the early summer, one giving its regular trilling song from the bunded pool.
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- LEACH'S PETREL V The only record of the two years is that of an individual over the river at full tide on 14 September 1980.
- CORMORANT R Seen throughout the year. Both sightings and numbers increase over the winter months, with peak counts of 110 and 150 from November 1979 and October 1980 respectively. Individuals in breeding plumage are noted from mid-February onwards, and in 1979 a breeding adult with the grey head of the continental race was recorded fishing the bunded pool.
- SHAG S One in flight up river on 19 December 1979, whilst on 24 October 1980 a second winter bird was watched from the West hide as it struggled to swallow a fifteen inch eel.
- GREY HERON R Scarce in the first six months of 1979, the heron population evidently suffered from the long freeze. Numbers increased from late July as birds of the year became independent, and 16 were counted on 5 November. In early 1980 sightings were frequent and numbers were maintained at up to five birds. The influx of juveniles in this year gave a peak count of 22 by the end of July.
- MALLARD R Present all year, though few are seen during April and May. In previous years the numbers have not increased until the end of August, but in both 1979 and 1980 there was a dramatic influx of birds moulting into eclipse during June. The maximum count was of 910 on 28 June 1979. Winter numbers have also been greater than before, especially so in 1979, with up to 600 during November and December. Several pairs have been seen in display, and a female with six young was recorded in August 1979.

- TEAL WV Birds reported as frequenting the Reserve in the winter of 1978 remained during January and early February of 1979. Since then this species has not been recorded regularly, and, with the exception of 250 overflying the Reserve in association with pintail and wigeon, numbers have not exceeded 20 birds.
- GADWALL S Never recorded on the Reserve until 1980 when, on 24 January, a pair were seen on the scrape in front of the West hide. The following day two males and a female were present. A single bird was recorded on the river mud on 3 September 1980.
- WIGEON WV The pattern of records for this species closely follows that of the Teal. The large flights of up to 2,000 coming to roost on the Reserve in January and February 1979, have not been repeated in the two subsequent winters. November was the peak month in both years, but the highest count was of only 380 birds.
- PINTAIL WV Present on the river or overflying the Reserve from September through the winter to February. A raft of 650 birds was recorded on 3 January 1979 and counts of 500 were made in November 1979 and January 1980. Although the species has increased in the estuary during these two years, the Cheshire side of the Dee appears to be more favourable.
- SHOVELER S Two isolated records only, of eight birds in April 1979, and of three males present on the west scrape in March 1980.
- MANDARIN DUCK V A drake was first seen on the Reserve when it was flushed from the marsh by the high tide of 20 January 1980. The bird, probably an escape, then remained on the pools of the west scrape for six days.
- TUFTED DUCK S An irregular visitor recorded during the first quarter of both years. These duck are usually seen singly or in twos, and remain on the river.
- POCHARD V A single drake, in October, was the only record from 1979, but the species was observed more frequently in 1980. Two drakes, present from 21st January until the 3rd February, were making use of the fly ash pool.
- GOLDENEYE WV The bunded pool is proving increasingly attractive to this species, which is now regularly present from October through to February. The pool is used both for feeding and as a roost, and is particularly favoured following high tides. The maximum count of 17 in November 1979 was exceeded by a group of 21 on Christmas Day 1980. Records of female and immature birds far outnumber those of males, but it has been apparent throughout November/December 1980, that the same two drakes, one an immature bird showing slight traces of adult male plumage, have formed the nucleus of the group frequenting the bunded pool, the number of accompanying redheaded birds varying from one to 19.



LONG-TAILED  
DUCK

V Another 'first' for the Reserve when, following strong winds on the 24 October 1980, a female appeared on the bunded pool and stayed there until 7 November. The East hide afforded splendid and close views of this duck fishing, preening and roosting afloat.



RED-BREASTED  
MERGANSER

WV Like the Goldeneye, this species now regularly frequents the bunded pool during the winter, leaving in April and returning in October. Numbers are highest in the last months of the year when up to 13 have been noted at a time, though these groups only rarely include adult males. From February to April, the groups have dispersed and birds are present as individuals or pairs with the sex ratio equal. In March 1979, the East hide gave close views of a pair in their characteristic neck thrusting display, the drake being in full summer plumage.

SHELDUCK

WV R B Greatest numbers, up to 300, occur from November to January, and these can most easily be assessed when the shelduck fly onto the west marsh to stay out very high tides. Display and pair formation are evident from February onwards. 1980 was a particularly successful year for those pairs remaining on the Reserve to breed. Several broods of downies were led to the safety of the fly ash and bunded pools in June, and here creches were formed. Average broods were of five or six ducklings, but one brood of 12 did well, as did the seven ducklings 'fostered' by the Society and released on the Reserve on 21 June.

RUDDY  
SHELDUCK

V For two days from 6 July 1980, one immature was to be seen feeding on the mudflats in association with the shelduck flock.

PINK-FOOTED  
GOOSE

V A flock of 50 was seen to approach the Reserve from Burton Marsh on 31 January 1979, and a second record of a flock double that size comes from 6 January 1980, the direction of flight being the same.

CANADA GOOSE

S Although previous reports have included records of individual Canadas, 10 June 1979 brought the first record of a flock of these geese, when 38 flew over the Reserve to drop onto the marsh on the Cheshire side of the revetment.

- MUTE SWAN S A more frequent visitor in these two years than before, occurring in ones and twos in the winter months. Although usually remaining on the Dee, a pair did alight to spend some time on the bunded pool in December 1980.
- BEWICK'S SWAN WV The number of records has increased from only one in the previous two years, to ten in the two years under review. The maximum was of 28 on 10 February 1979, flying past the West hide to alight on the river at the east end of the Reserve. A party of 13 was found in the early morning of 7 January 1979, feeding on the inland scrape adjacent to the railway line.
- BUZZARD V The first record of this raptor when, on 21 August 1979, a bird flew across the estuary to the Welsh side where it took height and began to soar.
- SPARROWHAWK S With nine records from 1979 and eleven from 1980, this species is now seen hunting the Reserve more frequently, especially predated the large flocks of finches which gather on the west marsh from September to December. Both sexes are recorded though females predominate.
- MARSH HARRIER SV A harrier not recorded before on the Reserve. A female was present on 3 May 1980 over the west scrape where startled flights of wading birds marked its progress. Gulls and crows began to mob the harrier and pursued it across the marsh towards Parkgate.
- HEN HARRIER WV A regular sight on the Reserve in the last two winters from November through to March. Once recorded hunting in association with a short-eared owl, once with a peregrine taking advantage of the panic caused among the small birds, and once being itself harried off the Reserve by a (probably the resident) female kestrel. In November and December 1980, two males were to be seen together and the number of sightings of a bird flying down the cut at dusk to drop onto the marsh suggests that at least one harrier might have roosted there.
- MONTAGU'S HARRIER V The first record of this harrier on the Reserve was made on 22 July 1980, when a male flew over the bunded pool to quarter the hay fields.
- PEREGRINE WV Another raptor now to be more frequently seen with 24 records over the two years, mainly from August and September. Both sexes recorded preying on finches, redshank roosts and feral pigeons. A pair were seen together on 6 December 1980.
- MERLIN WV A regular and frequent visitor attracted by the finch and skylark flocks. This falcon returns to the estuary in August and is present until mid-March. Males and females are both recorded, and two females were together in November 1979.
- KESTREL R B Always present and regularly recorded save for the secretive months of April and May. A pair raised two young in 1980 and in August of this year, five birds were together on the Reserve.

- PARTRIDGE R The numbers have remained steady at coveys of from two to twelve individuals, but these are now more often to be found on the grazing fields rather than on the marsh, frequented in the past, perhaps because the pasture affords no cover for the fox which is increasingly a predator.
- WATER RAIL S Rare. Recorded twice on the Reserve in 1980, when one was seen in the small pool right of the East hide on 22nd and again on 30th December.
- MOORHEN S Six records of individual birds or twos in April 1979 and March 1980, always in the vicinity of Rockcliffe Hall and only when areas adjacent to the road become flooded.
- COOT V One record only from the severely cold day of 3 January 1979, when three were out in mid-river.
- OYSTERCATCHER WV R B Display begins in February with piping parties on the marsh and bunded pool islands. Three birds were on nests in 1979, though no downy young were seen. In 1980, one female caused concern by electing to nest on the very top of the banking created to screen the car park from the marsh, but again there was no evidence of breeding success in this year. Winter high tide roosts reached maxima of 500 in December 1979 and 200 in December 1980.
- LAPWING WV R B? Peak counts were 1,500 in December 1979, and 2,000 in February 1980. Between March and May, the lapwing is scarce, but numbers increase in June with many immature birds roosting in the bunded pool area, and by October large flocks are again present on the marsh.
- RINGED PLOVER PM Recorded each year for a short period in late April/early May on spring passage, 100 on 15 April 1980 being an exceptional count for this time. Absent from late May, until returning migrants begin to frequent the Reserve on their more leisurely autumn passage, from the end of July through to October. Both fly ash and bunded pools attract numbers up to sixty birds including many birds of the year.
- LITTLE RINGED PLOVER PM Two only, both in 1979, one on 6 May, and a juvenile on the fly ash pool on 28 July.
- GREY PLOVER WV Individuals were recorded regularly from January to May 1979, and from October 1979 to February 1980. Since then, the species has been recorded only once, when eight birds were on the mudflats following a high tide on 28 August.

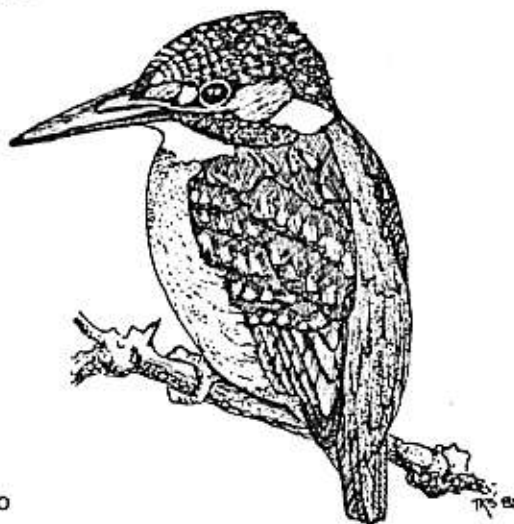


- GOLDEN PLOVER PM WV Wintering birds were evident in 1979 with thirteen records from the first and last three months of year, the maximum count being of 100 on 6 December. In 1980 no over-wintering birds were seen but small numbers came through on passage in August/September including one bird of the northern race in full summer plumage.
- TURNSTONE PM Scarce, with only five singles recorded in the two years, four being in the months August/September.
- LONG-BILLED DOWITCHER V The first and only record on the Reserve of this North American wader, is from 9 December 1979 when a single flew in with lapwing to alight on the tide edge.
- SNIPE WV R Small numbers only, a maximum of six, are recorded, but logbook entries span all months of the year.
- JACK SNIPE S Only one record of three present with one common snipe, on 31 July 1979.
- CURLEW WV PM Well distributed over the marsh and found in every month. Winter counts reach 30, when the scrape islands afford a high tide roost. Bubbling song is heard from February until numbers diminish to only a few birds in late Spring and early Summer.
- WHIMBREL PM Both years show Spring passage in April/May and return passage beginning in July and continuing through to September. In all, nine spring and 24 autumn records, usually of one or two birds only, but with an exceptional passage on 30 July 1980 of 24 birds flying up river in two groups.
- BLACK-TAILED GODWIT PM Migrating birds visit the Reserve in April when some are already moulting into summer plumage, but this godwit is yet more frequently seen from July onwards and small numbers have remained into December in the two mild winters. Although recorded more frequently than in past years, the counts are not so high, with peaks of 80 in July 1979, and of only 30 in July 1980.
- BAR-TAILED GODWIT PM 1979 was a good year with 23 records, mainly at times of migration. Usually 10-20 together, the early morning count of 84 on 17 May was exceptional. Very few were seen in 1980, with a December total of 14 the greatest number.
- GREEN SANDPIPER PM Four singles in Spring 1979 but none in this period in 1980. Autumn passage is late, from August to November, both years. Eighteen records in 1979 with 1980 comparatively low again at eight only. Both fly ash and banded pools serve as feeding areas.
- WOOD SANDPIPER PM Rare in 1979 with only three records totalling four birds in all on the banded pool. However, 1980 gave excellent sightings, as the fly ash lagoon was frequented by up to four birds throughout July and August.
- COMMON SANDPIPER SV Migrants reached the Reserve early in April both years, with one or two individuals present on the pools until June. From July, for eight weeks, the species is numerous, as adult and young birds gather to feed in the pools and roost on the islands. Maxima were 20 in August 1979, and 14 in July 1980. Mild weather gave occasional winter birds in both years.

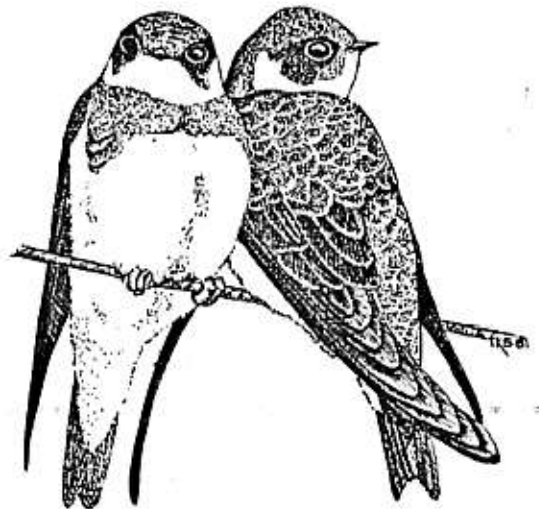
- REDSHANK WV R Present at all times. In winter, high tide roosts of 200 are regular both years, with 500 not uncommon in 1979. Although juvenile birds were again seen on the banded pool in 1979, successful breeding on the Reserve is not yet proved.
- SPOTTED REDSHANK PM WV Perhaps the 'special' bird of the Reserve; now even more readily seen, with the first birds in each season passing through in early July, some resplendent in dark breeding plumage. August/September give most records with up to 100 birds at high tides as on 27 August 1980. Numbers diminish in October but a few birds remained until February in both years.
- GREENSHANK PM May of both years gives a few records of individuals on their way to breeding grounds. The main presence however begins in July, after which sightings are frequent until late September. Often there are several together and records of eight to twelve birds have been made in both years, particularly 1980. In 1980, too, autumn passage extended into late October with up to six being seen regularly.
- KNOP WV Uncommon on the Reserve, with only individual birds identified in groups of other, regular, wader species from September through the winter to February.
- LITTLE STINT PM There are ten records from 1979 between 28 August and the end of October, with both adults and juveniles present. Three adults and two young on 5 September formed the largest party. 1980 was a great contrast with only a single bird seen on 3 May.
- DUNLIN PM WV The pattern for both years is the same. Flocks of up to 400 use the marsh especially on full tides through January and February; these have left by March when records become rare. By mid-April birds are moving through, some with the black underparts of breeding plumage. Passage is at its height in May, and again in July/August, with increasing numbers. The banded pool is favoured at migration times, with winter flocks preferring the marsh and foreshore.
- CURLEW SANDPIPER PM Mainly recorded on Autumn passage, the most frequent sightings being in August and September 1979, and five on 3 September, the highest count. Single birds only are noted for 1980, nor are they so frequent, though 1980 has a spring passage bird.
- SANDERLING PM Rare. Two were with dunlin and ringed plover on 26 May 1979, and there are two records of solitary birds in Autumn 1980.
- RUFF PM As in previous years, this species was seen only in Autumn. There are nine records from the two years, five being the maximum together.
- GREAT SKUA V One harassing gulls and waders off the revetment on 7 September 1980, constitutes a 'first' record for this species.
- GREAT BLACK-BACKED GULL WV R Present in small numbers throughout the year becoming more frequent from July to October. Peak counts of 40 were made in July 1979 and September 1980.

- LESSER BLACK-BACKED GULL SV PM A very noticeable change in status, for this gull is now represented in all months of the year, whilst the numbers in summer and autumn have greatly increased and such counts as 300 in June 1980 and 800 in August, are unprecedented.
- HERRING GULL R Recorded in each month of the year, though small in numbers, fewer than ten being noted by any one logbook entry.
- COMMON GULL PM WV Small numbers were present throughout 1979, with October being the peak month affording a count of 60. Fewer records in 1980 with none seen during the breeding season from May to July, and only small numbers, up to 16, in the winter.
- GLAUCOUS GULL V The first recorded from the Reserve, this gull was one of several hundred gull species flying down river to roost mid-channel in the late afternoon of 29 November 1979.
- MEDITERRANEAN GULL V Another 'first' when on 9 December 1979, a winter plumaged bird flew down the shore and alighted amongst other gulls at roost in the fields near Flint.
- BLACK-HEADED GULL R B Common everywhere on the Reserve, taking advantage of the bunded pool and standing water. Breeding was proved in 1979, with a bird on a nest. Winter numbers are increasing, 1,600 in October 1979, and 5,000 in August 1980.
- KITTIWAKE V Yet another first timer in 1979. An immature bird flew up river on 9 September.
- One of the notable features of the Reserve is that of the autumn evening flight, when gulls pass over the Reserve in two main flight paths, one down the Dee, the second from inland Wales, both converging on the estuary roosts. Passage is steady at 200-300 birds each minute, forming a 70,000 strong roost.
- BLACK TERN PM A single bird in association with 20 common tern, was hunting over the bunded pool at high tide on 18 May 1979. Not previously recorded.
- COMMON TERN SV Returned late April in both years, and present until August, with a few remaining into September in 1979. Each year territorial behaviour is observed on the islands of the bunded pool, but none has yet stayed to breed.
- LITTLE TERN SV This tern species, which has not been recorded since 1977, made a welcome return in August 1980, with four records of up to seven birds, probably on dispersal from a North Wales colony.
- SANDWICH TERN PM Two records only, and both from 1979. A group of 18 settled momentarily on the far scrape off the West hide on 27 June before flying on up river. A single present on 9 September.
- GUILLEMOT V On 23 February 1980, a guillemot was first spotted from the West hide and watched as it came into the estuary with the flooding tide. It reached the east end of the Reserve at high tide and went out to sea on the ebb.

- STOCK DOVE SV Small numbers recorded on the marsh from March to October both years with the late summer giving most sightings, usually of two or three birds.
- WOODPIGEON R B In 1979, this species was recorded in small numbers mainly in the summer months, on the inland fields of the Reserve. In 1980, the summer pattern was the same but there are records of large flocks of up to 80 birds using the grazing fields and marsh in winter, between January and March.
- TURTLE DOVE PM Twice recorded in 1979 in May and June, and once in July 1980.
- COLLARED DOVE R Present only in small numbers on the fringe of the Reserve at its boundary with the railway line which is the only wooded area.
- CUCKOO SV Despite the numbers frequenting the steelworks reserve, the records are few. Two juveniles were on the Reserve on 23 August 1980.
- LITTLE OWL R B This owl was first recorded in April 1980, when two were seen together. Throughout May and June there were regular sightings of one bird only, until the evening of 29 June when sightings again seemed to indicate two birds present. A watch was well rewarded with a fine view of two parent birds with a youngster just fledged. Three birds, probably the 'family' were still being recorded together in late August.
- SHORT-EARED OWL WV Noted on three occasions. On 17 November 1979, one hunted the marsh beyond the revetment with a hen harrier; on 10 February 1980, again hunting the edge of Burton marsh, and on 16 April 1980, a bird crossed the river from Burton and flew over the fly ash pool where it was mobbed by gulls.
- SWIFT SV Dates of arrival and departure are very weather dependent but both years were similar with first records from 7 May and 4 May respectively. Numbering up to 50, the swift was especially attracted to the bunded pool in 1979. In both years there is an isolated record in September after the main departure.
- KINGFISHER R Scarce in 1979, being seen once in February, and twice in October, when two were together. In 1980, no kingfisher was seen until August. After this, records of individual birds are regular when one is seen commuting from the west of the Reserve to fish the bunded pool from perches near the East hide and returning west. In all, 39 records, though since one of these is of two birds, it may be that a pair is with us again.



- GREAT SPOTTED WOODPECKER R Four records from 1979 and nine from 1980. This woodpecker appears in the silver birches between the two easterly hides, and in the Rockcliffe Hall area.
- LESSER SPOTTED WOODPECKER S Not recorded until 21 October 1979 when a male was observed in a hawthorn near to the power station gardens.
- SKYLARK WV R B The grazing fields and drier marsh are breeding sites for resident birds. Migrant and wintering birds, in flocks numbering up to 250, feed on the marsh, and their autumn song enlivens winter days.
- SWALLOW SV PM B The first returning birds were recorded on 15 April in 1979 and 13 April in 1980. From May to September of both years, the species appeared to be more numerous on the Reserve than in previous summers. The fly ash pool has become a favoured feeding ground.
- HOUSE MARTIN SV Also found the banded pool a source of food, though in earlier years records have come mainly from the inhabited inland strip of the Reserve. Present May to August.
- SAND MARTIN SV Now present at most times between April and July, and very much more numerous than before. The maximum of seven reported in 1978 had become 40 in 1979, whilst on 17 April 1980, there were at least 90 hawking over the banded pool.
- CARRION CROW R WV Always to be found in the grazing fields or on the marsh in groups of one to three. 1980 has seen a tremendous influx of birds in November and December, apparently attracted to the pulverised fuel ash tip. Here, 63 were present on 14 November.
- ROOK S Not common on the Reserve, with all records being of individuals or parties up to four, except for the presence of a 30 strong gathering on 7 November 1980.
- JACKDAW S Small numbers foraged on the grazing fields behind the East hide, the main presence being in the first half of each year.
- MAGPIE R B Increased in numbers dramatically after the 1980 breeding season, with 19 present on 10 August and flocks of up to 16 being recorded well into September.





JAY S Not previously recorded; 1979 afforded two sightings of a bird in the Rockcliffe Hall woodland in November and December, but none was seen during 1980.

GREAT TIT R Only occasionally recorded, and then usually in the winter months at the Rockcliffe Hall area.

BLUE TIT R Usually to be found in the hedgerow and woodland at Rockcliffe Hall; its behaviour makes it more evident in the winter months.

COAL TIT S Only once observed in October 1980.

LONG-TAILED TIT WV Nine were foraging the Rockcliffe Hall hedgerows with blue and great tits on 11 November 1979, and the same gregarious behaviour was observed with flocks of up to 10 individuals in October and November 1980.

WREN R Present throughout the year wherever there is a tangle of bramble and scrub, as in the nature trail area and between the hides. A bird very close to the East hide regularly scolds at any noise from within.

MISTLE THRUSH WV R Present in small numbers through the year though summer records are sparse. Two adults with young were at Rockcliffe Hall in 1979.

FIELDFARE WV The main presence is on the grazing fields from December to February, with maxima of 20 in January 1979 and 60 in December 1980.

SONG THRUSH R Only seen singly and in pairs in these two years, with no family parties recorded.

REDWING WV Visits by flocking winter birds were made more often than in previous periods, though most records still fall in January and February. The largest flock was 50 strong on 6 January 1980.

BLACKBIRD R B? Inhabits the wooded area at Rockcliffe Hall, and the bramble and scrub bordering the bunded pool. At least three male birds and two females were on the Reserve in Spring 1979 but no juveniles were recorded.

WHEATEAR PM First migrants arrived on 12 March and 30 March respectively in these two years. Males predominate in March and early April each year, after which both sexes, especially pairs, are recorded. These later migrants include birds of the Greenland race, noticeably larger in size. No records from June/July; return passage spreads from August to October.

STONECHAT R B Successful breeding in both years, with the nature trail scrub the preferred haunt. Three pairs were present in 1979 and one pair raised four young. In 1980, eight adults were in the area with one pair raising a brood of five.

- WHINCHAT PM In both years there are six records from May, the arrival of whinchats coinciding with that of falls of yellow wagtail and white wagtail. On return passage, only a single from August each year.
- REDSTART PM A male was observed in April, and a pair in May 1979, but there are no subsequent records.
- BLACK REDSTART WV A female has overwintered in past years in the locality of the studies centre, and from January to April 1979 a female was again present in this area. There have been no records of a return for the winter of 1979/80 nor in the last months of 1980.
- ROBIN R B A marked fall in the numbers recorded. A pair raised young in 1979, but in 1980 only single birds were seen, with no records falling between April and August.
- GRASSHOPPER WARBLER PM The bird flushed from the grass in the nature trail on 8 May 1979 added yet another species to the Reserve avifauna. There are two records from July 1980, one seen in the nettle and bramble undergrowth near the East hide and one heard in this vicinity later in the month.
- BLACKCAP S The male singing in the Rockcliffe Hall woodland on 10 June 1979 is the only record from these two years.
- WHITETHROAT SV B On 18 May 1979 a male was observed in display and on 11 July, a pair were accompanied by one juvenile. Probable breeding success in 1980 is indicated by records of a pair in May, and in June an adult with a juvenile. Present both years mid-May to August, and an addition to the list of breeding birds.
- LESSER WHITETHROAT PM One record, and that only the second for the Reserve, from 8 September 1979.
- WILLOW WARBLER SV The song first advertises this warbler's return to the wooded stretch at Rockcliffe Hall. Regularly present May/August in 1979, but not so in 1980 when sightings were very occasional.
- CHIFFCHAFF SV A late return for this species, first week of April both years, with no records falling in the summer months.
- GOLDCREST S None in 1979. An exceptional record of 10 in the shrubbery of the nature trail on 28 September 1980, was followed by sight of two on 9 November, foraging at Rockcliffe Hall in association with blue and long-tailed tits.



- SPOTTED FLYCATCHER SV Local to Rockcliffe Hall area, where up to five were present in July/August 1979. Infrequently seen in 1980 and never more than two together.
- DUNNOCK R B Noted throughout the year, usually singly. On 9 November at least seven birds were present, four in the nature trail scrub and three in the Rockcliffe Hall hedgerow.
- MEADOW PIPIT PM WV R A very evident passage of migrants in April 1979. In 1980 spring passage was earlier, being the end of March. After April only the occasional bird was seen until September, when migrating and wintering birds are again on field and marsh. A winter flock in November 1979 comprised c100.
- ROCK PIPIT PM One logbook entry only of two birds on 3 January 1979.
- PIED/WHITE WAGTAIL PM R B? Pied wagtail numbers dropped in 1980 after a previously good year. In April 1979 up to 20 at a time were recorded on passage, and the proportion of young to adults reported from May to August indicates a successful breeding season. Only a few remain through the winter.
- PM The white wagtail is to be found on the Reserve on migration, frequently in Spring, rarely if at all in Autumn. In passage it is often associated with related species, as on 2 May 1979, when twenty were accompanied by ten pied and two yellow wagtails. On 7 May 1979, sixty, the largest number on the Reserve to date, had twelve meadow pipits with them. 1980 spring passage was earlier than the previous year 8th - mid April, with a maximum count on 16th of 30 with 30 meadow pipits.
- GREY WAGTAIL PM WV Present on seven dates in each year. Records of this wagtail are now becoming more regular throughout late summer and winter.
- YELLOW WAGTAIL SV B Returning birds reach the Reserve in April, at first being seen in parties, maximum 16 on 5 May 1980, which disperse as pairs are formed. The fields prove particularly attractive to birds on passage when cattle are grazing them. Adults carrying food in June 1979 and at least one pair with four young early in July, indicate successful breeding.
- STARLING R B WV Present throughout the year though numbers fluctuate dramatically with the seasons. Few in Spring, then from June to September juveniles of the year flock together on the marsh and especially in fields cut for hay. Flocks consisting solely of young birds of the year have numbered 300 regularly both seasons. In early winter, the numbers decrease, but in February 1979, and again in December 1980, pylons on the Reserve became pre-roost gathering points with at least two thousand vociferous starlings flying in each evening at dusk.
- GREENFINCH WV No record from March to May in either year. Small numbers occur from June through to February, often in flocks of other finch species. Greenfinch flocks of 50 were recorded in September 1979 and January 1980.

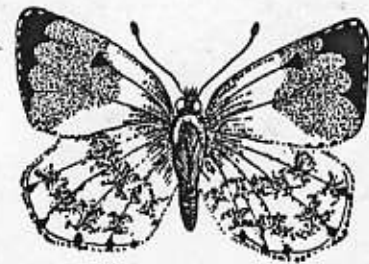
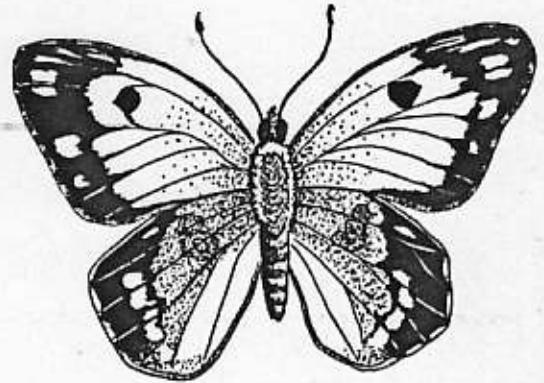
- GOLDFINCH R B WV Present throughout the year, but most evident when, in the winter months, flocks rove the marsh edge. Such 'charms' comprised far more individuals in 1980, up to 40 birds regularly during December compared with 20 to 25 in the same period of 1979. The greatest count ever made on the Reserve, however, was of 100 adults and juveniles on 20 August attracted to the seeding thistles beside the track by the fly ash pool.
- SISKIN S A bird 'new' to the Reserve when two were present on 31 July 1979.
- LINNET WV R B Well distributed over pasture and marsh, with winter flocks recorded in each year, those of 1979 being up to 150 strong with 100 regularly, whilst those of 1980 were less frequently recorded and then in the order of 30 to 50 birds.
- TWITE PM WV With eleven records from August 1979 to January 1980, the numbers of twite were well up on previous years. Records from winter 1980 are contrastingly low with individuals only recorded among finch flocks on four dates in August/September.
- BULLFINCH R Local to a marginal area of hedgerow at Rockcliffe Hall. A pair were here together in May, August and December 1979, and there are two records of a single male from 1980.
- CHAFFINCH WV R In the winter of November 1979 to January 1980, flocks of chaffinch numbered 50 regularly with a peak on 2 December of 400 in the nature trail area. Many of these flocks included other finches. Such flocks were not present at the end of 1980, only a few individuals frequenting the Reserve.
- BRAMBLING WV The winter of 1978 saw an influx of brambling, with many still present early in 1979. On 17 March a mixed finch flock with 70 chaffinch included 60 brambling, some of whom had assumed summer plumage. Flocks up to 50 were present in December 1979, with a few remaining in the first three months of 1980, but none has been recorded since.
- CORN BUNTING S A bird singing on 17 June comprises the only record for 1979, whilst 1980 had individuals on three dates from April and July.
- YELLOWHAMMER R? Previously a rare visitor to the Reserve, yet from January to July 1979, sightings occurred regularly once or twice a month. After this, records become sparse and are confined to the first three months of 1980.
- REED BUNTING WV R B Usually present in small numbers along the marsh edge in the nature trail area. In 1980, gregarious winter behaviour was very marked with up to 30 birds, mainly juveniles, together in October and November.
- HOUSE SPARROW R B To be found in small numbers in the inland urbanised strip of the Reserve. A pair were recorded in the nature trail area in June 1980.
- TREE SPARROW R WV Recorded from October through to February, though more abundant in 1979 with up to 19 congregating at Rockcliffe Hall in November.

## Lepidoptera

The following list is not exhaustive, being compiled from records made by only a small number of observers.

The status data is tentative.

Large white	C
<i>Pieris brassicae</i>	
Small white	C
<i>Pieris rapae</i>	
Orange tip	O
<i>Anthocharis cardamines</i>	
Clouded yellow	O
<i>Colias croceus</i>	
Peacock	O
<i>Inachis io</i>	
Red admiral	O
<i>Vanessa atalanta</i>	
Painted lady	O
<i>Vanessa cardui</i>	
Small tortoiseshell	C
<i>Aglais urticae</i>	
Comma	O
<i>Polygonia c-album</i>	
Grayling	C
<i>Hipparchia semele</i>	
Meadow brown	C
<i>Maniola jurtina</i>	
Wall brown	O
<i>Lasiommata megera</i>	
Small copper	O
<i>Lycaena phlaeas</i>	
Large skipper	C
<i>Ochlodes venatus</i>	
Common blue	O
<i>Polyommatus icarus</i>	



Status on reserve:           C - common                   O - occasional

Illustrated are: Clouded yellow, female; Comma, female and Orange tip, male

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## Fungi

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*Nectria cinnabarina* (Coral spot)  
small pink or red cushions showing through  
the bark of moist fallen wood

*Xylospheera hypoxylon* (Candle snuff)  
found on dead wood, straight black stems fork  
into white tips

*Hypholoma fasciculare* (Sulphur tuft)  
tufts grow at the base of tree stumps usually  
in autumn. The cap is shallow, yellow in colour  
with a tawny flush at the centre

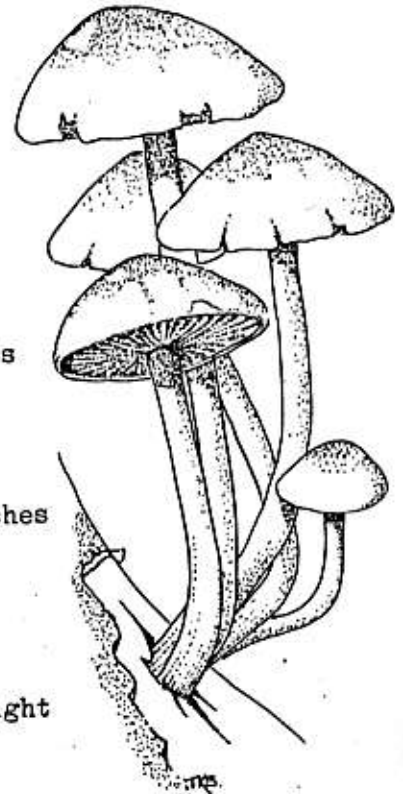
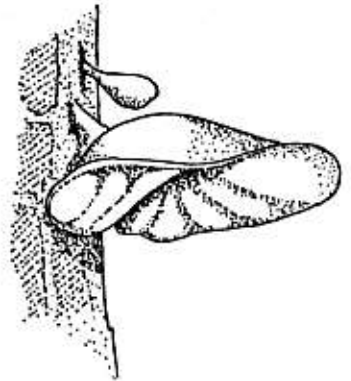
*Coprinus comatus* (Lawyer's wig)  
a compact, cylindrical, scaly cap, white when  
young. Later it becomes bell shaped, and dissolves  
in a black fluid. Also known as shaggy ink cap

*Auricularia auricula* (Jew's ear)  
a bracket like fungus of dark brownish pink lobes,  
the paler undersurface being folded and ridged

*Lycoperdon depressum* (no common name)  
one of the puff-balls, white when young with a  
granular surface which later becomes yellower

*Agaricus campestris* (Field mushroom)  
a small white cap with gills which are first pink  
and finally purplish-brown

Illustrated are: Jew's ear puffball sulphur tuft



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## Lichens

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*Lepraria incana*  
a light green, crusty lichen found in large patches  
on the banks and muddy slopes by Rockcliffe Hall

*Xanthoria parietina*  
a common species, bright yellow-orange in colour,  
with small leafy lobes at the margins. Small patches  
occur on elder trees between the hides, and it is  
found in circular patches on cement and limestone  
blocks on the river bank

*Physcia adscendens*  
a small, leafy lichen, forming poorly developed light  
grey rosettes on the elders between the hides

Although there will, undoubtedly, be other lichen species on  
the Reserve, these are the most common. The lichen flora is  
limited in variety due to the lack of suitable trees, and the  
absence of stable, well-established soil or rock.

# Classified list of Plants

## Key to Reserve Area Map

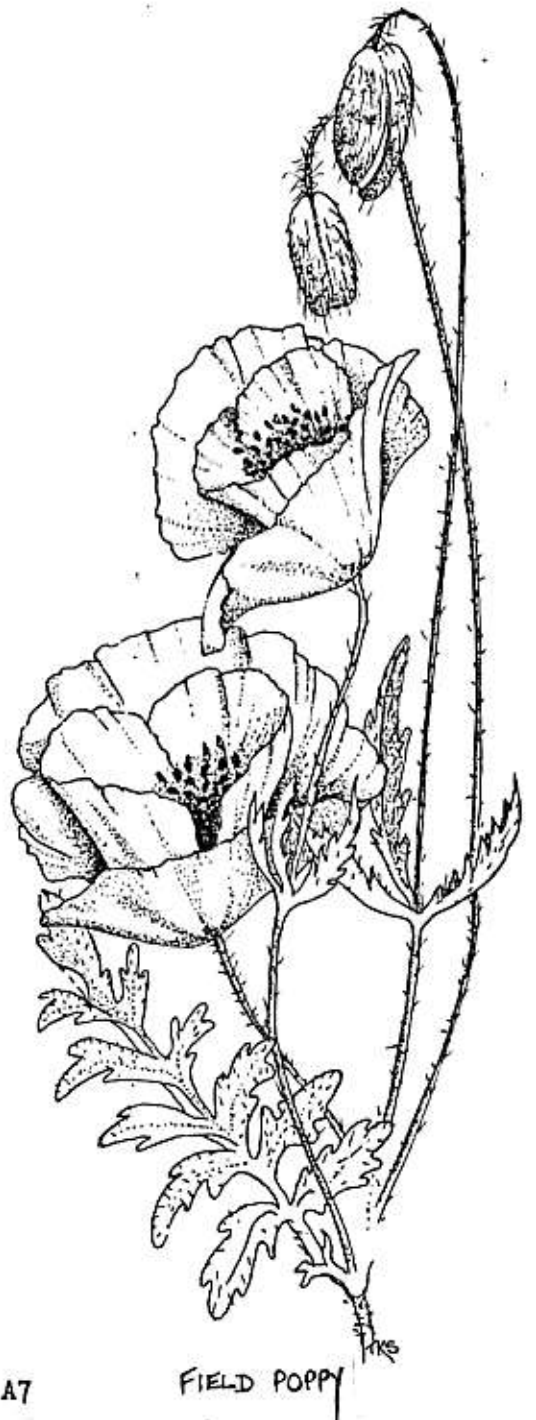
- A2 A4 - the plant occurs in sections A2 and A4  
 A2-A4 - the plant occurs in sections A2, A3 and A4  
 A2/A4 - the plant occurs on the boundary of A2 and A4  
 \* - one plant only recorded

## PTERIDOPHYTA - FILICALES

Male fern	
<i>Dryopteris filix-mas</i>	A3
Wall-rue	
<i>Asplenium rutamuraria</i>	A3
Hart's tongue	
<i>Phyllitis scolopendrium</i>	A3
Bracken *	
<i>Pteridium aquilinum</i>	A5

## SPERMATOPHYTA - ANGIOSPERMAE

Meadow buttercup	
<i>Ranunculus acris</i>	A3 A5
Lesser celandine	
<i>Ranunculus ficaria</i>	A3
Field poppy	
<i>Papaver rhoeas</i>	A1-A7
Greater celandine	
<i>Chelidonium majus</i>	A3
Common fumitory	
<i>Fumaria officinalis</i>	A5 A6
Charlock	
<i>Sinapis arvensis</i>	A1-A6
Shepherd's purse	
<i>Capsella bursa-pastoris</i>	A1-A6
Common scurvy-grass	
<i>Cochlearia officinalis</i>	A7
Hairy rockcress	
<i>Arabis hirsuta</i>	A3
Garlic mustard	
<i>Alliaria petiolata</i>	A3
Hedge mustard	
<i>Sisymbrium officinale</i>	A1-A7
Weld	
<i>Reseda luteola</i>	A1-A5 A7



FIELD POPPY

Perforate St. John's wort <i>Hypericum perforatum</i>	A1 A3
Bladder campion <i>Silene vulgaris</i>	A3 A5
Red campion <i>Silene dioica</i>	A2 A3 A5
White campion <i>Silene alba</i>	A2 A3 A5 A7
Red x white hybrid * <i>S.dioica x S.alba</i>	A5
Common mouse-ear chickweed <i>Cerastium fontanum</i>	A1-A6
Sticky mouse-ear chickweed <i>Cerastium glomeratum</i>	A1-A3
Chickweed <i>Stellaria media</i>	A1-A6
Lesser sea-spurrey <i>Spergularia marina</i>	A7
Good King Henry <i>Chenopodium bonus-henricus</i>	A1-A6
Fat hen <i>Chenopodium album</i>	A1-A6
Common orache <i>Atriplex patula</i>	A1-A6
Annual sea blite <i>Suaeda maritima</i>	A7
Glasswort <i>Salicornia europaea</i>	A7
Common mallow <i>Malva sylvestris</i>	A2 A7
Round-leaved cranesbill <i>Geranium rotundifolium</i>	A3-A6
Dove's-foot cranesbill <i>Geranium molle</i>	A3-A6
Herb robert <i>Geranium robertianum</i>	A1-A6
Gorse <i>Ulex europaeus</i>	A5
Lucerne <i>Medicago sativa</i>	A2 A5 A7
Black medick <i>Medicago lupulina</i>	A2 A5 A7
Spotted medick <i>Medicago arabica</i>	A1-A6
Common melilot <i>Melilotus officinalis</i>	A2 A4 A5 A7



COMMON  
MALLOW

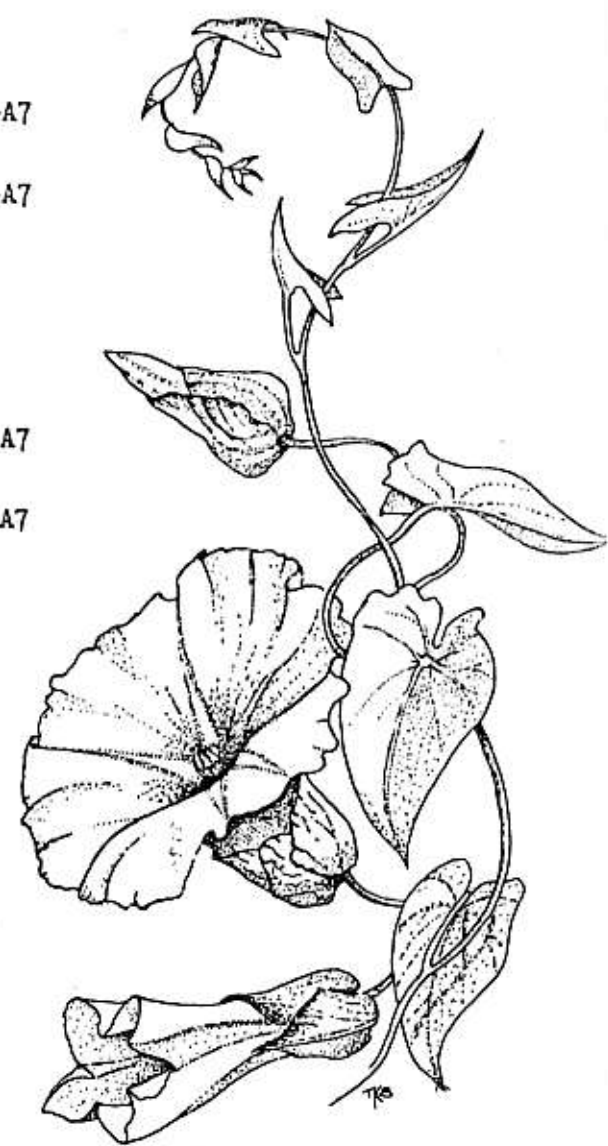


White melilot		
<i>Melilotus alba</i>		A2 A4 A5 A7
Hop trefoil		
<i>Trifolium campestre</i>		A2 A7
White clover		
<i>Trifolium repens</i>		A1-A7
Hare's foot		
<i>Trifolium arvense</i>		A1-A7
Red clover		
<i>Trifolium pratense</i>		A1-A7
Large hop trefoil		
<i>Trifolium aureum</i>		A1-A6
Birdsfoot trefoil		
<i>Lotus corniculatus</i>		A1-A7
Hairy tare		
<i>Vicia hirsuta</i>		A4
Tufted vetch		
<i>Vicia cracca</i>		A1-A7
Bush vetch		
<i>Vicia sepium</i>		A2 A7
Common vetch		
<i>Vicia sativa</i>		A1-A6
Grass vetchling		
<i>Lathyrus nissolia</i>		A1-A6
Meadow vetchling		
<i>Lathyrus pratensis</i>		A1-A7
Bramble		
<i>Rubus fruticosus</i>		A1-A7
Silverweed		
<i>Potentilla anserina</i>		A1-A6
Creeping cinquefoil		
<i>Potentilla reptans</i>		A1-A6
Dog rose		
<i>Rosa canina</i>		A2 A3 A5 A6 A7
Great hairy willow-herb		
<i>Epilobium hirsutum</i>		A5
Small-flowered willow-herb		
<i>Epilobium roseum</i>		A2 A7
Rosebay willow-herb		
<i>Epilobium angustifolium</i>		A1-A7
Broad-leaved willow-herb		
<i>Epilobium montanum</i>		A5
Ivy		
<i>Hedera helix</i>		A3 A5
Cow parsley		
<i>Anthriscus sylvestris</i>		A1-A6



DOG  
ROSE

Upright hedge parsley <i>Torilis japonica</i>	A1-A6
Hogweed <i>Heracleum sphondylium</i>	A1-A7
Wild carrot <i>Daucus carota</i>	A1-A7
White bryony <i>Bryonia cretica</i>	A3
Sun spurge * <i>Euphorbia helioscopia</i>	A6
Knotgrass <i>Polygonum aviculare</i>	A2 A5
Persicaria <i>Polygonum persicaria</i>	A2 A4-A7
Pale Persicaria <i>Polygonum lapathifolium</i>	A2 A4-A7
Sheep's sorrel <i>Rumex acetosella</i>	A2 A7
Common sorrel <i>Rumex acetosa</i>	A2 A7
Curled dock <i>Rumex crispus</i>	A2 A5 A7
Stinging nettle <i>Urtica dioica</i>	A2 A5 A7
Common Centaury <i>Centaureum erythraea</i>	A4
Yellow-wort * <i>Blackstonia perfoliata</i>	A4
Great bindweed <i>Calystegia sylvatica</i>	A3
Bittersweet (Woody nightshade) <i>Solanum dulcamara</i>	A3
Mullein * <i>Verbascum thapsus</i>	A2/A7
Common toadflax <i>Linaria vulgaris</i>	A2-A4
Foxglove <i>Digitalis purpurea</i>	A3
Common field speedwell <i>Veronica persica</i>	A1-A6
Yellow rattle <i>Rhinanthus minor</i>	A4 A5
Self-heal <i>Prunella vulgaris</i>	A3
Hedge woundwort <i>Stachys sylvatica</i>	A3



GREAT  
BINDWEED

Red dead-nettle		
<i>Lamium purpureum</i>		A1-A6
White dead-nettle		
<i>Lamium album</i>		A1-A6
Greater plantain		
<i>Plantago major</i>		A1-A6
Hoary plantain		
<i>Plantago media</i>		A5
Sea plantain		
<i>Plantago maritima</i>		A5-A7
Ribwort plantain		
<i>Plantago lanceolata</i>		A1-A6
Cleavers		
<i>Galium aparine</i>		A1-A7
Elder		
<i>Sambucus nigra</i>		A2 A7
Teasel		
<i>Dipsacus fullonum</i>		A1
Ragwort		
<i>Senecio jacobaea</i>		A1-A7
Oxford ragwort		
<i>Senecio squalidus</i>		A1-A7
Groundsel		
<i>Senecio vulgaris</i>		A1-A6
Groundsel var. radiatus		
<i>Senecio vulgaris</i> var. radiatus		A2 A3
Ox-eye daisy		
<i>Leucanthemum vulgare</i>		A4
Coltsfoot		
<i>Tussilago farfara</i>		A2 A5 A7
Winter heliotrope		
<i>Petasites fragrans</i>		A3
Daisy		
<i>Bellis perennis</i>		A1-A6
Yarrow		
<i>Achillea millefolium</i>		A1-A7
Scentless mayweed		
<i>Tripleurospermum inodorum</i>		A3-A7
Scented mayweed		
<i>Matricaria recutita</i>		A3-A7
Rayless mayweed		
<i>Matricaria matricaricoides</i>		A3-A7
Feverfew		
<i>Chrysanthemum parthenium</i>		A1-A7



SCENTLESS

MAYWEED

Tansy	<i>Chrysanthemum vulgare</i>	A1-A7
Mugwort	<i>Artemisia vulgaris</i>	A1-A7
Great burdock	<i>Arctium lappa</i>	A2 A3 A7
Spear thistle	<i>Cirsium vulgare</i>	A1-A7
Creeping thistle	<i>Cirsium arvense</i>	A2 A3 A5 A7
Scotch thistle	<i>Onopordum acanthium</i>	A2 A7
Black knapweed	<i>Centaurea nigra</i>	A2-A4
Nipplewort	<i>Lapsana communis</i>	A2-A6
Catsear	<i>Hypochaeris radicata</i>	A1-A7
Goatsbeard	<i>Tragopogon pratensis</i>	A2-A6
Wall lettuce	<i>Wycelis muralis</i>	A3
Prickly lettuce	<i>Lactuca serriola</i>	A2-A6
Perennial sow-thistle	<i>Sonchus arvensis</i>	A2-A6
Smooth sow-thistle	<i>Sonchus oleraceus</i>	A2-A7
Prickly sow-thistle	<i>Sonchus asper</i>	A2-A6
Smooth hawksbeard	<i>Crepis capillaris</i>	A1-A6
Common dandelion	<i>Taraxacum officinale</i>	A1-A7
Black bryony	<i>Tamus communis</i>	A3
Common spotted orchid	<i>Dactylorhiza fuchsii</i>	A3 A4
Lords and ladies	<i>Arum maculatum</i>	A3
Great water-grass	<i>Glyceria maxima</i>	A2 A7



COMMON  
SPOTTED ORCHID