

# ROSTHERNE MERE NNR BIRD REPORT 2021



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Compiled by Dr Bill Bellamy

## Introduction

Welcome to the Rostherne Mere NNR Bird Report 2021.

For the second year running bird watching at Rostherne Mere was seriously impacted by COVID-19 restrictions. The Observatory and hides were closed from 1<sup>st</sup> Jan until 17<sup>th</sup> May. However, there was access to the Reserve and birds were recorded throughout the year as were butterflies, dragonflies and damselflies, hoverflies and plants.

A decision was taken not to continue with the Common Bird Census (CBC) in favour of a less onerous breeding bird survey tailored to the availability of the volunteers involved. The methodology and results are shown on page 56.

A big thank you to everybody who has sent me bird records and photos throughout the year. I'm particularly grateful to Phil Dell, Sheelagh Halsey and Steve Collins for providing weekly bird records and undertaking breeding bird surveys. I would also like to thank Malcolm Calvert and John Adshead for their contributions to ringing, associated photos and report items.

The Rostherne Butterfly Survey was undertaken in 2021 for the eighth consecutive year after an absence of 10 years. Rostherne Mere has been part of the United Kingdom Butterfly Monitoring Scheme (UKBMS) since 1976 and was surveyed by Bryan Roberts and Barry Shaw for many years until 2003. It was reinstated in 2014. The results from the survey are shown on page 63. A big thanks to Sheelagh Halsey for her assistance in the survey and for providing many excellent photos.

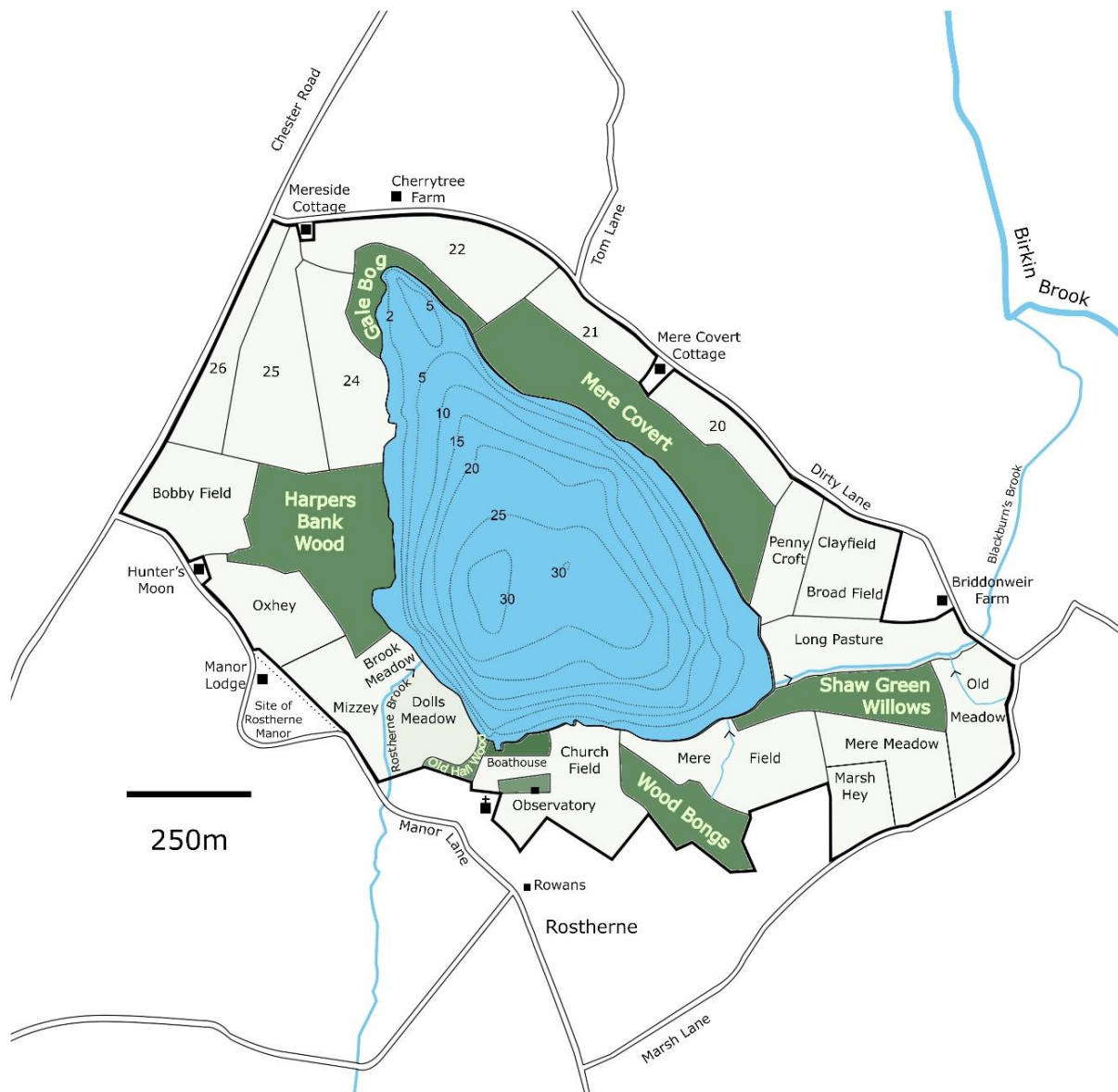
Sheelagh Halsey undertook a comprehensive Dragonfly and Damselfly Survey in 2021 for the sixth consecutive year. The results from the survey are shown on page 71.

Pete Kelly recorded and photographed Hoverflies from July onwards and I'm very grateful for his keen interest in this fascinating group of insects. The results are shown on page 78.

Jules Hill undertook a survey of plants on the Reserve in 2021. The first since Sue Downs surveyed the Reserve in 1996 and 1997! The results are shown on page 83.

The order of bird species in the Systematic List has been changed in line with the latest Cheshire and Wirral Bird Report (2020) which follows the International Ornithological Congress (IOC) World Bird List.

All records and comments in the text refer to birds seen on or over Rostherne Mere National Nature Reserve (NNR) unless stated. It is Wetland Bird Survey (WeBS) policy to include in counts only fledged independent young (i.e. capable of flight and at least  $\frac{3}{4}$  adult size). Where possible, this practice has been followed here.



**Map of Rostherne Mere NNR\*1**

\*1 The map created by Gisele Wall originally appeared in 'Rostherne Mere – Birds of mere and margin' 2019.

## Summary of the Year

A total of 123 species of bird were recorded in 2021.

There were 180 **Canada Geese** in Feb and then 502 in Sep. At least three pairs bred with 22 goslings reared, the majority fledged. A total of 76 **Canadas** and two **Greylag Geese** moulted on the Reserve and while there was some damage to the reeds surrounding the Mere, it was much less severe than in 2020 when a combined total of 130 geese moulted. A count of 125 **Greylags** in Jan was the highest for Dec/Jan on record.

**Mute Swan** didn't breed after last year's success. Five **Whooper Swans** were recorded in Nov and **Egyptian Geese** visited the Reserve on 22 days with nine seen in Sep.

**Mandarin Ducks** reached an amazing high of 50 in Jun, the second highest number ever recorded. The new scrapes and ponds on Dolls Meadow provided extra habitat and breeding was confirmed with several broods. It was a poor year for **Shoveler, Mallard, Tufted Duck** and **Goldeneye**. There were 28 records of **Pochard** with 10 seen in Dec. A pair of **Gadwall** were seen on the new ponds throughout the breeding season but no offspring were recorded. Numbers of **Wigeon** and **Teal** were the highest since 2016 with Feb highs of 300 and 412 respectively. **Common Scoter** was recorded on seven days with an adult seen in Dec, only the fifth account for the month. A rare **Hooded Merganser** visited the Mere in Feb, the first ever record for the Reserve. **Goosanders** often arrived during the evening to roost with 20 seen in Jan, the highest count since 2011.

A total of 68 **Swifts** were seen feeding over the Mere in Aug.

For the second year running, a **Cuckoo** egg was laid in a **Reed Warbler** nest in the reeds at the edge of Mere Covert. It remained unhatched as it did last year. However, investigations revealed the egg was laid by a different female to that in 2020 which was the first evidence of **Cuckoo** parasitism of **Reed Warblers** since 1993.

**Stock Doves** bred in each of the six **Barn Owl** boxes with second broods in several of them. There were around 500 **Woodpigeons** on Bobby Field in Dec. The highest count of **Collared Doves** was 20.

Six **Water Rails** were recorded in Nov. **Moorhen** and **Coot** both bred with numbers of the latter the highest since 2015, peaking at 95 in Sep. There were five **Little Grebes** in Feb and 32 **Great Crested Grebes** in Aug. A **Black-necked Grebe** was seen on five consecutive days in Mar.

It was a good year for waders with the new scrapes on Dolls Meadow creating new habitat for several species including **Oystercatcher, Lapwing, Snipe, Common Sandpiper** and **Green Sandpiper**. Two **Avocets** were seen swimming on the Mere in Mar, the first record at Rostherne. **Little Ringed Plover** was seen for the first time since 2004 and 12 **Whimbrel** on Bobby Field in Apr were the first records since 2012. **Curlew** was recorded on eight days and there were seven records of **Woodcock** flushed from woodland around the Mere. The count of 22 **Snipe** in Jan and Dec was the highest since 2015.

Around 5500 **Black-headed Gulls** roosted on the Mere in Dec, the highest count since 2013. Two **Mediterranean Gulls** were recorded. **Common Gull** numbers were low with only one double figure of 10. There were only two records of **Great Black-backed Gull**. The highest **Herring Gull** count was only 20. **Caspian Gull** was recorded on two days with two visiting the roost in Nov. There were three **Yellow Legged-Gull** records with three seen during within the roost in Sep. **Lesser Black-backed Gulls** were recorded on 177 days with around 500 seen in in the roost in Dec.

There were six sightings of **Common Tern** in Jul with two seen on one date.

Fewer **Cormorants** are using the trees on the edge of Harpers Bank Wood as a roost outside of the breeding season. The highest count of the year was 374 in May when both adults and juveniles were present. Nest building started on 6<sup>th</sup> Feb and a total of 173 nests were recorded by May.

There were only two records of **Bittern**, both single birds. One was seen in Jun is only the second record for the month. Ten **Grey Herons** were also recorded in Jun. There were two sightings of **Great White Egret** and surprisingly only one record of **Little Egret** when two were seeing catching dragonflies along the edge of Harpers Bank Wood in Jul.

An **Osprey** dropped in and perched in a tree in Gale Bog during a morning in Apr. Two **Sparrowhawks** were seen hunting the **Starling** roost in Nov. A **Marsh Harrier** visited the Reserve during Apr and there were three records of **Red Kite** flying over the Mere. The highest count of circling **Buzzards** was 12 in Mar. Pairs nested in Mere Covert and Harpers Bank Wood and juveniles were heard begging for food at various locations around the Reserve.

**Barn Owls** were only seen on 20 days with two on two dates. There was no evidence of breeding on the Reserve. There were six records of **Tawny Owls** and only one for **Little Owl**, near Shaw Green Farm.

**Kingfishers** were seen along the Mere shoreline on 13 days with one catching fish in front of the Bittern Hide in Sep being the highlight.

There were only two records of **Lesser Spotted Woodpecker** but **Great Spotted Woodpecker** was seen on 120 days. Breeding was confirmed with a pair feeding young in a nest hole in Wood Bongs. It was a poor year for **Green Woodpecker** with the species recorded on only two dates.

**Kestrels** were seen throughout the year and bred either on or near the Reserve although the nest site was not located. A juvenile was observed being fed in front of the Observatory in Aug. Interestingly, an adult was seen mobbing a **Hobby** in Sep. **Hobby** was first logged on 22<sup>nd</sup> Apr. There were almost daily sightings from late Aug to late Sep with often two to three birds seen hunting dragonflies over the Mere. There were 11 records of **Peregrine** with one hunting Goldeneye and then Mandarin Ducks in Feb.

**Ring-necked Parakeets** were seen on the Reserve for the first time since 1992! First one in May and then six later in the year in Oct.

There were 110 **Jackdaws** roosting in the woodland around the Reserve in Dec and 80 **Rooks** feeding on Bobby Field in Jan. **Ravens** were recorded on 17 days with two seen on four dates.

There were three **Coal Tit**, 25 **Blue Tit** and nine **Great Tit** territories recorded during the Breeding Bird Survey.

**Skylark** was recorded on 19 days with four singing over the Sprout Field in Mar.

**Sand Martins** were seen on 28 dates with around 500 in Apr the highest count since 2016. Two **Swallows** were over the Mere on 18<sup>th</sup> Mar setting a new earliest date. The highest count was around 100 in Apr. It was a poor year for **House Martins** with only one double figure count of just 10 in May.

It was another very good year for **Cetti's Warbler** with the species recorded on 118 days. Seven birds were singing from different locations around the Mere in May. While breeding was not confirmed it was thought very likely. Malcolm ringed three birds and retrapped four.

**Long-tailed Tits** were recorded on 136 days, breeding was confirmed in Wood Bongs and six territories were recorded. The maximum count was 18 in Sep.

It was a poor year for **Willow Warbler** and **Garden Warbler** but it was a better year for **Sedge Warbler** with 17 adults and two juveniles trapped. It was a good year for **Chiffchaff** and **Blackcap** with 14 and 17 territories recorded respectively.

A total of 102 **Reed Warblers** were trapped but it was a very poor breeding year with only 36 young birds ringed. Many of the adults left the reed beds earlier than usual. A notable retrap was of a male originally ringed in Jun 2013.

**Whitethroat** was seen on 30 dates with possibly three territories on the Reserve.

**Goldcrest** was recorded on 50 days with three territories recorded.

There were 35 **Wren** territories with 20 in Mere Covert. **Nuthatch** posted nine territories and **Treecreeper** was confirmed to breed in Wood Bongs again with four territories recorded around the Reserve. Seven were ringed.

Up to 20,000 **Starlings** roosted in the reeds near Shaw Green Willows in Nov.

During Oct, around 200 **Redwings** were seen over the Reserve and 100 **Fieldfare** were seen feeding on Mere Meadow in Nov. There were 11 **Mistle Thrushes** on Church Field in Oct. There were three **Song Thrush** and 12 **Blackbird** territories recorded.

**Spotted Flycatcher** was recorded on 16 days and breeding was confirmed when a pair were seen feeding a fledgling in a nest in Wood Bongs in Jul.

There were 19 **Robin** territories recorded and a **Redstart** was seen in Penny Croft on several dates in Apr. **Wheatear** was recorded on two dates, the first records since 2014.

Two **Tree Sparrows** seen in Dec were the first since 2016. There were three **Duncock** territories recorded.

The new created bunds surrounding the ponds and scrapes provided habitat for wagtails with **Grey Wagtails** seen on 18 days and up to 10 **Pied Wagtails** on 87 days. A **White Wagtail** was recorded in May.

There were six **Meadow Pipits** on the Sprout Field in Apr.

There were 20 **Chaffinch** feeding on the Sprout Field in Oct, 10 breeding territories were recorded. There was a winter flock of 12 **Bullfinch** seen in Mere Covert and around 100 **Linnets** were feeding in the fields surrounding Gale Bog in Apr. **Lesser Redpoll** was only recorded on one date. Several **Siskins** visited the Bird Table in front of the Observatory in Jan and Feb. There were around 100 in the Alders near the Boathouse in Dec.

There were four records of **Yellowhammer**, all of single birds in the hedgerows surrounding the Reserve.

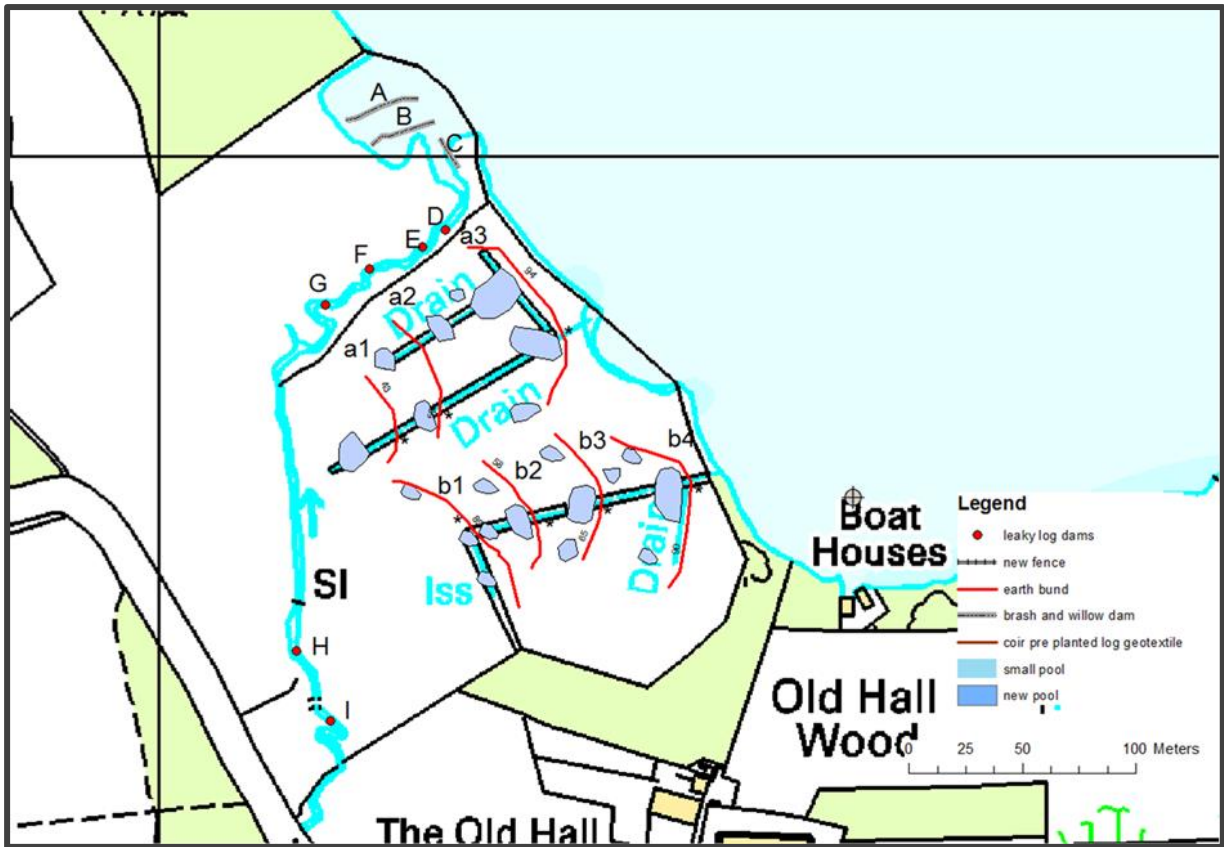
Malcolm ringed 28 **Reed Buntings** and eight territories were recorded.

During March 2021 work started on an exciting plan to create a series of bunds, scrapes and ponds in several areas on the Reserve. The initial focus of the work was in Dolls Meadow where a series of 23 pools and scrapes replaced the old ditch system (see map). Nearby in Rostherne Brook six leaky dams were built to slow the flow and encourage flooding into the adjacent fields which will help deposit silt and create a more dynamic wetland. Woven willow coirs, positioned at the mouth of Rostherne Brook, help divert water back into Brook Meadow pooling the flow and directing it to filter through a young willow bed.

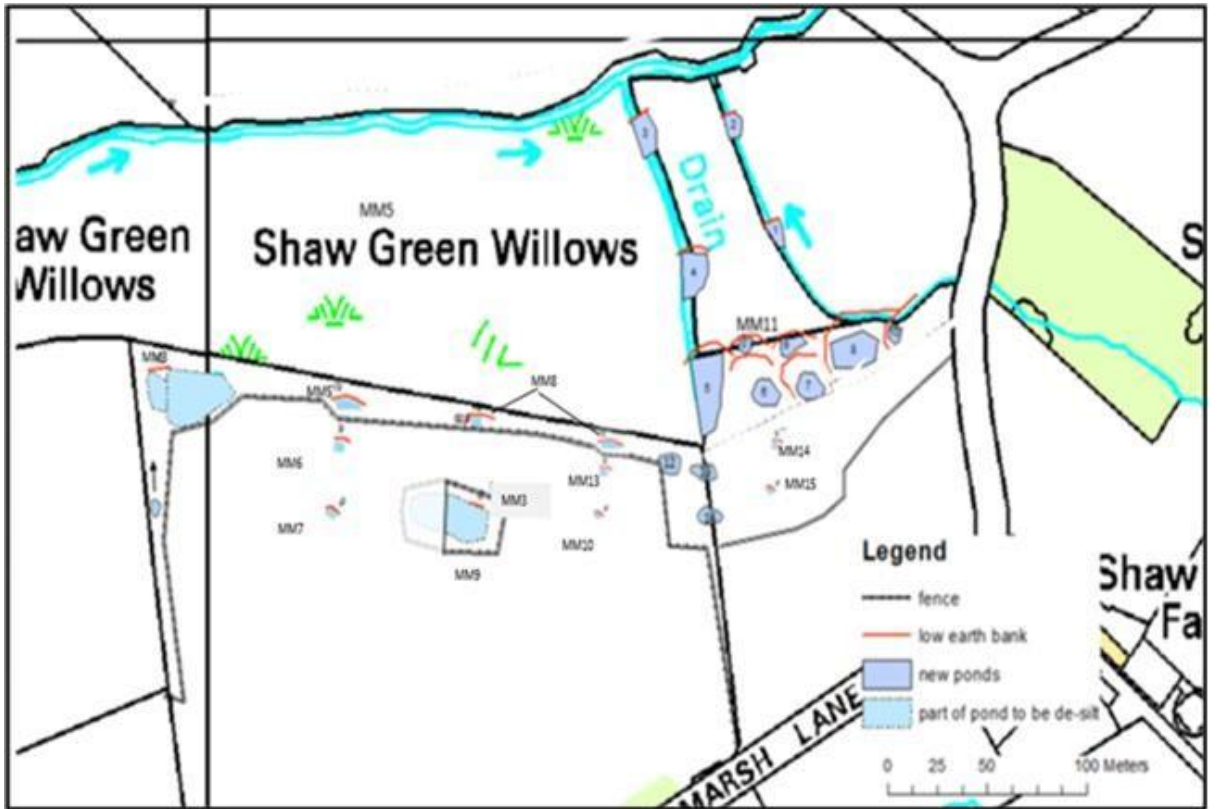
During September 2021 the second phase of the work started on the creation of wetland features in the southern section of the NNR near Shaw Green Willows, Mere Field, Mere Meadow and Old Meadow (see map). Bunds, ponds, scrapes and leaky dams were all created in order to improve water quality and increase ecological diversity.

Heavy rainfall in Jan resulted in serious flooding around the Reserve as water flowed back into the Mere from Blackburn's Brook (see photos below).





Map showing Phase 1 of the Rostherne Mere NNR Wetland Enhancement Project on Dolls Meadow.



Map showing Phase 2 of the Rostherne Mere NNR Wetland Enhancement Project near Shaw Green Willows.





Wetland Enhancement Project in Dolls Meadow 26<sup>th</sup> Mar 2021, © Bill Bellamy



Wetland Enhancement Project in Old Meadow 31<sup>st</sup> Jan 2022, © Bill Bellamy





**Water flowing back into the Mere from Blackburn's Brook on 21<sup>st</sup> Jan 2021, © Rupert Randall.**



**Flooding around the Bittern Hide on 21<sup>st</sup> Jan 2021, © Phil Dell.**

## Systematic List 2021

In the following accounts, tables including ticks from the tick list have been taken as referring to a single bird. Several wetland species are counted regularly and included in the monthly WeBS count. The tables generated include the highest counts for each of the four 'weeks' of each month (i.e. 1-8, 9-16, 17-24, 25-30/31, except in the case of February where 'weeks' run 1-7, 8-14, 15-21, 22-28/29). nc = Not Counted.

### Canada Goose (*Branta canadensis*)

Regular visitor at all times

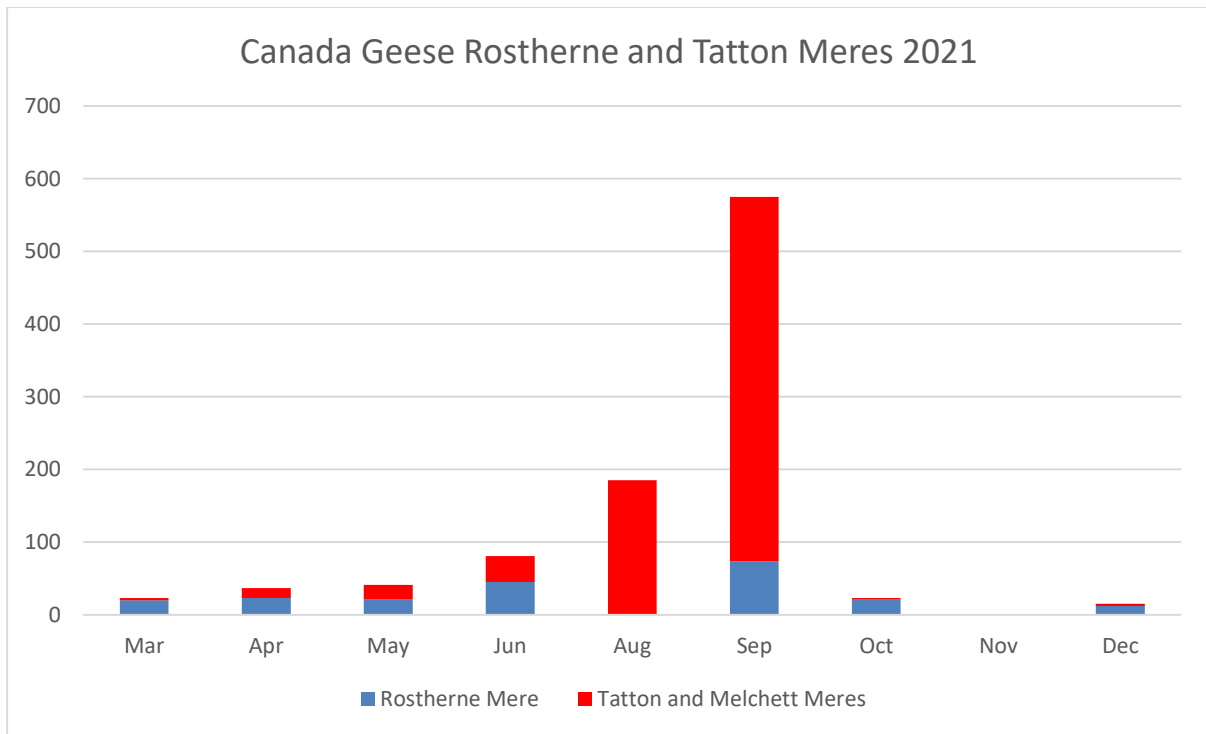
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Monthly max</b>	110	180	30	46	27	88	92	20	502	22	16	12

The annual total of monthly maxima was comparable to last year which was the second highest since 2008. There were 110 recorded on 25<sup>th</sup> Jan and the count of 180 on 13<sup>th</sup> Feb was the highest for the month since 1991 (529). Numbers were lower during Mar, Apr and May. A f was sitting on a nest in Gale Bog on 9<sup>th</sup> May and 12 goslings were first recorded on 18<sup>th</sup> May. At least three pairs bred producing a total of 22 goslings, the highest number since the 1970s. The three separate broods were often seen on the new scrapes on Dolls Meadow and it is thought the majority of young fledged.

During Jun and Jul 2020 around 130 geese (70 Canadas and 60 Greylags) caused significant damage to the reed beds around the margins of the Mere through grazing during their flightless moult. In early Jun 2021, a strategy was devised to disrupt the flocks before they settled to moult. This involved launching a boat when large flocks were spotted on the Mere to disturb the geese so that they flew away from the Reserve. However, it soon became apparent that many would hide in the reed beds when they first spotted the boat leaving the Boathouse, emerging later when the boat left the water. A total of 76 birds moulted on the Mere from late Jun into Jul. While they grazed some areas of the reed beds the damage was not as severe as in 2020 because very few Greylag Geese remained to moult with them as they appeared more sensitive to the boat disturbance, leaving the Mere not to return. The total number of moulting geese was therefore around half of that recorded in 2020. Additional birds which had already moulted elsewhere joined the Canada flock to increase the Jul maximum to 92. Numbers gradually declined through Jul and into Aug when they were recorded on only two dates (20 on each).

As in most years, the highest numbers of Canada Geese were recorded in Sep with 502 on 20<sup>th</sup>, 500 on 21<sup>st</sup>, 426 on 22<sup>nd</sup> and 420 on 26<sup>th</sup>. The result from coordinated WeBS counts at Rostherne, Tatton and Melchett Meres are shown in Figure 1. The table illustrates the transient nature of Canada Geese moving between the sites. During the 12<sup>th</sup> Sep WeBS count there were 74 on Rostherne Mere and 501 on Tatton and Melchett meres combined.

After Sep there were only seven records until the end of the year with 22 on 10<sup>th</sup> Oct and 16 on 5<sup>th</sup>, 13<sup>th</sup> Nov and 12 on 18<sup>th</sup>, 21<sup>st</sup> Dec. Interestingly, the WeBs counts show that there were also very few geese at Tatton during this period.



**Figure 1 Numbers of Canada Geese at Rostherne and Tatton Meres during monthly WeBS counts 2021 (there were no counts for Jan, Feb and Jul).**

### Greylag Goose (*Anser anser*)

Feral (some possibly wild), irregular visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Monthly max</b>	125	62	9	5	4	46	24	33	66	24	0	0

There were only two records in Jan but they were notable. Counts of 97 on 3<sup>rd</sup> and then 125 on 25<sup>th</sup>. The latter is the highest Dec/Jan count on record! There were 62 on 6<sup>th</sup> and 15<sup>th</sup> Feb, the highest Feb count recorded. However, numbers fell away in late Feb and remained in single figures until early Jun when they increased to 46 on 12<sup>th</sup>. The flock was driven off the Mere using a boat to prevent damage to the reedbeds prior to their annual moult when they are flightless. In contrast to the Canada Geese, the large majority of Greylags did not return and only two appeared to stay to moult compared to 60 in 2020.

Double figure counts were seen in Jul (max 24) and Aug (max 33) as birds returned to the Mere. There was a series of higher counts in Sep peaking at 66 on 19<sup>th</sup>. However, there was only one record of 24 birds from Oct to Dec.

### Pink-footed Goose (*Anser brachyrhynchus*)

Irregular visitor, skeins Sep-Mar

There were nine records in 2021 (seven in 2020, two in 2019 and six in 2018).

There were four records from Jan to Mar. Around 100 were heading north on 1<sup>st</sup> and c50 over on 25<sup>th</sup> Jan. One was seen within the Greylag Goose flock on the Mere on 15<sup>th</sup> Feb and there were 130 over on 21<sup>st</sup> Mar. In Nov there were 250 flying south on 5<sup>th</sup> and 48 flying north on 10<sup>th</sup>. There were several skeins totalling c400 flying north-west on 15<sup>th</sup> and c100 over on 24<sup>th</sup>. The last record was of three skeins totalling 245 flying north-west on 21<sup>st</sup> Dec.



Greylag Geese and a Mandarin Duck on 20<sup>th</sup> Sep, © John Hancock.

### Mute Swan (*Cygnus olor*)

Regular visitor at all times, bred in 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	1	5	2	3	3	2		1	8	9	4	1

There was no evidence of breeding in 2021 after a successful attempt in 2020 in which a total of three cygnets fledged.

The majority of sightings referred to one or two birds although none were recorded in Jul. Five immatures visited the Mere on 6<sup>th</sup> Feb. Six birds were seen on eight dates in Sep with eight on 25<sup>th</sup>. Nine (six adults, three immatures) were recorded on 3<sup>rd</sup> Oct which was reduced to eight by 7<sup>th</sup>. There were only three sightings from Nov to Dec with four (two adults, two immatures) on 7<sup>th</sup> Nov.

### Whooper Swan (*Cygnus cygnus*)

Uncommon visitor, Sep-May

There were two records during the year. Four landed on the Mere on 24<sup>th</sup> Jan and then five were recorded on 5<sup>th</sup> Nov.

### Egyptian Goose (*Alopochen aegyptiacus*)

Uncommon visitor. Presumed escaped or feral birds

The species was recorded on 22 days (12 days in 2020, 18 in 2019 and 32 in 2018). There were four records in Jan with a single on 1<sup>st</sup> and two on 8<sup>th</sup>, 9<sup>th</sup> and 22<sup>nd</sup>. Locations included Old Meadow, Snipe Marsh, Dolls Meadow and near the Boathouse. There were no further records until tick-list only entries on 7<sup>th</sup> and 9<sup>th</sup> Apr.

Later in the year, the species was recorded on seven days in Sep with nine on 14<sup>th</sup>. These were initially seen feeding on grassland behind Egerton Hall before flying over the Reserve. This is the highest count since 16 were seen in Oct 2017. There were six on 15<sup>th</sup>. Seven were recorded on 1<sup>st</sup> Oct with two on Brook Meadow on 26<sup>th</sup>, 28<sup>th</sup> and 29<sup>th</sup>. In November, there were two flying over Harpers Bank Wood on 17<sup>th</sup> and two on Old Meadow on 18<sup>th</sup>. The last record of the year was of two seen in the field behind Egerton Hall on 21<sup>st</sup> Dec.

It is highly likely that the birds visiting Rostherne are part of the breeding feral population which have been reported in Tatton Park in recent years. The species is often recorded on the WeBS counts on Melchett and Tatton meres with a maximum of five adults on Melchett Mere on 12<sup>th</sup> Sep.



**Egyptian Goose on 8<sup>th</sup> Sep, © John Hancock.**

**Shelduck (*Tadorna tadorna*)**

Irregular visitor

There were six records in 2021 (four in 2020, two in 2019 and three in 2018). One was recorded on 22<sup>nd</sup> Jan. Three were seen on 22<sup>nd</sup> Feb and one on 6<sup>th</sup> Mar. During May, a pair were seen on the new scrapes in Dolls Meadow on 5<sup>th</sup>, 17<sup>th</sup> and 24<sup>th</sup>.

**Mandarin Duck (*Aix galericulata*)**

Irregular visitor, origin unknown, bred in 2021

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	30	35	10	10	10	50	7	9	6	8	6	8

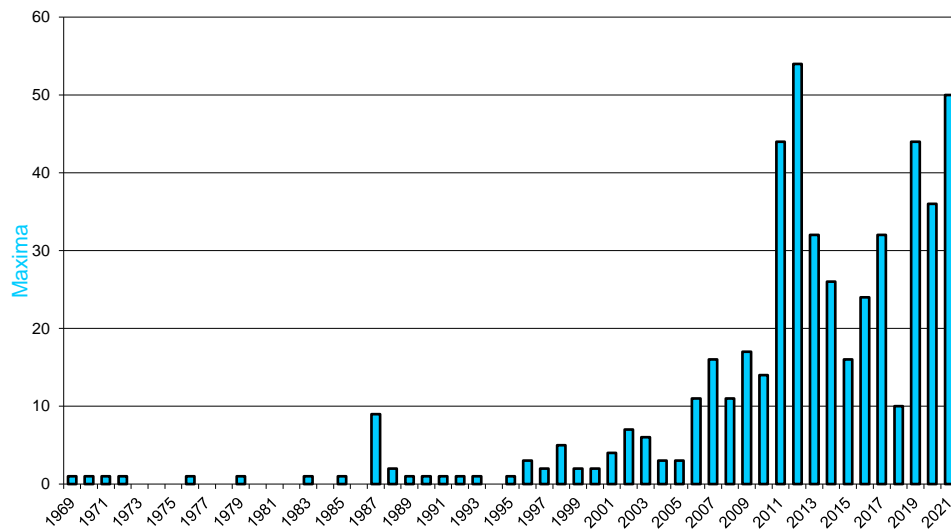
The species was seen on 109 days. High counts in the first quarter included 26 on 3<sup>rd</sup> Jan and 30 on the sandbar on 28<sup>th</sup> Jan. There were 20, 35 and 24 on 6<sup>th</sup>, 11<sup>th</sup> and 15<sup>th</sup> Feb respectively.

The scrapes and ponds on Dolls Meadow provided a new habitat for Mandarins and several m were seen fighting and displaying throughout the spring. Three m were seen displaying to a single f on 1<sup>st</sup> Apr and there were nine m surrounding one f on 26<sup>th</sup> Apr. Breeding was confirmed when a m and f with 12 small chicks were seen on 7<sup>th</sup> May. During Jun, 31 birds were seen on Dolls Meadow on 6<sup>th</sup> and then an amazing 50 flew over Marsh Lane to land on the Mere on 21<sup>st</sup>. This is the second highest count ever recorded, only slightly lower than the maximum of 54 seen in Jan 2012. A family party with seven medium sized young was logged on 28<sup>th</sup>. Adults with two young were recorded on 11<sup>th</sup> and 16<sup>th</sup> Jul. Interestingly, a pair with two small chicks was seen emerging from vegetation on 8<sup>th</sup> Aug. Mandarin Ducks are thought to only have one brood per year so could these chicks have hatched from a late replacement clutch?

There were fewer records from Sep and Dec and only occasional birds seen on Dolls Meadow. There were eight on 10<sup>th</sup> Oct and eight (5m, 3f) on 9<sup>th</sup> Dec.

The graph below shows the trend towards higher maximum counts from 2005 with several above 40, although there have been years when markedly fewer birds were recorded such as in 2015 (16) and 2018 (10).





**Figure 2 Annual maximum counts of Mandarin Duck 1969 to 2021.**



**Mandarin Ducks on 20<sup>th</sup> Mar, © Jules Hill.**

**Shoveler (*Anas clypeata*)**

Autumn &amp; winter visitor, has bred

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
4		2	4	2	2			2		25	12
	2			2				1	19	27	15
	2		4	2				3	20	18	10
	1	1	2	1					26	17	10

The numbers of Shoveler were the lowest since the 1960s! The highest count in the first winter period was four on 3<sup>rd</sup> Jan and species was not seen again until the second week in Feb. There were four on 5<sup>th</sup> and 22<sup>nd</sup> Apr. A pair was seen on the new ponds and scrapes on Dolls Meadow on eight dates from May to early Jun but there was no evidence of breeding. They were last seen on 7<sup>th</sup> Jun.

Shoveler was not recorded again until two were seen on the Mere on 4<sup>th</sup> Sep. Double figure counts were recorded from 10<sup>th</sup> Oct (16) but monthly maximums were modest at 26, 27 and 15 for Oct, Nov and Dec respectively.

**Gadwall (*Anas strepera*)**

Summer, autumn &amp; winter visitor, otherwise irregular, bred 2006, 2007

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Monthly max</b>	4	3	2	3	4	2				4	4	

Gadwall were recorded on 22 days (7 days in 2020, 20 in 2019 and 19 in 2018). All the records were single figure counts with range one to four birds. The last double figure count was in Oct 2013. Twenty of the 22 records were in the first half of the year. Four were seen on 3<sup>rd</sup> Jan and three (two m, one f) on 27<sup>th</sup> Feb. There were six records in Apr with a maximum of three birds seen on 13<sup>th</sup>. There were nine records in May and Jun with the majority referring to a pair seen on the scrapes and ponds on Dolls Meadow. They were last seen on 5<sup>th</sup> Jun but there was no evidence of breeding. Four (two m, two f) were seen on Dolls Meadow on 8<sup>th</sup> May. There were records of four (two m, two f) on 28<sup>th</sup> Oct and 10<sup>th</sup> Nov.

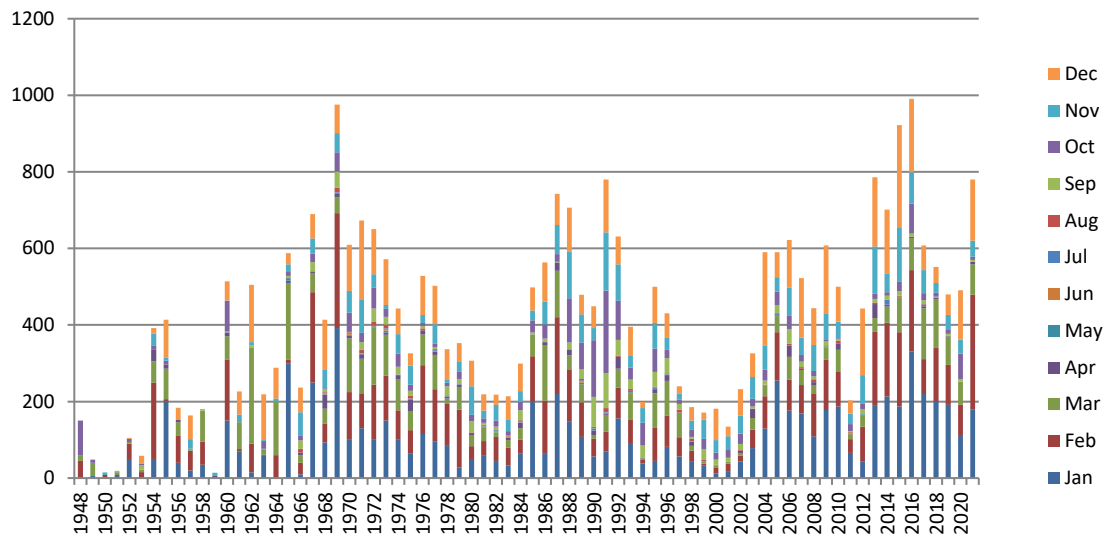
**Wigeon (*Anas penelope*)**

Winter visitor, passage migrant

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
179	300	79	4						4	12	77
54	202	45	7					2	8	11	124
122	131	18						2	2	30	106
130	72	13						5	8	42	160

The total of monthly maxima was the highest since 2016. The maximum count in Jan was 179 on 3<sup>rd</sup>. There were several very high counts through Feb with 300 on 4<sup>th</sup> representing the highest ever count for the month and the highest annual count since Jan 2016 (331). Numbers started to fall towards the end of Feb with the Mar high 79 on 1<sup>st</sup>. There were three records in Apr with the last count for the first half of the year being seven on 11<sup>th</sup>.

Numbers were slow to build up the in the second winter period. Two on 15<sup>th</sup> Sep were the first records but the count only increased to eight by the end of Oct. This was the lowest Oct maximum since 2010 (two). There were 42 on 28<sup>th</sup> Nov before the first three figure counts were seen on 15<sup>th</sup> Dec (124). The monthly maximum of 160 was recorded on the last day of the year, the highest Dec count since 2016 (192).



**Figure 3 Annual totals of Wigeon based on monthly maxima 1948-2021.**

**Mallard (*Anas platyrhynchos*)**

Resident, small breeding population

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
202	52	12	10	14	10	12	15	30	12	40	66
44	60	20	20	15	76	12	10	40	88	35	60
22	12	10	8	30	16	1	14	35	6	28	30
24	10	14	15	20	18	37	40	1	20	34	25

Monthly maxima were slightly higher than in 2020 but they remain at a very low ebb. The maximum in the first winter period was 202 on 3<sup>rd</sup> Jan which represents the first count over 200 since Jan 2011 (205). Numbers fell markedly after this period with 44 the second highest count for the month. Five m pursued one f on the new wetland on Dolls Meadow on 1<sup>st</sup> Apr. The first ducklings were seen on 14<sup>th</sup> Apr, a f with 12 young. There were several records on ducklings in the following weeks with the new wetland around the Reserve providing a significant increase in habitat for the species. The maximum duckling count was of 20 consisting of 11 small young and nine larger ducklings on 30<sup>th</sup> Apr. Four large young were seen throughout May and Jun, last recorded on 28<sup>th</sup> Jun. There were two late broods in Jul with two small ducklings on 4<sup>th</sup> and eight on 16<sup>th</sup>. A pair also attempted to breed in Wood Bongs but the three eggs were thought to be abandoned. Monthly highs in the latter part of the year included 88 in Oct, 40 in Nov and 66 in Dec.

**Teal (*Anas crecca*)**

Winter visitor, otherwise small numbers at any time

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
110	101	14	50			4				52	85
102	412	123	30					2	6	26	56
50	20	8	7					1	2	48	68
115	10						3	1		42	14

The total of monthly maxima were the highest since 2016 although they remain at a low level compared to long-term data. The highest count in Jan was 115 on 25<sup>th</sup>. There were 101 on 6<sup>th</sup> Feb and then a high count of 412 on 11<sup>th</sup>. This is the highest monthly maximum since Jan 2015 (580) and the highest count for Feb since 2012 (505). There were double figure highs during late Feb and early Mar before a resurgence to 123 on 14<sup>th</sup> Mar, the highest Mar count since 2014 (211). Fifty were seen on the Mere on 2<sup>nd</sup> Apr, the highest count for the month since 2007

(111). Seven recorded on 22<sup>nd</sup> Apr was the last date for several months until four were recorded on 4<sup>th</sup> Jul. Numbers were slow to recover through Sep and Oct with the Oct high of only six on 10<sup>th</sup> and then the Nov high of 52 on 7<sup>th</sup> the lowest on record for the month! There were 85 by the 5<sup>th</sup> Dec but this is the second lowest Dec maximum ever recorded. In comparison, ten years previously the Dec 2011 maximum figure was 627!

### **Pochard (*Aythya ferina*)**

Autumn & winter visitor, small numbers summer

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	6	1							4	1	9	10

There were 28 records in 2021 with seven in Jan. The highest count for Jan was six on 1<sup>st</sup>. The last record of the first winter period was one on 1<sup>st</sup> Feb. Four males were seen on 19<sup>th</sup> Sep but only a single male was seen in Oct. Nine were recorded on 2<sup>nd</sup> and 7<sup>th</sup> Nov. The highest count during the year was 10 (five m, five f) on 30<sup>th</sup> Dec.

WeBS counts in Tatton Park recorded 60 in Oct and 47 in Nov. It seems surprising that probably only a few of these birds made the short distance to Rostherne during 2021.

### **Tufted Duck (*Aythya fuligula*)**

Irregularly breeding resident; post-breeding, autumn & winter visitor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	1	1	1	2		19	55	60	1	34	5
27	4	1	3	1		65	106	18	24	30	12
2	21	1	6		15	35	66	35	20	24	11
6	3	1	1	3	30	85	43	10	40	5	20

Monthly maxima have been at a low level since 2014. The Jan maximum was 27 on 11<sup>th</sup>. The only double figure count in Feb was 21 on 15<sup>th</sup>. Only one m was seen throughout Mar, the lowest high for the month since 2001 when none were recorded. There were single figures throughout Apr and May before a return to double figure counts in late Jun. The Jul high of 85 on 25<sup>th</sup> was the lowest since 2001 (62). The only three figure count of the year was 106 on 13<sup>th</sup> Aug which represents the lowest annual maximum since 1969 (100)! The Sep high was 60 on 8<sup>th</sup>. Numbers fell slightly in the Oct and Nov and the Dec maximum was only 20 on 31<sup>st</sup>. By comparison, WeBS counts in Tatton Park included 142 in Aug, 74 in Sep, 282 in Oct, 92 in Nov and 62 in Dec.

### **Common Scoter (*Melanitta nigra*)**

Uncommon passage migrant; rare in winter

There were seven records. One was seen on 8<sup>th</sup> Apr. There was a series of three observations in Jul with one on 5<sup>th</sup>, five on 10<sup>th</sup> and three underneath the trees where the Cormorants roost at the edge of Harpers Bank Wood on 13<sup>th</sup>. These represent the highest counts since Jun 2016 (eight). An adult was seen feeding in front of the Bittern Hide on three dates from 28<sup>th</sup> to 30<sup>th</sup> Dec. Mid-winter records are unusual and this is only the fifth Dec sighting!



Common Scoter on 30<sup>th</sup> Dec, © Kaz Horrocks.

**Goldeneye (*Bucephala clangula*)**

Passage migrant & winter visitor, occasional in summer

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	14	13	6							10	5
9	15	14	7						3	4	12
10	18	10	1						2	12	5
10	16	9							3	5	11

It was a poor year for Goldeneye. The total of monthly maxima was the lowest since 1984! The highest count during the first half of the year was 18 (six m, 12 f) on 15<sup>th</sup> Feb. The last record was one on 20<sup>th</sup> Apr. The first returning birds were seen on 15<sup>th</sup> Oct when three (1 m, 2 f) were logged. The Nov and Dec maximums was 12 on 17<sup>th</sup> Nov and 9<sup>th</sup> Dec. There were similar counts on the WeBS Survey in Tatton Park with 15 recorded in Dec.

**Hooded Merganser (*Lophodytes cucullatus*)**

Very rare vagrant

One seen on several days in Feb in Tatton Park visited Rostherne Mere on 27<sup>th</sup> Feb and was seen at 13:30 in Gale Bog by Roger and Sheelagh Halsey. This is the first record of the species on the Reserve but the visit was fleeting and the species was not seen again.

**Goosander (*Mergus merganser*)**

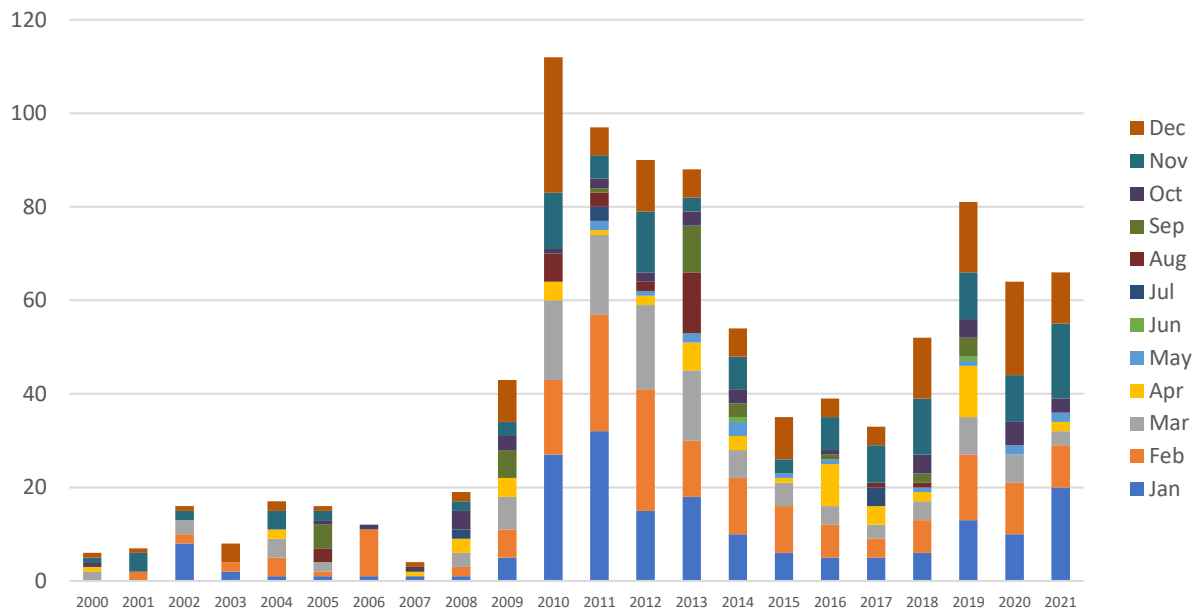
Irregular passage migrant & winter visitor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20	6	2		1					3	15	10
6	4	2		1					1	8	8
15	9	3		2					2	8	5
7	7	3	2						2	16	11

Monthly maxima during 2021 were slightly higher than in 2020. Double figure counts were usually made just before dusk when birds flew into roost on the Mere.

Twenty roosting during the evening of 3<sup>rd</sup> Jan represented the annual maximum and the highest Jan count since 2011 (32). Later in the month, 15 were recorded on 18<sup>th</sup>. There were nine on 17<sup>th</sup> and eight (five m, 3 r/h) on 21<sup>st</sup> Feb. There was an interesting record on 23<sup>rd</sup> Mar when there was a m and r/h on the Mere while another m was seen swimming down Blackburn's Brook. The last record of the first half of the year was a single r/h on 24<sup>th</sup> May.

The first record during the second winter period was of a single r/h on 3<sup>rd</sup> Oct. The species was seen almost daily during Nov and Dec. There were 15 (two m, 13 r/h) on 5<sup>th</sup> and 16 (eight m, eight r/h) on 30<sup>th</sup> Nov when display was noted. This is the highest Nov count on record. Double figure counts in Dec were 10 (five m, five r/h) on 5<sup>th</sup> and 11 (six m, five r/h) on 31<sup>st</sup>.



**Figure 4 Annual totals of Goosander based on monthly maxima 2000-2021.**

### **Pheasant (*Phasianus colchicus*)**

Breeding resident supported by local releases

Pheasants are often seen throughout the year and there are regular releases by Tatton Estates onto land surrounding the Reserve during the late summer and early autumn. Double figure counts included at least 10 on 23<sup>rd</sup> Mar, 2<sup>nd</sup>, 9<sup>th</sup> and 13<sup>th</sup> May. The highest count was 16 on 19<sup>th</sup> Sep. There were 11 on 26<sup>th</sup> Sep and 10 on 10<sup>th</sup> Oct. During Nov there were 12 on 2<sup>nd</sup> and 10 on 17<sup>th</sup>. There were 10 in Mere Meadow on 9<sup>th</sup> Dec.

### **Swift (*Apus apus*)**

Passage migrant & summer visitor, Apr-Oct

Swift was recorded on 21 days (20 days in 2020, 26 in 2019 and 37 in 2018). The first record of the year was two seen on 29<sup>th</sup> Apr (5<sup>th</sup> May in 2020). There were 12 records in May with c20 over Penny Croft on 7<sup>th</sup> and c30 over on 9<sup>th</sup>. There were 12 feeding over the Natural England workshop on 10<sup>th</sup> which then moved over the Mere and 35 on 23<sup>rd</sup> May. There were c20 over on 20<sup>th</sup> Jun and 6<sup>th</sup> Jul. The highest count of the year was 68 after heavy rain on 8<sup>th</sup> Aug. This was the last record of the year (5<sup>th</sup> Aug in 2020).

### **Cuckoo (*Cuculus canorus*)**

Summer visitor, Apr-Sep, has bred; decreasing

It was an interesting year for Cuckoo on the Reserve. There were records on five days (two in 2020, one in 2019 and none in 2018). One was heard calling in Wood Bongs on 29<sup>th</sup> Apr. A silent f was seen in Wood Bongs on 10<sup>th</sup> May. It flew into the trees near the Bittern Hide before coming down onto the ground. One was heard calling in



the Observatory on 25<sup>th</sup> May. A f flew out of Wood Bongs on 22<sup>nd</sup> Jun. The last record was of a bird which flew across the front of the Bittern Hide on 10<sup>th</sup> Aug.

On the 30<sup>th</sup> Jun Malcolm Calvert found a Cuckoo egg with two Reed Warbler eggs in a nest in the Mere Covert reed bed. A visit on the 5<sup>th</sup> Jul revealed the Cuckoo egg and a single Reed Warbler egg. Surprisingly, a visit to the nest on the 8<sup>th</sup> Jul revealed the Cuckoo egg and a tiny Reed Warbler chick which had just hatched! Subsequent visits to the nest on the 13<sup>th</sup> and 15<sup>th</sup> Jul indicated that the young Reed Warbler chick developed well (to eventually fledge) but the Cuckoo egg failed to hatch. It was suggested that the egg was probably infertile as observed last year when an infertile Cuckoo egg was found on 20<sup>th</sup> Jul. These breeding attempts represent the first evidence of Cuckoo parasitism in Reed Warbler nests on the Reserve since 1993!

Malcolm compared photos of the two alien eggs from Jul 2020 and Jun 2021. Whereas the overall brown colouration was very similar, the markings varied between the two eggs. Malcolm asked the opinion of Nick Davies who has investigated Cuckoos at Wicken Fen. Nick believed that two different f Cuckoos were responsible for the eggs as eggs from one individual are virtually identical. It is therefore possible that two f are active on the Reserve. Let us hope that they have some future interaction with at least one m.

A short article written by Malcolm entitled '**Cuckoo – a teasing revival?**' is on page 62.



**Cuckoo egg within a Reed Warbler nest on 30<sup>th</sup> Jun, © Malcolm Calvert.**



**Cuckoo egg with Reed Warbler nestling on 11<sup>th</sup> Jul, © Malcolm Calvert.**



Cuckoo on 10<sup>th</sup> May, © Steve Collins.

**Stock Dove (*Columba oenas*)**

Breeding resident

Stock Dove was recorded on 118 days (79 days in 2020, 114 in 2019 and 112 in 2018). There were no records in either Jan or Oct. Counts were usually of one to three birds with four on 3<sup>rd</sup> Mar and 16<sup>th</sup> Jul and five on 27<sup>th</sup> Apr, 27<sup>th</sup> May and in the front of the Observatory (family party) on 25<sup>th</sup> Jul. There were two double figure counts with a family party of 10 in Penny Croft on 22<sup>nd</sup> Aug and 15 near the Natural England Workshop on Marsh Lane on 22<sup>nd</sup> Aug. Two were seen displaying on 6<sup>th</sup> and 15<sup>th</sup> Feb and then two were on the porch of the Mere Meadow Barn Owl box on 1<sup>st</sup>, 17<sup>th</sup> and 20<sup>th</sup> Mar.

Observations of the six Barn Owl boxes throughout the year indicated that Stock Doves bred in each of the six boxes with possible second broods in several as young birds were flying around while adults sat on warm eggs inside the boxes. The Barn Owl boxes were closely inspected by Bill Bellamy and Phil Dell on 24<sup>th</sup> Aug and the following information ascertained:

**Mere Field Box** – Abandoned Stock Dove nest with three rotten eggs.

**Mere Meadow Box** – Two adults, shallow nest with one warm egg, old broken eggs shells with young birds flying near the box.

**Penny Croft Box** – One adult, shallow nest with two warm eggs, old broken eggs with young birds flying nearby.

**Mere Covert Box** – Not closely inspected but one adult entering the box with food, young birds flying nearby.

**Dolls Meadow Box** – One adult, shallow nest with two warm eggs.

**Brook Meadow Box** – One adult, shallow nest with one warm egg.

The Breeding Bird Survey (BBS) recorded two territories in Mere Covert.

**Woodpigeon (*Columba palumbus*)**

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos.</b>	c50	c100	c50	c20	15	63	c50	c30	c50	c30	c30	c500

Flocks often roosted in Harpers Bank Wood during the winter periods with c100 on 6<sup>th</sup> Feb. Numbers fell through the spring and summer with the highest count 63 on Bobby Field on 24<sup>th</sup> Jun. The annual maximum was c500 on Bobby Field on 7<sup>th</sup> Dec.

### **Collared Dove (*Streptopelia decaocto*)**

Irregular visitor, has attempted to breed

Collared Dove is often seen in Rostherne village and the species occasionally ventures onto the Reserve. The species was recorded on 78 days. The largest counts were near the Natural England Workshop on Marsh Lane where c20 were recorded sitting on wires on 6<sup>th</sup> Feb and 12<sup>th</sup> Oct.

### **Water Rail (*Rallus aquaticus*)**

Passage migrant & winter visitor, has bred

The number of days in each month on which birds were seen or heard was as follows (ticks on the tick list have been taken as referring to single birds – this method can seriously distort the apparent number of records of single birds).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>No of Days Recorded</b>	14	15	8	3	1				2	14	14	11
<b>1 bird</b>	9	11	3	2	1				2	13	4	8
<b>2 birds</b>	2	3	5	1						1	4	1
<b>3 birds</b>		1									2	1
<b>4 birds</b>	2										3	
<b>5 birds</b>	1											1
<b>6 birds</b>											1	

The reed beds around Shaw Green Willows and the Boathouse are the most popular areas to hear ‘sharming’ Water Rails. There were 82 records in 2021 compared with 43 in 2020. Four birds were recorded on two dates in Jan with five on 13<sup>th</sup> Jan. Water rails were recorded almost daily from 1<sup>st</sup> Jan to 23<sup>rd</sup> Mar. The next record was one near the Bittern Hide on 26<sup>th</sup> Apr and then two on 27<sup>th</sup> and another near Blackburn’s Bridge on 30<sup>th</sup> Apr. The last record during this period was one near Blackburn’s Bridge on 7<sup>th</sup> May.

The first record in the second half of the year was a one heard near the Bittern Hide on 22<sup>nd</sup> Sep, the same date as last year. There were 39 records from Oct to Dec with four on three dates. Six were heard on 17<sup>th</sup> Nov with records from the edge of Harpers Bank Wood, Gale Bog, Shaw Green Willows and Old Meadow. There were five on 19<sup>th</sup> Dec with one in the Boathouse reed bed, two in Gale Bog and two in Shaw Green Willows.

### **Moorhen (*Gallinula chloropus*)**

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	2	1	2	1	1	1	1	1	2	1	2	1

Moorhen was recorded on 44 days (54 days in 2020, 69 in 2019 and 73 in 2018).

Only ones and twos were seen with two seen on six dates. One small juvenile incapable of flight was seen near one of the new ponds on Dolls Meadow on 8<sup>th</sup> Aug indicating that the species bred in 2021.

**Coot (*Fulica atra*)**

Breeding resident

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20	15	10	8	6	6	7	21	82	20	58	40
7	30	10	10	6	18	21	26	48	72	34	26
20	10	10	6	7	14	5	26	95	36	45	22
8	10	6	6	10	1	31	24	76	46	48	20

Monthly maxima were markedly higher than last year and the highest since 2015. The highest count in the first winter period was 30 on 11<sup>th</sup> Feb. A pair were seen mating in front of the Bittern Hide on 19<sup>th</sup> Mar. A bird sitting on a nest in front of the Bittern Hide was noted on 30<sup>th</sup> Mar. A nest with 10 eggs was seen near the old cattle drink near Penny Croft on 2<sup>nd</sup> May. A single large chick was seen on 13<sup>th</sup> and 20<sup>th</sup> Jun.

Coot were often seen feeding close to the shoreline under the Cormorant colony. There appears to be more aquatic plant growth in this area probably due to guano fertilisation from the Cormorants. The highest counts were in Sep with 82 on 4<sup>th</sup> and 95 on 22<sup>nd</sup>, the highest count since Sep 2018 (100). Seventy-two on 10<sup>th</sup> Oct is the highest count for the month since 1982 (73).

**Little Grebe (*Tachybaptus ruficollis*)**

Regular visitor at all times, irregular breeder

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	2	5	1	1	0	1	1	0	2	2	3	4

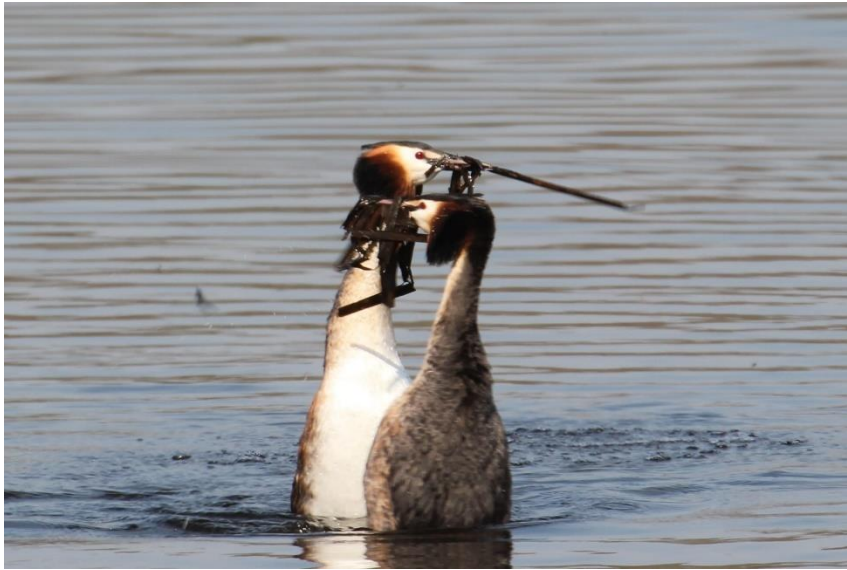
There was only one record in Jan. Two were seen on 5<sup>th</sup>. Five were seen in front of the Bittern Hide on 17<sup>th</sup> and 20<sup>th</sup> Feb, the second highest count since 2011. Four were recorded on 23<sup>rd</sup> Feb when the first trilling of the year was heard. Singles were recorded after this date including a juvenile on 22<sup>nd</sup> Jun. On 20<sup>th</sup> Sep two were seen on the new wetland in Dolls Meadow. There were 17 records from Oct to Nov with three seen on 2<sup>nd</sup>, 7<sup>th</sup> Nov and 10<sup>th</sup> Dec. Four were observed in front of the Bittern Hide on 15<sup>th</sup> Dec.

**Great Crested Grebe (*Podiceps cristatus*)**

Breeding resident

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
7	2	7	10	9	6	12	23	20	26	25	10
4	3	8	8	7	6	15	30	17	28	25	10
5	5	5	9	11	12	2	32	31	7	20	13
8	7	11	8	8	9	14	16	24	23	10	12

Monthly maxima were similar to recent years. Counts were very low in the first winter period with the first double figure count only 11 on 27<sup>th</sup> Mar. Display between pairs was noted on six dates and first seen on 27<sup>th</sup> Feb. Nest building in the reed bed near the Bittern Hide was observed on 26<sup>th</sup> Mar. An adult was sitting on the nest on 25<sup>th</sup> Apr but the nest was abandoned after this date. Another nest building attempt was witnessed near the Bittern Hide during May but once again the nest appeared to be abandoned by the end of the month. No small chicks were seen during the summer and the only record of a juvenile was on 24<sup>th</sup> Aug but it was large enough to fly and could have been bred elsewhere. The annual maximum was only 32 on 17<sup>th</sup> Aug, the second lowest since 2015. However, 28 in Oct was the highest for the month since 2009 (31).



The Great Crested Grebe 'Weed Dance' © Ian McCulloch.

### **Black-necked Grebe (*Podiceps nigricollis*)**

Uncommon visitor, has bred

One was seen in front of Bittern Hide on five consecutive days from 23<sup>rd</sup> to 27<sup>th</sup> Mar.



Black-necked Grebe on 23<sup>rd</sup> Mar, © John Hancock.

### **Oystercatcher (*Haematopus ostralegus*)** Passage migrant & summer visitor, has bred locally; Jan-Nov

Oystercatcher was recorded on 23 days (12 days in 2020, 7 in 2019 and 17 in 2018).

The new scrapes on Dolls Meadow proved popular with 17 records of birds visiting this area. The first record of the year was of one circling the Reserve on 14<sup>th</sup> Mar.

Oystercatchers visited the new scrapes on Dolls Meadow very soon after they were created in Mar. The first sighting was a single on 24<sup>th</sup> and then three on 27<sup>th</sup>, 28<sup>th</sup> and 30<sup>th</sup> Mar. There were nine records in Apr. The majority of records were of ones and twos on Dolls Meadow. There were six records in May with four birds on



Dolls Meadow on 15<sup>th</sup> May, the highest count for the year. There was one on 5<sup>th</sup> and 7<sup>th</sup> Jun with the last record of one on Dolls Meadow on 5<sup>th</sup> Jul (7<sup>th</sup> Jun in 2020 and 7<sup>th</sup> Jul in 2019).



Oystercatcher on a bund in Dolls Meadow on 17<sup>th</sup> Apr, © Steve Collins.

### Avocet (*Recurvirostra avosetta*)

Very rare vagrant, first record 2021

Two birds were first spotted swimming on the Mere at 09:00 on 23<sup>rd</sup> Mar by Sheelagh Halsey. They were seen to take off and fly away from the Mere around 11:00. This is the first record of the species on the Reserve!

### Lapwing (*Vanellus vanellus*)

Declining resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	40	c50	3	7	5	33	65	20	16	c50	27	c100

Lapwing was recorded on 68 days (21 days in 2020, 56 in 2019 and 60 in 2018). The majority of winter sightings referred to flocks flying up from farmland west of the A556 and north of Gale Bog. There were only two records in Jan with 40 over Gale Bog on 19<sup>th</sup>. There were c50 on 4<sup>th</sup> and 15<sup>th</sup> Feb. Two were seen in Bobby Field on 3<sup>rd</sup> and 31<sup>st</sup> Mar. There were seven in a ploughed field near Dirty Lane on 27<sup>th</sup> Apr.

Two were seen on the new scrapes on Dolls Meadow on 30<sup>th</sup> Apr. During May, a single was seen on the Dolls Meadow from 2<sup>nd</sup> to 13<sup>th</sup> May. A second bird arrived on 15<sup>th</sup> May resulting in display. The two were seen to chase a Carrion Crow away from Dolls Meadow on 27<sup>th</sup> May from a suspected nest site. It is thought that the pair attempted to breed and were defending a nest throughout Jun. However, no young were subsequently recorded. During the same period up to 33 birds were recorded on Bobby Field. This number increased to 65 by 5<sup>th</sup> Jul. The last record of an adult on the scrapes was one on 25<sup>th</sup> Jul.

There were only 11 records during the second winter period with c50 over on 22<sup>nd</sup> Oct, 88 over on 8<sup>th</sup> and c100 flying low over the Mere on 29<sup>th</sup> Dec.



**Little Ringed Plover (*Charadrius dubius*)**

Scarce passage migrant and visitor; Mar-Jul

It was encouraging to see one visit the new scrapes on Dolls Meadow on 13<sup>th</sup> Apr and 6<sup>th</sup> May. These were the first records since one was seen on the sandbar at the mouth of Brook Meadow in May 2004!

**Whimbrel (*Numenius phaeopus*)**

Uncommon passage migrant; Apr-Aug, Oct

There were two records. One flew over calling on 27<sup>th</sup> Apr and then 12 were seen in Bobby Field at 15:30 on 30<sup>th</sup> Apr, a record high for the Reserve. These were the first records since one flew over on 6<sup>th</sup> Jul 2012.

**Curlew (*Numenius arquata*)**

Passage migrant, summer &amp; winter visitor, has bred

Curlew was recorded on eight days but none were observed to land on the Reserve. Nearly all the records were of singles with one circling the Mere on 17<sup>th</sup> Jan and one circling Mere Field on 22<sup>nd</sup> Feb. There were four flying over on 23<sup>rd</sup> Mar. The last record of the year was one flying over on 11<sup>th</sup> Aug.

**Woodcock (*Scolopax rusticola*)**

Winter visitor, former breeding resident

There were seven records of Woodcock (five in 2020, two in 2019 and 10 in 2018). One was flushed from Brook Meadow on 21<sup>st</sup> and 22<sup>nd</sup> Jan. One was flushed from Wood Bongs on 13<sup>th</sup> Feb. There were four records in Dec with one flushed from Mere Covert on 2<sup>nd</sup>, one in Harpers Bank Wood on 19<sup>th</sup>, two on 21<sup>st</sup> with sightings in Old Hall Wood and Harpers Bank Wood. The last record was on 31<sup>st</sup> when one was flushed from Harpers Bank Wood.

**Snipe (*Gallinago gallinago*)**

Winter visitor, former breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Monthly max</b>	22	10	7	2	1				3	2	2	22

It was a good year to see Snipe on the Reserve. The new ponds and scrapes on Dolls Meadow and later in the year on Old Meadow provided extra wetland habitat for the species. There were records on 33 days (17 in 2020, 31 in 2019 and 15 in 2018).

There were 22 in the 'Triangle' at the foot of Long Pasture on 22<sup>nd</sup> Jan, the highest Jan count since 2015 (33). Ten in the 'Triangle' on 9<sup>th</sup> Feb was the highest Feb count since 2015 (12). Seven were seen on 13<sup>th</sup> Feb with four flushed from the stream at the bottom of Wood Bongs, two near the boardwalk at Blackburn's Bridge and one from the 'Triangle'. Seven flew into roost in the Snipe Marsh on 29<sup>th</sup> Mar. There were five records in Apr with one ringed by Malcolm near Blackburn's Brook on 30<sup>th</sup>, the first ever Snipe ringed on the Reserve! There were three records of singles during May with one seen feeding on Dolls Meadow on 8<sup>th</sup> and 10<sup>th</sup>.

The species was not seen again until Sep when one on Old Meadow and two on Dolls Meadow were logged on 16<sup>th</sup>. Ones and twos were seen on Dolls Meadow and Old Meadow throughout Oct and Nov. There were three records in Dec with 22 flushed from the 'Triangle' on 19<sup>th</sup> and 20 (18 in the Triangle and 2 on Dolls Meadow) on 21<sup>st</sup>.



The first Snipe ringed on the Reserve on 30<sup>th</sup> Apr, © Malcolm Calvert.

**Common Sandpiper (*Actitis hypoleucos*)**

Passage migrant & summer visitor, has bred; Mar-Oct

There were three records (one record in 2020, 2019 and 2018). One was seen on Dolls Meadow on 8<sup>th</sup> May. There was a single flying low over the Reserve on 2<sup>nd</sup> Jul and one on the sandbar at the mouth of Brook Meadow on 15<sup>th</sup> Aug.

**Green Sandpiper (*Tringa ochropus*)**

Uncommon visitor

There were three records (one in 2020 and 2019, 12 in 2018). One visited the new scrapes on Dolls Meadow on 18<sup>th</sup> Mar, shortly after they were dug. One was flushed from along the boardwalk near Shaw Green Willows on 21<sup>st</sup> Apr. There was a single on Dolls Meadow on 26<sup>th</sup> Apr.

**Black-headed Gull (*Chroicocephalus ridibundus*)**

Regular visitor at all times

COVID restrictions during the first winter period prevented any evening roost counts from being undertaken from Jan to Mar. There were eight counts between 5<sup>th</sup> Nov and 31<sup>st</sup> Dec which are shown in the table below. There were at least 1000 birds in each of the eight counts and highs of c3000 on 6<sup>th</sup> and c5500 on 22<sup>nd</sup> Dec, the highest count since c8000 were recorded in Jan 2013. Interestingly, there were c5000 on the same date in 2020. The largest day count in the first winter period was 250 on 9<sup>th</sup> Mar. The highest day count of the year was c500 on 22<sup>nd</sup> Sep. There were 452 on 28<sup>th</sup> Nov.

**Mediterranean Gull (*Ichthyaeetus melanocephalus*)**

Rare visitor

There were two records. An adult was seen on 24<sup>th</sup> Jan and one at 07:30 during the morning of 2<sup>nd</sup> Jun.

**Common Gull (*Larus canus*)**

Passage migrant & winter visitor

Common Gull was recorded on 19 days matching last year. Numbers were generally low (one to four) and there was only one double figure count of 10 in the roost on 6<sup>th</sup> Dec.

## **Great Black-backed Gull (*Larus marinus*)**

Winter visitor

There were only two records compared to 14 in 2020, 10 in 2019 and eight in 2018. One circled the Mere on 22<sup>nd</sup> Feb. One was seen in the roost on 31<sup>st</sup> Dec.

## **Herring Gull (*Larus argentatus*)**

Winter visitor

Herring Gull was recorded on 68 days (41 days in 2020, 44 in 2019 and 39 in 2018). There were records on 25 days from Jan to Jun but numbers were low (one to four). There were records on 43 days from Jul to Dec. Twenty were seen in the evening roosts on four occasions (see table below). The highest day count was 10 on 28<sup>th</sup> Nov. There was a Herring Gull x Lesser Black-backed Gull hybrid on the Mere on 13<sup>th</sup> Nov.

## **[Caspian Gull (*Larus cachinnans*)]**

Very Scarce visitor

The Cheshire and Wirral Bird Report 2018 says 'Caspian Gull remains a rare bird in Cheshire and Wirral, which is frequently misidentified. Descriptions are essential. The first accepted record for Rostherne Mere NNR was an adult seen by Mike Duckham on 17<sup>th</sup> Nov 2018.

There were two records in 2021. An adult was logged on 24<sup>th</sup> Jan and two seen on 13<sup>th</sup> Nov. No descriptions were provided for either account.

The species was split from Herring Gull and Yellow-legged Gull in 2007 following much deliberation. The first county record for this species (the year before the split) was a first winter bird found by G. Thomas at Birchwood Pools, Moore Nature Reserve on 11<sup>th</sup> Mar 2006. There were several in the next couple of years and then in 2008 there was a flood of records with 13 in total as local gull enthusiasts got their eyes in. The exact numbers of this species recorded to date has yet to be ascertained as a number are pending by the Cheshire rarities committee due to confusion over the issue of possible hybrids (Text taken from Rare and Scarce Birds of Cheshire & Wirral, Allan Conlin and Eddie Williams, 2017).

## **Yellow Legged-Gull (*Larus michahellis*)**

Scarce visitor

There were three records in 2021 (10 in 2020, 12 in 2019 and 21 in 2018 ). They are listed below:

27 <sup>th</sup> Feb	1	adult seen at 14:00
8 <sup>th</sup> Aug	1	juvenile on a buoy.
17 <sup>th</sup> Sep	3	within the Lesser Black-backed Gull flock.

## **Lesser Black-backed Gull (*Larus fuscus*)**

Passage migrant & winter visitor

The species was recorded on 177 days (134 in 2020, 161 in 2019 and 170 in 2018).

The highest Jan count was only 32 on 3<sup>rd</sup> but there were no roost counts during the first three months of the year. The first three figure count was 148 on 13<sup>th</sup> and then 160 on 19<sup>th</sup> Apr. The next was not until Aug when c100 was recorded on 13<sup>th</sup>. There were two high counts in Sep of 502 on 17<sup>th</sup> and 510 on 22<sup>nd</sup>. The Nov and Dec maximums in the evening roosts were 350 and c500 respectively. There were also counts of c500 in Oct 2020 and counts of around 500 represent the highest since Jan 2000 (650)!

## Gull Roost

The following table shows all the gull roost counts made in 2021.

Date	Black-headed Gull	Common Gull	Herring Gull	Lesser Black-backed Gull	Great Black-backed Gull
05 Nov	1700	1	20	350	
10 Nov	1000		2	100	
17 Nov	1000	1	5	90	
30 Nov	1500	2	20	210	
6 Dec	3000	10	20	500	
10 Dec	1000	2	5	120	
22 Dec	5500			300	
31 Dec	1000	4	20	150	1

## Common Tern (*Sterna hirundo*)

Annual passage migrant, Apr-Oct

There were records on six days in 2021 (two days in 2020, two 2019 and nine 2018). All sightings were in Jul with one seen on 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup>, presumably the same bird. It perched on the Weather Station and was seen to consume a Pike among other fish. Later during the month there were singles on 15<sup>th</sup> and 16<sup>th</sup>. The last record was of two which flew into perch on the Weather Station at 11:00 on 26<sup>th</sup>.



Common Tern with a small Pike on 5<sup>th</sup> Jul, © Steve Collins.

## Cormorant (*Phalacrocorax carbo*)

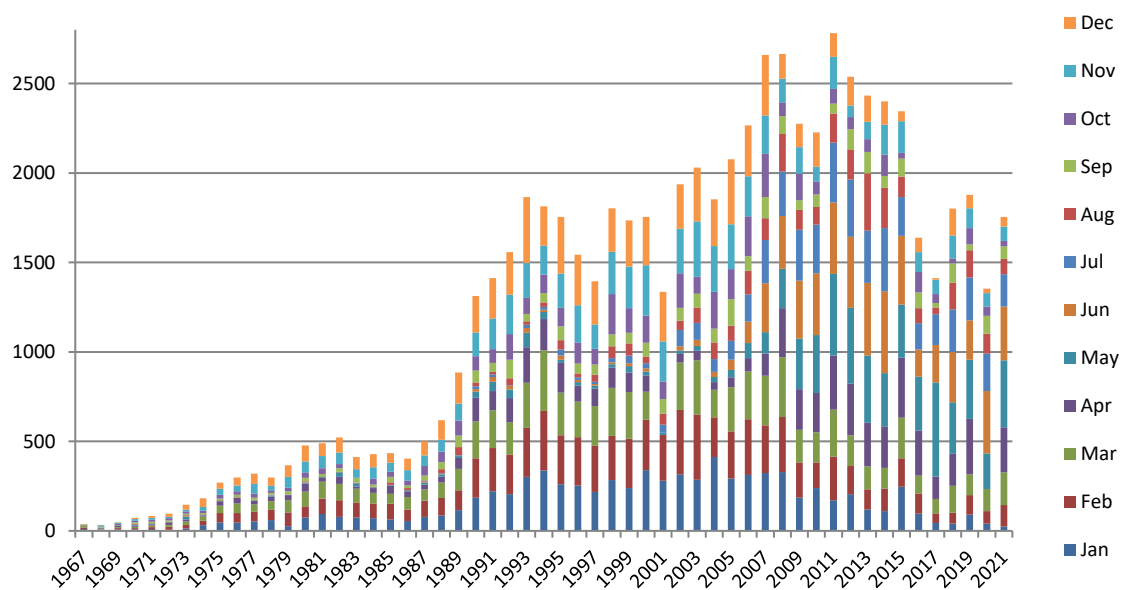
Winter visitor and increasing breeding resident since 2004

Maximum counts:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
25	120*	182*	252*	374*	300*	181*	86*	70*	30	80*	55*

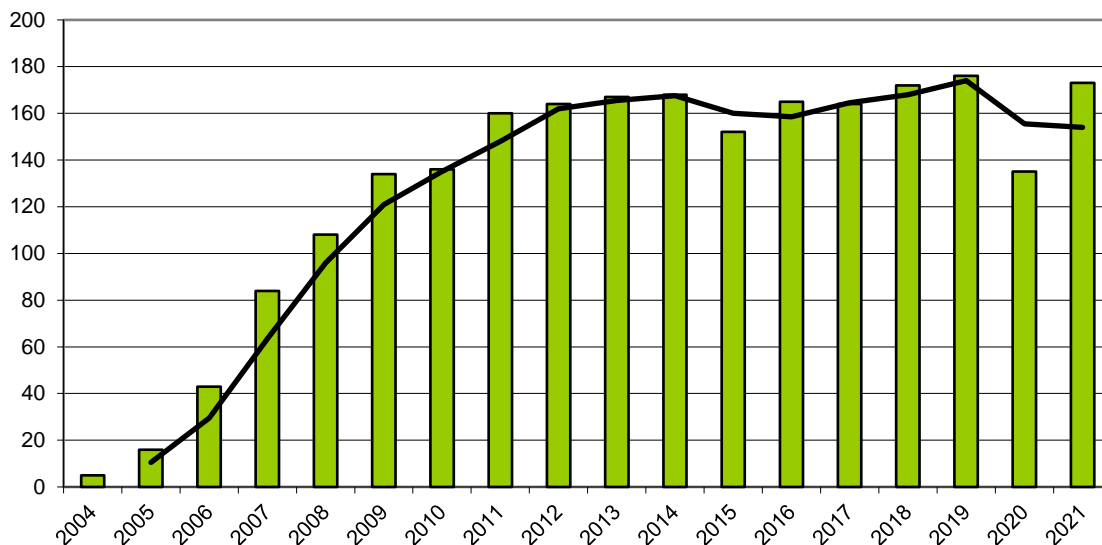
\*evening roost count

Monthly maxima were higher than in 2020 which were the lowest since 2001. However, there appears to be a trend towards markedly fewer birds using Rostherne as a roost outside of the breeding period compared to the 10-years from 2006 to 2015. The first three figure count of the year was 120 during the evening of 27<sup>th</sup> Feb. The highest count for the year was 374 on 23<sup>rd</sup> May. The Dec roost count of 55 on 31<sup>st</sup> Dec was the lowest of the year.



**Figure 5 Annual totals of Cormorants based on monthly maxima 1967-2021.**

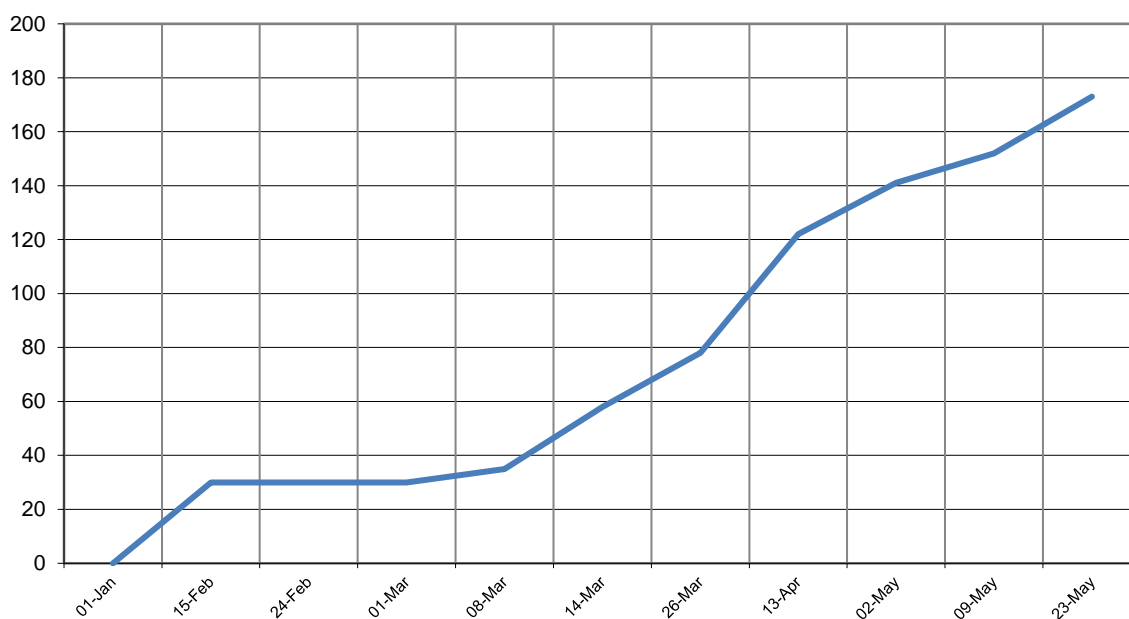
Nesting activity was first observed on 6<sup>th</sup> Feb (28<sup>th</sup> Jan in 2020 and 2<sup>nd</sup> Feb in 2019). There was a maximum of 173 occupied nests by 23<sup>rd</sup> May which is just below the record of 176 set on 22<sup>nd</sup> May 2019 and much greater than the maximum of 135 recorded in 2020. However, COVID restrictions prevented access to the Reserve during May 2020 and the nest count wasn't made until early Jun.



**Figure 6 Numbers of Nests at Rostherne Mere 2004 to 2021. The trend line represents a moving average.**

The list below and figure 7 shows the increase in active Cormorant nests through 2021. Several birds started nesting in Feb but the major growth in the colony was from mid Mar onwards with 95 nests built between 26<sup>th</sup> Mar to 23<sup>rd</sup> May.

6 <sup>th</sup> Feb	27 nests being built.
15 <sup>th</sup> Feb	30 occupied nests.
1 <sup>st</sup> Mar	30 occupied nests.
8 <sup>th</sup> Mar	35 occupied nests.
14 <sup>th</sup> Mar	58 occupied nests.
26 <sup>th</sup> Mar	78 occupied nests.
13 <sup>th</sup> Apr	122 occupied nests.
2 <sup>nd</sup> May	141 occupied nests.
9 <sup>th</sup> May	152 occupied nests.
23 <sup>rd</sup> May	173 occupied nests.



**Figure 7 The increase in active Cormorant nests from Jan to May 2021.**



Cormorant with a small fish on 13<sup>th</sup> Jun, © Gunnar Menzel.

**Bittern (*Botaurus stellaris*)**

Uncommon visitor

There were only two records. One was flushed from Blackburn’s Brook on 6<sup>th</sup> Feb. One was seen walking along a netting ride near the Bittern Hide early in the morning and then later flying along Mere Covert at 07:30 on 3<sup>rd</sup> Jun. Jun records of Bittern in Cheshire are very rare and this is only the second for Rostherne with the previous seen on 29<sup>th</sup> Jun 2004!

**Grey Heron (*Ardea cinerea*)**

Regular visitor at all times

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	2	3	3	3	2	10	4	3	4	2	2	4

There was one notable count of 10 on 30<sup>th</sup> Jun. This is the first double figure count since Jul 2017 (10-14).

**Great White Egret (*Ardea alba*)**

Very rare vagrant

There were two records. One was on the sandbar at the mouth at Rostherne Brook on 8<sup>th</sup> Sep. There was one at the edge of Harpers Bank Wood on 29<sup>th</sup> Dec. These represent the ninth and tenth records for the Reserve.



Great White Egret on 8<sup>th</sup> Sep, © John Hancock.

**Little Egret (*Egretta garzetta*)**

Rare vagrant

There was only one record in 2021 which was surprising considering that 2020 was the best ever showing for the species (13 records). There were 11 records in 2019 and four in 2018.

On 20<sup>th</sup> Jul two were first seen in Gale Bog and then later underneath the Cormorant trees along the edge of Harpers Bank Wood where they were observed to be catching dragonflies.

**Osprey (*Pandion haliaetus*)**

Rare on spring and autumn passage

One was seen perched in a tree at the end of Mere Covert at 08:35 on 11<sup>th</sup> Apr. It had left by mid-morning.

**Sparrowhawk (*Accipiter nisus*)**

Breeding resident

There were 44 records in 2021 (38 in 2020, 56 in 2019 and 57 in 2018). The first record of the year was of one mobbed by several Jackdaws over Mere Covert on 18<sup>th</sup> Jan. Most accounts were of single birds in flight. One was found dead on the boardwalk in Shaw Green Willows on 9<sup>th</sup> Mar. Two were seen on 8<sup>th</sup> Apr with a m in Mere Field and a f over Mere Covert.

As in most years, there were fascinating views of birds hunting the Starling roost from the end of Oct to Dec. Most of the records were of single birds but two were seen on 17<sup>th</sup> Nov.

**Marsh Harrier (*Circus aeruginosus*)**

Rare passage migrant

An adult m was first sighted in Penny Croft at 16:00 on 21<sup>st</sup> Apr. It flew over Broad Field and then back over the reed beds in front of the Bittern Hide before heading back again over Long Pasture.



## Red Kite (*Milvus milvus*)

Rare vagrant

There were three records matching last year's total. One flew over Briddonweir Farm on 29<sup>th</sup> May. A bird was seen circling over Dolls Meadow on 8<sup>th</sup> Jun and one was over Bobby Field on 29<sup>th</sup> Jul before flying over Manor Wood.

## Buzzard (*Buteo buteo*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	2	3	12	9	2	4	3	4	5	4	3	3

The species was recorded on 161 days (110 days in 2020, 176 in 2019 and 151 in 2018).

Numbers were low during Jan and Feb. A pair were seen displaying over Mere Covert on 11<sup>th</sup> Jan. There were 12 circling over the Reserve on 2<sup>nd</sup> Mar and a pair were seen mating on the edge of Mere Covert on 23<sup>rd</sup>. Three pairs and a single were seen in Mere Covert on 10<sup>th</sup> and there were nine were over Gale Bog on 14<sup>th</sup> Apr. A pair were seen roosting in the large Hornbeam in the middle of Mere Covert on 15<sup>th</sup> May.

It is thought that two pairs bred with a nest in Harpers Bank Wood and another in Mere Covert. Views were obscured by vegetation so no chicks could be seen in the nests but there were six records of juvenile birds from 25<sup>th</sup> Jul and 13<sup>th</sup> Aug. Two were seen calling in Mere Covert on 25<sup>th</sup> Jul and then two from Wood Bongs on 30<sup>th</sup> Jul. Two were seen calling in Shaw Green Willows on 3<sup>rd</sup> Aug. Were these the same two juveniles moving around the southern end of the Reserve? Sadly, a dead juvenile was found in Shaw Green Willows on 2<sup>nd</sup> Aug.

Five Buzzards were seen on 16<sup>th</sup> Sep but a maximum of only three were seen in Nov and Dec.

## Barn Owl (*Tyto alba*)

Rare visitor, bred 2017, 2018, 2019

It was a poor year for the species. Barn Owls were only seen on 20 days (57 days in 2020, 37 in 2019 and 54 in 2018). There was no evidence of breeding and an inspection of the six Barn Owl boxes on 24<sup>th</sup> Aug revealed Stock Doves breeding in each one and no evidence of Barn Owls.

There were seven records from Jan to Mar but no records after 30<sup>th</sup> Mar until 10<sup>th</sup> Oct. There were 13 records from Oct to Dec.

The majority of sightings were of single birds, but one was in the Mere Field box while another emerged from the Mere Meadow box on 28<sup>th</sup> Jan. Two were seen in the Mere Meadow box on 25<sup>th</sup> Oct.

A full list of the dates of records from the boxes around the Reserve is shown below. All records refer to one bird unless indicated otherwise:

### Mere Field Box

Jan 28<sup>th</sup>  
Oct 19<sup>th</sup>, 20<sup>th</sup>  
Nov 30<sup>th</sup>  
Dec 29<sup>th</sup>

### Mere Meadow Box

Jan 7<sup>th</sup>, 21<sup>st</sup>, 22<sup>nd</sup>, 28<sup>th</sup>  
Mar 29<sup>th</sup>, 30<sup>th</sup>  
Oct 25<sup>th</sup> (2)  
Dec 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup>, 30<sup>th</sup>

Away from the boxes, one was seen hunting over the Snipe Marsh during the day at 13:00 on 29<sup>th</sup> Mar. Interestingly, one was perched in the scrubby woodland in Gale Bog on 10<sup>th</sup> Oct. There was one in Shaw Green Willows on 12<sup>th</sup> Oct. One was perched in Wood Bongs on 13<sup>th</sup> Nov and one was in Harpers Bank Wood on 19<sup>th</sup> Dec.

**Tawny Owl (*Strix aluco*)**

Breeding resident

Tawny Owl was recorded on only 6 days (13 days in 2020, 24 in 2019 and 19 in 2018).

Most of the records were of birds calling during the early evening. There was one on 7<sup>th</sup> Jan but no location was given. There was one flushed from Mere Covert at 15:00 on 1<sup>st</sup> Apr. One was calling in Wood Bongs on 2<sup>nd</sup> May. There was one in the trees in Mere Meadow on 25<sup>th</sup> Oct and one calling from Wood Bongs on 24<sup>th</sup> and 29<sup>th</sup> Dec.

**Little Owl (*Athene noctua*)**

Previous breeding resident now scarce

There was only one record in 2021 (five in 2020, 10 in 2019 and eight in 2018). One was seen during the early evening near Shaw Green Farm on 25<sup>th</sup> Oct. This is a location where Little Owls have been recorded in recent years and it is thought they have bred nearby in previous years.

**Kingfisher (*Alcedo atthis*)**

Irregular visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>1 bird</b>						1		4	5	1		2

Kingfisher was recorded on only 13 days (19 days in 2020, 23 in 2019 and 45 in 2018). All the records were of single birds. Locations were given for all the records and birds were broadly seen in two areas. These were in front of the Bittern Hide (seven records) and along the Dolls Meadow shoreline (six records).

The first record was not until Jun when one was seen along the Dolls Meadow shoreline on 19<sup>th</sup>. There was one sitting on the rail in front of the Bittern Hide on 24<sup>th</sup> Aug. It was seen fishing from the rail on 26<sup>th</sup> Sep when it caught four fish in quick succession.



Kingfisher on 29<sup>th</sup> Aug, © Gunnar Menzel.

## Lesser Spotted Woodpecker (*Dendrocopos minor*)

Scarce resident

There were only two records of Lesser Spotted Woodpecker in 2021, one less than in 2020 (19 in 2019 and six in 2018).

The locations were similar to last year's with one in Wood Bongs on 24<sup>th</sup> Feb and another in Manor Wood just off the Reserve on 30<sup>th</sup> Apr. There was an interesting account on 22<sup>nd</sup> Jun when a call was heard in Wood Bongs. However, sighting of the bird proved it to be a Song Thrush doing a very good impression of a Lesser Spot!

## Great Spotted Woodpecker (*Dendrocopos major*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Max nos</b>	2	2	2	2	2	2	2	2	1	1	1	3

The species was recorded on 120 days (71 days in 2020, 87 in 2019 and 140 in 2018). The first drumming was heard from Harpers Bank Wood on 6<sup>th</sup> Feb (31<sup>st</sup> Jan in 2020). There were eight records of drumming in total with two on 9<sup>th</sup> Mar. An occupied nest hole was spotted in Wood Bongs on 17<sup>th</sup> Apr and a m and f were observed at the hole on 20<sup>th</sup>. The first records of young were not until 21<sup>st</sup> Jun when an adult and juvenile were seen in Wood Bongs. A juvenile was ringed in Shaw Green Willows on 22<sup>nd</sup> Jun, the 13th Great Spotted Woodpecker ringed on the Reserve. In Jul a juvenile was seen in front of the Observatory on 16<sup>th</sup>, 17<sup>th</sup> and 25<sup>th</sup> and then in Sep on 8<sup>th</sup>. A f was seen to visit the Bird Table in front of the Observatory on several days from Oct to Dec. Three were seen in Church Field below the Observatory on 31<sup>st</sup> Dec, the highest count of the year.

## Green Woodpecker (*Picus viridis*)

Breeding resident

It was another very poor year for Green Woodpecker records and sightings of this species are becoming rare on the Reserve while it appears to favour the environs of Tatton Park and Dunham Massey, nearby. It was only seen on two days (three days in 2020, 17 in 2019 and 96 in 2018). One was heard yaffling in Harpers Bank Wood on 21<sup>st</sup> Feb and one was seen in Wood Bongs on 22<sup>nd</sup> Jul.

## kestrel (*Falco tinnunculus*)

Breeding resident

Kestrel was recorded on 87 days (73 days in 2020, 142 in 2019 and 83 in 2018).

The majority of the records referred to birds seen in the vicinity of Church Field, the Sprout Field and Wood Bongs. A pair was seen in this area on ten dates from 12<sup>th</sup> Apr to 26<sup>th</sup> May. They prospected the dead Alder near the Boathouse on 12<sup>th</sup>, 13<sup>th</sup>, 24<sup>th</sup> and 26<sup>th</sup> Apr and various trees in Wood Bongs on 19<sup>th</sup>, 20<sup>th</sup> Apr and 9<sup>th</sup> May. The final nesting site was not found but a juvenile was seen later in the year on the Cricket Pitch on 8<sup>th</sup> Aug and one being fed by an adult in the Split Limes on 14<sup>th</sup> Aug. One adult was mobbed by two Jays in front of the Observatory on 22<sup>nd</sup> Aug.

Away from Church Field, there were frequent sightings of birds hunting on Bobby Field and the fields around Gale Bog. Two were seen near Gale Bog and one hunting on Old Meadow on 10<sup>th</sup> Oct.

Later during the year, a pair was seen near the Sprout Field on 15<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> Dec.

Other interesting sightings included an adult mobbing a Hobby near Church Field while another mobbed a Buzzard in Gale Bog on 17<sup>th</sup> Sep.

### **Hobby (*Falco subbuteo*)**

Scarce passage migrant & summer visitor, Apr-Oct

Hobby was seen on 30 dates which is a reasonable showing compared to recent years (10 dates in 2020, 42 in 2019 and 10 in 2018). The first account was of one seen flying over the Mere on 22<sup>nd</sup> Apr, matching last year's date which was the first Apr record since 2014 (27<sup>th</sup> Apr) and the earliest since 2013 (17<sup>th</sup> Apr). There was one over Shaw Green Willows on 7<sup>th</sup> May but this was the only record for the month. There was one hunting along the shoreline between Brook Meadow and the Bittern Hide on 14<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup> and 21<sup>st</sup> Jun. There were no further records until one seen on 12<sup>th</sup> Aug. Later during the month, one was seen on 28<sup>th</sup> and then there was almost daily sightings until 28<sup>th</sup> Sep which was the last sighting of the year (25<sup>th</sup> Sep 2020). During the Sep sightings three (one adult, two juveniles) was seen on 14<sup>th</sup>, two (one adult, one juvenile) on 15<sup>th</sup>, two (both adults) on 17<sup>th</sup>, three on 20<sup>th</sup> and two passing food on 22<sup>nd</sup>.

Other interesting records included one being mobbed by a Kestrel on 17<sup>th</sup> Sep and one mobbing a Sparrowhawk on 26<sup>th</sup> Sep.



**Hobby on 28<sup>th</sup> Sep, © John Hancock.**

### **Peregrine (*Falco peregrinus*)**

Irregular visitor at all times, primarily in autumn and winter

Peregrine was recorded on 11 days (17 days in 2020, eight in 2019 and four in 2018). All the records were of single birds seen irregularly throughout the year usually flying low over the Mere. There were some interesting accounts with one swooping low over several Goldeneye which dived to avoid it on 15<sup>th</sup> Feb. The Peregrine then appeared to hover over the water before flushing a flock of Mandarin Ducks and then perching up in Mere Covert with no kill. One was seen displaying over Harpers Bank Wood on 9<sup>th</sup> Apr. There was one mobbed by a Lesser Black-backed Gull on 6<sup>th</sup> May.

### **Ring-Necked Parakeet (*Psittacula krameri*)**

Scarce visitor

One flew over the Reserve from east to west on 29<sup>th</sup> May. This was the first record since 5<sup>th</sup> Mar 1992! Later during the year six flew through Rostherne village and then three over the Observatory on 10<sup>th</sup> Oct. Birds have reported in Ashley and it is thought a small population is migrating out of the Hale/Altrincham area.

### **Jay (*Garrulus glandarius*)**

Resident, probably breeding regularly

The majority of records referred to one or two birds seen in the woodland surrounding the Mere. Higher counts were as follows:

Four – 6<sup>th</sup> Feb, family party in Shaw Green Willows 10<sup>th</sup> Jul, 17<sup>th</sup> Nov.

Three – 15<sup>th</sup> Feb, 19<sup>th</sup>, 22<sup>nd</sup> Sep, 3<sup>rd</sup>, 28<sup>th</sup> Oct.

Two were seen mobbing a juvenile Kestrel on 22<sup>nd</sup> Aug.

### **Magpie (*Pica pica*)**

Breeding resident

Magpie was often seen on the fields surrounding the Mere. The highest counts were in Dec when six were seen on the Sprout Field on 5<sup>th</sup>, 9<sup>th</sup>, 18<sup>th</sup> and 30<sup>th</sup>. One of the more unusual sightings was one seen perched on the head of a Herdwick ram on Long Pasture on 15<sup>th</sup> Oct.

### **Jackdaw (*Corvus monedula*)**

Breeding resident

Jackdaws are frequently observed around Rostherne village, the churchyard and occasionally on Church Field during the daytime. They also often roost in large numbers during the winter in the surrounding woodland. Counts of 30 and over during the first winter period included c100 near the Churchyard on 11<sup>th</sup> Feb and c30 on 23<sup>rd</sup> Mar. Three were seen mobbing a Sparrowhawk over Mere Covert on 18<sup>th</sup> Jan.

A pair nested in a box adjacent to the Natural England Car Park in Rostherne village and a juvenile was caught and ringed in the car park on 10<sup>th</sup> Jun. Another pair were seen prospecting the Dead Alder near the Boathouse during Apr. Around 50 were seen feeding on Bobby Field on 14<sup>th</sup> Jun.

Counts in the second winter period included c40 on 12<sup>th</sup> Oct, c30 over on 18<sup>th</sup>, 110 over on 21<sup>st</sup>, c30 over on 30<sup>th</sup> and c50 over on 31<sup>st</sup> Dec.

### **Rook (*Corvus frugilegus*)**

Resident, bred in 1990

Rooks are often seen in the fields surrounding the Reserve but are rarer on the fields within the Reserve boundary, where there is less intensive crop and pasture management. There were 13 records in 2020, all but one of them were of birds feeding on Bobby Field. Double figure counts included c80 on 1<sup>st</sup> Jan, 10 on 17<sup>th</sup>, c20 on 21<sup>st</sup> Feb, 26 on 22<sup>nd</sup>, 28 on 24<sup>th</sup> Jun and 26 on 4<sup>th</sup> Sep. There were also five feeding in Mere Meadow on 24<sup>th</sup> Nov.

### **Carrion Crow (*Corvus corone*)**

Breeding resident

Carrion Crow was recorded throughout the year with numbers ranging from one to 10. A notable record was of a newly fledged bird being fed by two adults on the Dead Alder on 20<sup>th</sup> Jun. The highest count was 10 which were seen feeding on the Cricket Pitch on 4<sup>th</sup> Aug.

### **Raven (*Corvus corax*)**

Scarce visitor, has bred

Raven was recorded on 17 days (19 days in 2020, 22 in 2019 and 21 in 2018).

The majority of records referred to birds flying over the Reserve. All records with the exception of tick-list only entries are shown below.

27<sup>th</sup> May                      1



2 <sup>nd</sup> Jun	1
20 <sup>th</sup> Jun	2
11 <sup>th</sup> Aug	2
24 <sup>th</sup> Aug	1
15 <sup>th</sup> Sep	1
3 <sup>rd</sup> Oct	2
4 <sup>th</sup> Oct	2
7 <sup>th</sup> Oct	1
12 <sup>th</sup> Oct	1
14 <sup>th</sup> Nov	1
28 <sup>th</sup> Dec	1

### **Coal Tit (*Periparus ater*)**

Breeding resident

Usually seen throughout the year with several birds (one to two) frequently visiting the bird table in front of the Observatory. Four were seen on 15<sup>th</sup> Feb and 9<sup>th</sup> and 23<sup>rd</sup> Mar. Breeding bird surveys indicated there were single territories in Wood Bongs, Shaw Green Willows and Mere Covert.

### **Blue Tit (*Cyanistes caeruleus*)**

Breeding resident

High counts included 14 on 9<sup>th</sup> Mar, 17 in Mere Covert on 10<sup>th</sup> Apr, 15 in Wood Bongs on 13<sup>th</sup> and 14 in Wood Bongs on 20<sup>th</sup> Apr. There was a family party of 12 seen in front of the Observatory on 20<sup>th</sup> Jun. There were 15 visiting the Bird Table on 31<sup>st</sup> Dec. Fifty were ringed during the year. Breeding Bird Surveys suggested there were 25 territories.

### **Great Tit (*Parus major*)**

Breeding resident

Eight were recorded on 14<sup>th</sup> Apr and eight in Mere Covert, with seven singing on 15<sup>th</sup> May. There was a family party of five on 13<sup>th</sup> and 20<sup>th</sup> Jun. There was a family party of seven seen in Shaw Green Willows on 16<sup>th</sup> Jul. Later during the year eight were seen visiting the Bird Table on 19<sup>th</sup> and 21<sup>st</sup> Dec. Twelve were ringed during the year. Breeding Bird Surveys indicated there were 9 territories.

### **Skylark (*Alauda arvensis*)**

Autumn passage migrant, irregular visitor, may breed occasionally

Skylark was recorded on 19 days in several of the fields surrounding the Reserve (16 days in 2020, 7 in 2019 and 10 in 2018). There were three main areas of sightings, namely, the fields north of Gale Bog, near the Sprout Field and the fields near Marsh Lane (Marsh Hey and Mere Meadow). All records are listed below, with the exception of tick-list only entries:

06 <sup>th</sup> Feb	1 singing over Mere Field.
01 <sup>st</sup> Mar	2 singing and displaying in Section 22 near Gale Bog.
08 <sup>th</sup> Mar	2 singing and displaying near Cherrytree Farm.
27 <sup>th</sup> Mar	4 singing over the Sprout Field.
30 <sup>th</sup> Mar	2 singing and displaying near Cherrytree Farm.
31 <sup>st</sup> Mar	4 singing with 2 near Marsh Lane and 2 over Bobby Field.
6 <sup>th</sup> Apr	1 singing in the Sprout Field.
7 <sup>th</sup> Apr	2 over the Sprout Field.
8 <sup>th</sup> Apr	2 singing and displaying in Section 22 near Gale Bog.
14 <sup>th</sup> Apr	1 near Marsh Lane.
15 <sup>th</sup> Apr	1 singing near Marsh Lane.
3 <sup>rd</sup> May	1 singing near Marsh Lane.
13 <sup>th</sup> May	2 near Marsh Lane.
13 <sup>th</sup> Jun	1 near Marsh Lane.

14<sup>th</sup> Jun 1 near Marsh Lane.  
 9<sup>th</sup> Jul 1 displaying over Bobby Field.  
 2<sup>nd</sup> Nov 1 in Mere Meadow.

**Sand Martin (*Riparia riparia*)**

Passage migrant, Feb-Oct

It was a much better year for records of Sand Martins after sightings were markedly impacted by the COVID restrictions in 2020. There were seen on 28 days (only three days in 2020, 24 in 2019 and 2018). The first arrival was on 19<sup>th</sup> Mar when three were seen. Numbers gradually increased during late Mar with 25 on 27<sup>th</sup>. Large numbers visited the Mere in early Apr with almost daily records from 1<sup>st</sup> to 14<sup>th</sup> Apr. Numbers were around c200 with a maximum of c500 low over the water in a strong wind on 5<sup>th</sup>. The highest count since c1000 were seen on 12<sup>th</sup> Apr 2016.

Sightings decreased after 14<sup>th</sup> Apr with records on only eight days until the end of Jun, all of these were single figure counts with the exception of c40 on 21<sup>st</sup> Apr. Five were seen on 6<sup>th</sup> and 30<sup>th</sup> Jul, four on 16<sup>th</sup> Aug. The last sighting was five over the Mere on 8<sup>th</sup> Sep. The latest date since six on 10<sup>th</sup> Sep 2017.

**Swallow (*Hirundo rustica*)**

Passage migrant & summer visitor, has bred; Mar-Nov

Swallow was recorded on 57 days (31 days in 2020, 49 in 2019 and 76 in 2018). The first record was of two on 18<sup>th</sup> Mar which set a new earliest record (previous was 21<sup>st</sup> Mar 2009). There was another record in Mar with one on 27<sup>th</sup>. There were frequent sightings from Apr to Aug but numbers were generally low ranging from one to c20. The exceptions were c100 and c50 seen in squally conditions on 29<sup>th</sup> and 30<sup>th</sup> Apr respectively. There were six records in Sep with the last record of two on 21<sup>st</sup> Sep. (20<sup>th</sup> Sep in 2020).

**House Martin (*Delichon urbicum*)**

Passage migrant & summer visitor, has bred; Mar-Oct

It was a very poor year for House Martins. The species was only recorded on 10 days (18 days in 2020, 22 in 2019 and 21 in 2018). The first arrival was one on 27<sup>th</sup> Mar (3<sup>rd</sup> Apr in 2020). There were only three records in Apr and four in May. Numbers were very low with the highest count of 10 on 23<sup>rd</sup> May, the only double figure count of the year! The last record was two on 13<sup>th</sup> Aug (22<sup>nd</sup> Oct in 2020 which with 1963 is the latest date on record).

**Cetti's Warbler (*Cettia cetti*)**

Scarce, recently established breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>No of Days Recorded</b>	8	7	10	22	17	13	7	0	5	13	12	4
<b>Max nos</b>	2	2	2	5	7	4	2	0	2	3	2	2

It was another very good year for records of Cetti's Warbler at Rostherne. The species was recorded on 118 days (89 days in 2020, 76 in 2019 and 13 in 2018).

The first record of the year was a bird singing from near the Bittern Hide on 1<sup>st</sup> Jan. There were 25 records from Jan to Mar with the majority of them of a singing m near the Bittern Hide. There were 22 records in Apr. The first bird caught by Malcolm Calvert in 2021 was in the snow on 5 Jan. There were four singing from various locations around the Reserve on six dates. There were five on 19<sup>th</sup> with records from near the Bittern Hide, Penny Croft, Blackburn's Bridge, Boathouse and Dolls Meadow. There were 17 records in May with four on three dates and seven singing at different locations on 2<sup>nd</sup> May. Four were singing around the Reserve on 2<sup>nd</sup> and 6<sup>th</sup> Jun. Records started to decrease in Jul with seven for the month and then none in Aug. There were 34 records from Sep to Dec with the highest count of three on 10<sup>th</sup> Oct with males singing from near the Boathouse, Brook Meadow and the Bittern Hide.

There were three territories recorded in the areas covered by the Breeding Bird Survey i.e. one in each of Shaw Green Willows, Penny Croft/Long Pasture and Mere Covert.

An account of ringing history by Malcolm Calvert is as follows:

In 2021, three birds were ringed and four others appeared as retraps.

AZB7864

Ringed as **Female** on 5 Jan on Long Pasture path in snowy conditons;  
R 2 May with start of brood patch. Penny Croft  
R 7 May bp progressing, LP reedbed (EREB);  
R 8 June full bp. Penny Croft

APJ8533

*Ringed as juv **Male** at RE (LP reedbed) 29 Aug 2020;*  
*R 16 Sep 2020 on Blackburn's Brook path (BBD);*  
R 02 Apr at causeway (long ride RCB);  
R 19 Apr at Bittern hide (RH);  
R 26 Apr at causeway (long ride RCB);  
R 03 Jun at causeway (RCA);  
R 05 Jun at Old Hall Wood (mereside path) caught in net with APJ8536

AZB7985

Ringed as **Female** on 9 Apr at BH (RH). Partial bp;  
Photographed by SC near BH, carrying feathers for nest-building, on 22 Apr

AZB7783

*Ringed as **Male** on at BH (RH) 17 Oct 2019;*  
*R 23 Mar 2020 at causeway (RCB);*  
*R 22 Dec 2020 at BH (RH);*  
R 19 Apr at BH (RH)  
R 02 May at Penny Croft

AHF0857

*Ringed as ad **Female** at OHW. 10 Aug 2020;*  
R 02 May at Penny Croft. Full bp. Heavy, probably with egg

AHF0747

Ringed as **Female** at Gate hedge (GH) Full bp. 03 Jun

APJ8536

*Ringed as juv. **Female** at RE (LP reedbed) on 29 Aug 2020;*  
R 05 Jun at OHW. Full bp. caught in net with APJ8533  
R 22 Jul at OHW. Full bp

An enigmatic season with 5 females all displaying brood patches but with no sign of any juvenile. On catching APJ8536 with dates 47 days apart I assumed she was laying 2 clutches but Kennerley & Pearson (2010) state Cetti's females are single brooded, although males are polygamous and may have up to four females.

Reference:

Kennerley, Peter & Pearson, David (2010) Reed and Bush Warblers. Helm



Cetti's Warbler on 22<sup>nd</sup> Apr, © Steve Collins.

### **Long-tailed Tit (*Aegithalos caudatus*)**

Breeding resident

The species was recorded on 136 days (94 days in 2020, 114 in 2019 and 117 in 2018). There were no double figure counts during the first winter period with the highest six seen in Old Hall Wood on 11<sup>th</sup> and 23<sup>rd</sup> Mar. Malcolm caught a pair along the Gate Hedge in Shaw Green Willows on 9<sup>th</sup> Apr. They were in breeding condition and originally ringed in 2020. A pair was seen visiting a nest with food in Wood Bongs on 5<sup>th</sup> May and one seen carrying food to a nest in Shaw Green Willows on 6<sup>th</sup> May. A family party of six was seen on 18<sup>th</sup> May. Later in the year a family party of 10 was seen near the Boathouse on 24<sup>th</sup> Aug. Eight birds visiting the Bird Table next to the Bittern Hide on 4<sup>th</sup> Sep were all displaying rings. The highest count of the year was 18 on 26<sup>th</sup> Sep. There were 12 double figure counts during the second winter period with 15 on 7<sup>th</sup> Oct, 5<sup>th</sup> Nov and 21<sup>st</sup> Dec. Eight 'new' birds were ringed in 2021. Six territories were recorded during the Breeding Bird Survey with two in each of Mere Covert, Wood Bongs and Shaw Green Willows.

### **Willow Warbler (*Phylloscopus trochilus*)**

Breeding summer visitor, Mar-Nov; declining

It was another poor year for Willow Warbler. The species was only seen on 14 days (eight days in 2020, 28 in 2019 and 42 in 2018). The first record of the year was of a bird singing in Mere Covert on 1<sup>st</sup> Apr (16<sup>th</sup> Apr in 2020). There were 11 records in Apr. All were of singles with singing recorded from Mere Covert, Dolls Meadow and Penny Croft. The exception was on 15<sup>th</sup> Apr when four were recorded with one singing in Old Hall Wood and three different birds singing from an area from the Bittern Hide to the foot of Long Pasture. There were only three further records for the year after Apr with a tick-list only entry on 13<sup>th</sup> May and then Malcolm caught and ringed a moulting bird on 2<sup>nd</sup> Aug. The final report was one on the edge of Wood Bongs on 15<sup>th</sup> Aug (23<sup>rd</sup> Aug 2020). There were two territories recorded during the Breeding Bird Survey with one in Wood Bongs and one in Mere Covert.

### **Chiffchaff (*Phylloscopus collybita*)**

Breeding summer visitor, rare in winter

Chiffchaff was recorded on 102 days (57 days in 2020, 89 in 2019 and 105 in 2018). The first record for the year was a silent bird trapped by Malcolm in Shaw Green Willows on 25<sup>th</sup> Feb (17<sup>th</sup> Mar in 2020). There was not another record until 18<sup>th</sup> Mar when one was singing near the Snipe Marsh. There were 10 singing around the Reserve by 30<sup>th</sup> Mar. There were 23 records in Apr with 10 singing on 2<sup>nd</sup> and 13<sup>th</sup>. Malcolm trapped four in Shaw Green Willows on the 2<sup>nd</sup> Apr and a nest was spotted in a patch of Bramble near Penny Croft on 24<sup>th</sup>. There were 62 records from May until the end of Aug. The first juvenile was recorded on 1<sup>st</sup> and a family party of six was seen in Wood Bongs on 3<sup>rd</sup> Aug. Later during the month, a family party of 12 were recorded on 28<sup>th</sup>. There were

10 records in Sep with three on 28<sup>th</sup> Sep being the last record of the year. Twenty-four were ringed during the year. Results from the Breeding Bird Survey suggested that there were 14 territories with eight in Mere Covert.

### **Sedge Warbler (*Acrocephalus schoenobaenus*)**

Breeding summer visitor, Apr-Sep

The species was recorded on 24 days (11 days in 2020, 23 in 2019 and 27 in 2018). The first record of the year was one near the old Cattle Drink in Penny Croft on 24<sup>th</sup> Apr (7<sup>th</sup> Jun in 2020 and 23<sup>rd</sup> Apr in 2019). There were four records in Apr with two in Shaw Green Willows on 30<sup>th</sup> Apr. There were 12 records during May with two in Shaw Green Willows on 2<sup>nd</sup> and 6<sup>th</sup> May. Malcolm ringed four birds on 7<sup>th</sup> May. The remaining records were of single birds. There were five records in June, all singles in the vicinity of the foot of Long Pasture and Penny Croft. There were two records in Jul with two in Dolls Meadow on 25<sup>th</sup>. The last record was a single on 3<sup>rd</sup> Aug (14<sup>th</sup> Aug in 2020 and 5<sup>th</sup> Sep in 2019).

Seventeen adults, including a bird ringed on the Reserve in May 2018, were trapped during the season; the catches were made between 30<sup>th</sup> Apr and 3<sup>rd</sup> Jun except for one on 10<sup>th</sup> Jun. Only two juveniles were caught and ringed, one on 19<sup>th</sup> Jul and the other on 2<sup>nd</sup> Aug.

There was only one territory recorded (Shaw Green Willows) during the Breeding Bird Survey.



**Adult Female Sedge Warbler on 7<sup>th</sup> May, © Malcolm Calvert.**

### **Reed Warbler (*Acrocephalus scirpaceus*)**

Breeding summer visitor, Apr-Oct

The first record of the year was a single in Mere Covert on 10<sup>th</sup> Apr (23<sup>rd</sup> Apr in 2020 and 12<sup>th</sup> Apr in 2019). The last record was of a juvenile on 8<sup>th</sup> Sep (29<sup>th</sup> Sep in 2020 and 18<sup>th</sup> Sep in 2019).

An account of the year by Malcolm Calvert is as follows:

A total of 102 adults were trapped: 41 new, 3 ringed elsewhere and 58 retrapped from earlier seasons on the Reserve. It appeared to be a very poor breeding season with only 36 young birds ringed, being 18 juveniles and 18 nestlings. Many of the full grown birds had weights of just over 10 grams whereas in excess of 11 grams had been expected. In the average season many adults would leave the Reserve from mid Jul but in this season very few were in evidence into Aug. Juveniles are normally prevalent in Aug and early Sep but such birds were in short supply at that time. Had adverse weather in spring affected the food supply of insects?

A nest was located containing 2 Reed Warbler eggs and a Cuckoo egg from which a Reed Warbler hatched and fledged.



Since 1972, 3606 adults have been caught of which 1657 (45.95%) were new and 89 (2.47%) controlled. 1860 were retraps (51.58%) of birds ringed in earlier seasons on the reserve as 770 pullus (41.40%), 378 juveniles (20.32%), 712 adults (38.28%). Over the years, 2176 juveniles and 4682 pullus have been ringed on the Reserve. In total 100 birds ringed elsewhere have been controlled, 89 as adults and 11 in their natal season. 161 Rostherne-ringed birds have been reported elsewhere.

Reported movements of Reed Warblers:

Ring no.	Ring code/sex	Date	Place	Movement
ATC5226 R	3	24-08-19 27-05-21	Scotsman's Flash, Wigan, GM Rostherne Mere	26 km SE
SB75527 R R R R R	4M	13-08-17 07-05-19 11-05-19 14-05-19 23-06-20 03-06-21	Knutsford Moor Rostherne Mere Rostherne Mere Rostherne Mere Rostherne Mere Rostherne Mere	5 km N
ADN6383 R	3J F	15-08-20 10-06-21	Pickmere Rostherne Mere	10 km NE
ALK5191 R	4 F	26-06-21 02-08-21	Woolston Eyes, Warrington Rostherne Mere	11 km ESE

They have been 37 Reed Warblers controlled from Woolston Eyes; 56 have moved there from Rostherne Mere.

Notable Retap:

Y782236 R	4M	21-06-13 08-07-21	Rostherne Mere Rostherne Mere
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R – caught & released by ringer

3 – bird of the year

3J – bird of the year in juvenile plumage

4 – adult with year of hatching unknown but older than one year

F – adult female

M – adult male



Reed Warbler on 13<sup>th</sup> May, © Steve Collins.

### **Blackcap (*Sylvia atricapilla*)**

Breeding summer visitor, occasional in winter, no Feb records

Blackcap was recorded on 77 days (38 days in 2020, 80 in 2019 and 98 in 2018). The first record of the year was one in Wood Bongs on 1<sup>st</sup> Apr (two on 23<sup>rd</sup> May in 2020 and 27<sup>th</sup> Mar on 2019). There were 23 records in Apr with six singing on 12<sup>th</sup>. Later during the year eight were recorded on 6<sup>th</sup> May and 2<sup>nd</sup>, 6<sup>th</sup> Jun. A nest was located in Old Hall Wood on 15<sup>th</sup> May. A juvenile was recorded on 1<sup>st</sup> Aug and singles were seen in front of the Obs throughout the month. In contrast, there were only two records in Sep with a m and f in Wood Bongs on 12<sup>th</sup> and one on 22<sup>nd</sup>, the last record of the year (7<sup>th</sup> Oct in 2020 and 22<sup>nd</sup> Sep in 2019). Twelve were ringed during the year. There were 17 territories recorded after the Breeding Bird Survey with 10 in Mere Covert.

### **Garden Warbler (*Sylvia borin*)**

Summer visitor, Apr-Sep

There were only two records of a species which is becoming rare on the Reserve (one record in 2020 and none in 2019). One was in Wood Bongs on 8<sup>th</sup> May and one on 2<sup>nd</sup> Jun with no location details provided.

### **Whitethroat (*Sylvia communis*)**

Passage migrant, breeds irregularly; Apr-Sep

Whitethroat was recorded on 30 days in 2021 (5 days in 2020, 23 in 2019 and 20 in 2018). The first record was one on 26<sup>th</sup> Apr (7<sup>th</sup> May in 2020 and 23<sup>rd</sup> Apr in 2019). One was seen along the hedge in Shaw Green Willows on 30<sup>th</sup> Apr. There were 10 records in May with two (one in Shaw Green Willows and one in the Snipe Marsh) on 6<sup>th</sup> May. All the remaining records for the month were singles with one in Dolls Meadow on 8<sup>th</sup> and one in Brook Meadow on 23<sup>rd</sup>. There were 12 records in Jun with nests noted in Shaw Green Willows and Penny Croft on 6<sup>th</sup>. One was in the hedge bordering Bobby Field on 8<sup>th</sup> and there was one in front of the Observatory on 9<sup>th</sup>. There was one singing in Brook Meadow and another in Old Hall Wood on 16<sup>th</sup>. There were two in the hedge near Bobby Field on 22<sup>nd</sup>. There were six records in Jul with a single in front of the Observatory the last record of the year on 28<sup>th</sup> Jul (17<sup>th</sup> Jul in 2020 and 24<sup>th</sup> Jul in 2019). Two were ringed during the year. There were two territories (Shaw Green Willows) recorded in the Breeding Bird Survey and with the nest in Penny Croft it is possible there was a total of three territories.



Whitethroat on 30<sup>th</sup> Apr, © Steve Collins.

### **Goldcrest (*Regulus regulus*)**

Breeding resident

Goldcrest was recorded on 50 days (46 days in 2020, 53 in 2019 and 50 in 2018). Records were usually of single birds although two were seen on 5<sup>th</sup> Jan, 23<sup>rd</sup> Feb (singing), 23<sup>rd</sup> Mar, 14<sup>th</sup> Apr and 5<sup>th</sup> Nov. There were three territories recorded after the Breeding Bird Survey with one in Wood Bongs and two in Mere Covert.

### **Wren (*Troglodytes troglodytes*)**

Breeding resident

Birds were first heard singing on 15<sup>th</sup> and displaying on 21<sup>st</sup> Feb. Double figure counts of birds singing around the Reserve included 18 on 9<sup>th</sup> and 17 on 23<sup>rd</sup> Mar. Other double figure counts included 12 on 27<sup>th</sup> and 14 on 30<sup>th</sup> Apr and then 10 on 2<sup>nd</sup>, 12 on 6<sup>th</sup>, 14 on 18<sup>th</sup> and 18 on 27<sup>th</sup> May. There were 10 on 2<sup>nd</sup> and 11 on 9<sup>th</sup> Jun with 10 on 28<sup>th</sup> Aug. Twelve Wren were ringed during the year. A total of 35 territories were estimated during the Breeding Bird Survey with 20 of these in Mere Covert.

### **Nuthatch (*Sitta europaea*)**

Breeding resident

Counts ranging from one to four were recorded throughout the majority of the year. Five were recorded in an area from Old Hall Wood to Wood Bongs on 22<sup>nd</sup> Jan and six were singing in a similar area on 9<sup>th</sup> Mar. Later during the year, six were logged on 25<sup>th</sup> Jul. A juvenile was seen in front of the Observatory on 11<sup>th</sup> Aug. One was ringed during the year. Nine territories were plotted during the Breeding Bird Survey.

### **Treecreeper (*Certhia familiaris*)**

Breeding resident

The majority of records were of single birds seen in the woodland around the Reserve. Two were displaying in Old Hall Wood on 22<sup>nd</sup> Feb. Four were recorded from the Dave Clarke hide on 23<sup>rd</sup> and two on 27<sup>th</sup> and 30<sup>th</sup> Mar. An occupied nest was noted in Wood Bongs on 13<sup>th</sup> Apr but it appeared to have been abandoned with most of the nesting material removed by 17<sup>th</sup> Apr. Three were recorded on 14<sup>th</sup> and three in Wood Bongs on 20<sup>th</sup> Apr. Additional nests were spotted in Wood Bongs on 22<sup>nd</sup> and 26<sup>th</sup> Apr. During May, four (two pairs) were very active in Wood Bongs on 2<sup>nd</sup> and three were recorded on 18<sup>th</sup>, 20<sup>th</sup> and 26<sup>th</sup>. A juvenile was seen in front of the

Observatory on 9<sup>th</sup> Jul. During the second winter period three were seen with sightings from in front of the Observatory, Wood Bongs and Shaw Green Willows on 30<sup>th</sup> Dec. Seven were ringed during the year. There were four territories recorded during the Breeding Bird Survey.

### Starling (*Sturnus vulgaris*)

Breeding resident

Starling was recorded on 30 days (57 days in 2020, 47 in 2019 and 48 in 2018).

Several thousand roosted in the reed beds in Shaw Green Willows during the first few days of the year with c3000 on 1<sup>st</sup> Jan. However, numbers fell rapidly with only two in the Sprout Field recorded on 13<sup>th</sup> Jan.

Around 1000 Starlings roosted during the evening in Shaw Green Willows on 24<sup>th</sup> Aug but the regular roost didn't start to build until early Oct when c200 were recorded on 3<sup>rd</sup>. This had increased to c3000 on 15<sup>th</sup> and c5000 on 21<sup>st</sup> Oct. As usual the highest counts were in Nov with an average of c10,000 roosting most nights. There were peaks and troughs with highs of c20,000 on 2<sup>nd</sup> and c16,000 on 30<sup>th</sup> Nov. Numbers started to decrease in Dec as sections of the reed beds became flattened by the weight of roosting Starlings. There were c10,000 on 10<sup>th</sup> Dec which decreased to c5,000 by 30<sup>th</sup> Dec.

### Song Thrush (*Turdus philomelos*)

Breeding resident

Song Thrush was recorded on 102 days (67 days in 2020, 87 in 2019 and 96 in 2018). The first singing bird was recorded on 19<sup>th</sup> Jan (23<sup>rd</sup> Jan 2020). Four were singing on 3<sup>rd</sup> and 19<sup>th</sup> Mar. During May, four were recorded on 8<sup>th</sup>, five on 13<sup>th</sup> and four on 30<sup>th</sup> May. Song Thrushes were recorded almost daily in the spring and early summer but there were only 11 records from Aug to Dec with a maximum of only two on 2<sup>nd</sup> Nov and 10<sup>th</sup> Dec. Four Song Thrushes were ringed during the year. Only three territories were recorded during the Breeding Bird Survey with one in each of Wood Bongs, Shaw Green Willows and Mere Covert.

### Mistle Thrush (*Turdus viscivorus*)

Scarce breeding resident

The species was recorded on 63 days (47 days in 2020, 81 in 2019 and 70 in 2018). There were 32 records of one to two birds from Jan to Jun. There were family groups of three and four seen in Church Field on 25<sup>th</sup> and 28<sup>th</sup> Jul respectively. During Sep four were seen on the wires across the Sprout Field on 19<sup>th</sup> and 22<sup>nd</sup> Sep. There were seven on Church Field on 26<sup>th</sup> Sep. The highest count of the year was 11 on Church Field on 12<sup>th</sup> Oct. There were 10 within a mixed flock of thrushes on the Sprout Field on 21<sup>st</sup> Oct.

### Redwing (*Turdus iliacus*)

Winter visitor & passage migrant; Sep-Apr

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>No of Days Recorded</b>	12	6	6							5	9	4
<b>Max nos</b>	c30	5	c20							c200	76	c100

Redwing was recorded on 42 days (48 days in 2020, 58 in 2019 and 42 in 2018).

There were 12 records in Jan. Around 30 were in the Sprout Field on 13<sup>th</sup> and c30 on Mere Meadow on 22<sup>nd</sup> Jan. There were 15 on the Cricket Pitch on 9<sup>th</sup> Mar and c20 seen on Church Field and then in Wood Bongs on 23<sup>rd</sup> Mar was the last record in the first winter period.

There were 18 records in the second winter period. There was a large movement of around 200 birds at 16:30 on 13<sup>th</sup> Oct. This was the first record of the second winter period. There were c40 in a mixed flock of thrushes on 21<sup>st</sup> and then c40 in the Snipe Marsh on 25<sup>th</sup> Oct. There were 76 in Mere Covert on 23<sup>rd</sup> Nov and a flock of c100 feeding in the fields around Rostherne village on 18<sup>th</sup> and 21<sup>st</sup> Dec.

## Blackbird (*Turdus merula*)

Breeding resident

There were 24 double figure counts during the year. Fifteen were recorded on 13<sup>th</sup> Jan and 26<sup>th</sup> Apr. There were 25 on 21<sup>st</sup> and 18 and 30<sup>th</sup> Dec. A single Blackbird was ringed during the year. There were 12 territories recorded during the Breeding Bird Survey.

## Fieldfare (*Turdus pilaris*)

Winter visitor & passage migrant

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>No of Days Recorded</b>	7	2	3							1	7	3
<b>Max nos</b>	2	3	c50							10	c100	c50

Fieldfare was recorded on 23 days (20 days in 2020, 11 in 2019 and 19 in 2018).

There were seven records in Jan but the maximum was only two feeding on the Cricket Pitch and then Church Field on 3<sup>rd</sup> Jan. There were three in the same area on 11<sup>th</sup> Feb. There were c50 flying over from the direction of Cicley Mill Pond on 18<sup>th</sup> Mar. The last record in the first winter period was two on 27<sup>th</sup> Mar.

The first record in the second winter period was ten within a mixed flock of thrushes on the Sprout Field on 21<sup>st</sup> Oct, the only record for the month. There were seven records in Nov with c100 feeding on Mere Meadow on 24<sup>th</sup>. There were only three records in Dec with 15 in the Sprout Field on 4<sup>th</sup> and c50 feeding in the fields around the Reserve and then flying over on 21<sup>st</sup> Dec.

## Spotted Flycatcher (*Muscicapa striata*)

Scarce, breeding summer visitor, Apr-Oct

It was a better year for sightings of Spotted Flycatcher. There were records on 16 days (only three in 2020, 28 in 2019 and 31 in 2018). The first record of the year was of two adults in Wood Bongs on 17<sup>th</sup> Jun (16<sup>th</sup> May in 2019). As in previous years, a pair bred in Wood Bongs. They were seen displaying on 19<sup>th</sup> and a nest was spotted on 21<sup>st</sup> Jun. The two adults were seen feeding a fledgling in the nest on 5<sup>th</sup> Jul. Adults were seen later during the month near the nest site on 16<sup>th</sup>, 17<sup>th</sup> (two) and 18<sup>th</sup>. There were no further records until 1<sup>st</sup> Aug when a tick-list only entry was made. An adult was seen feeding around Split Limes on 21<sup>st</sup> and 22<sup>nd</sup> Aug, the last record of the year (8<sup>th</sup> Sep 2019).



Spotted Flycatchers on 5<sup>th</sup> Jul, © Steve Collins.

**Robin (*Erithacus rubecula*)**

Breeding resident

The highest count during the first winter period was 10 on 22<sup>nd</sup> Jan and 15<sup>th</sup> Feb. During Mar there were 12 on 9<sup>th</sup>, 10 on 19<sup>th</sup>, 13 on 23<sup>rd</sup> and 10 on 30<sup>th</sup> Mar. There were 10 on 2<sup>nd</sup> and 12<sup>th</sup> Apr. There were 10 on 27<sup>th</sup> May and then later during the year there were 12 on 12<sup>th</sup> Oct. Seven Robin were ringed during the year. There were 19 territories recorded during the Breeding Bird Survey with 10 in Mere Covert.

**Redstart (*Phoenicurus phoenicurus*)**

Uncommon passage migrant

A male was seen in Penny Croft on 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> Apr. The first records since a m was seen in Dolls Meadow on 15<sup>th</sup> Aug 2016.



Redstart in Penny Croft on 11<sup>th</sup> Apr, © Ian McCulloch.

**Wheatear (*Oenanthe oenanthe*)**

Uncommon passage migrant

One was seen on the path adjacent to the Sprout Field on 27<sup>th</sup> Apr. The first record since 6<sup>th</sup> May 2014. Later in the year there was one near the Natural England Workshop on 31<sup>st</sup> Aug.



### **Tree Sparrow (*Passer montanus*)**

Rare visitor former breeder

Two were seen in a hedge near the Sprout Field on 15<sup>th</sup> Dec. This was the first record since Tree Sparrows were seen on 10 days in 2016.

### **House Sparrow (*Passer domesticus*)**

Breeding resident

House Sparrow is a breeding resident in several properties surrounding the Reserve and is occasionally logged when birds are seen just outside the Reserve boundary, or when they stray into the boundary hedgerows and fields on the Reserve. There were 92 records in 2021 with the majority of sightings in Rostherne village with numbers ranging from one to 30. The highest counts of the year were 15 near Marsh Lane on 9<sup>th</sup> Dec and c30 in Rostherne village on 21<sup>st</sup> Dec.

### **Dunnock (*Prunella modularis*)**

Breeding resident

Ones and twos were recorded throughout the year. The first singing bird was heard on 19<sup>th</sup> Jan (23<sup>rd</sup> Jan in 2020). Six birds were recorded on 3<sup>rd</sup> Mar, five on 9<sup>th</sup> Mar and seven on 30<sup>th</sup> Apr. Six Dunnock were ringed during the year. There were three territories recorded during the Breeding Bird Survey with one in each of Wood Bongs, Shaw Green Willows and Mere Covert.

### **Grey Wagtail (*Motacilla cinerea*)**

Irregular visitor, had bred

Grey Wagtail was recorded on 18 days (7 days in 2020, 11 in 2019 and nine in 2018). This represents the best showing since 2009 (recorded on 24 days). The new ponds and scrapes on Dolls Meadow created in Mar and those dug later in the year on Mere Field, Mere Meadow and Old Meadow provided large areas of new habitat for the species. Singles were recorded in Dolls Meadow from Mar onwards with two feeding on a bund on 8<sup>th</sup> May. One was seen on a bund surrounding a pond in Mere Field on 19<sup>th</sup> Oct. One was in Old Meadow on 9<sup>th</sup> Dec. One was seen feeding along the banks of the stream flowing out of Wood Bongs on 30<sup>th</sup> and 31<sup>st</sup> Dec. Leaky dams were constructed upstream, slowing down the flow and creating muddy and silty areas for Grey Wagtail to feed along the stream banks downstream.



Grey Wagtail on 30<sup>th</sup> Dec, © John Hancock.

**Pied Wagtail/White Wagtail (*Motacilla alba yarrellii/alba*)**

Breeding resident

There were records on 87 days (31 days in 2020, 51 in 2019 and 44 in 2018). This represents a very good showing. The unvegetated bunds surrounding the new ponds and scrapes in Dolls Meadow provided a new habitat for the species. There were seen almost daily after the first bunds were created in Mar until mid-May. Numbers ranged from one to 10 with an average of four birds. Ten were recorded on 11<sup>th</sup> and eight on 14<sup>th</sup> Mar. One was ringed on 22<sup>nd</sup> Jun which was only the second ever ringed on the Reserve with the first in 1979! Later during the year, the newly created bunds in Mere Field below Wood Bongs served as an additional site. Other favoured locations included the Cricket Pitch (up to three), Bobby Field (one) and the Churchyard. Five were seen on the roof of the Church on 9<sup>th</sup> Dec.

There was one record of the continental **White Wagtail (*Motacilla alba alba*)**. One was clearly seen on the new bunds on Dolls Meadow on 6<sup>th</sup> May. This is the first confirmed record since April 2003!

**Meadow Pipit (*Anthus pratensis*)**

Passage migrant &amp; scarce winter visitor; no known June records

Meadow Pipits are occasionally seen in the fields surrounding the Reserve, often on passage. There were only six records in 2021 (nine in 2020, 16 in 2019 and 20 in 2018). Two visited the newly created bunds in Dolls Meadow on 11<sup>th</sup> Mar and there was one in Gale Bog on 14<sup>th</sup> Mar. There were four records in Apr with six in the Sprout Field on 6<sup>th</sup> and 7<sup>th</sup> with a single on 10<sup>th</sup> and 19<sup>th</sup>.

**Chaffinch (*Fringilla coelebs*)**

Breeding resident

Double figure counts included 14 over on 9<sup>th</sup> Mar and 20 on the Sprout Field on 12<sup>th</sup> Oct. There were 10 territories recorded during the Breeding Bird Survey with eight in Mere Covert.

**Bullfinch (*Pyrrhula pyrrhula*)**

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>No of Days Recorded</b>	15	13	14	11	8	4	3	15	5	7	8	12
<b>Max nos</b>	16	7	5	4	3	4	2	2	1	2	3	6

Bullfinch was recorded on 115 days in 2021 (93 days in 2020, 72 in 2019 and 164 in 2018). The majority of records were of birds visiting the bird tables in front of the Observatory and the Dave Clarke Hide. Sixteen were recorded on 3<sup>rd</sup> Jan with twelve in a wintering flock in Mere Covert and four on the Bird Table in front of the Observatory. This matches the highest count on record when 16 were recorded in Mere Covert in Dec 1986 and Feb 1991! There were seven (three m, four f) on the Observatory Bird Table on 21<sup>st</sup> Feb. A juvenile was seen on 4<sup>th</sup> Jul and Malcolm ringed two juveniles near the Gate Hedge in Shaw Green Willows on 24<sup>th</sup> Aug. Numbers were lower during the summer and autumn ranging from one to three birds. Numbers started to increase in Dec with six seen on 21<sup>st</sup> Dec.

**Greenfinch (*Carduelis chloris*)**

Resident, breeds nearby

Greenfinches are common in the gardens of properties surrounding Rostherne Mere and in Rostherne village. There were 76 records in 2021 (31 in 2020, 23 in 2019 and 11 in 2018). The majority of records were of ones and twos in the trees near the Natural England car park. The first record of singing was 6<sup>th</sup> Feb. There was one in front of the Observatory on 11<sup>th</sup> and one in Wood Bongs on 27<sup>th</sup> Apr. There were four in the Car Park on 15<sup>th</sup> May. Interestingly, there was one singing in Shaw Green Willows and near the Bittern Hide on 20<sup>th</sup> and 22<sup>nd</sup> Jun. There

were several in a mixed flock with Goldfinch in Old Hall Wood on 4<sup>th</sup> Aug and one in Shaw Green Willows on 24<sup>th</sup> Aug. Later in the year there were four in Rostherne Village on 7<sup>th</sup> Nov and six on the Sprout Field on 15<sup>th</sup> Dec.

### **Linnet (*Carduelis cannabina*)**

Irregular visitor, has bred

There were nine records in 2021 (20 in 2020, nine in 2019 and four in 2018). The prevalence of Linnets in the fields surrounding the Reserve is related to crops grown. In 2020, the Oilseed Rape crop in the Sprout Field supported good numbers. In 2021, maize stubble in the fields to the east Dirty Lane and Cherrytree Farm supported flocks of Linnets which occasionally crossed the road to forage in Sections 20, 21 and 22 on the Reserve. Around 50 were seen from 27<sup>th</sup> Feb until the 8<sup>th</sup> Mar. The highest count of the year was an impressive c100 in Section 22 on 8<sup>th</sup> Apr. Single figure counts included one, six and three, all in Mere Meadow on 19<sup>th</sup>, 20<sup>th</sup> Apr and 24<sup>th</sup> Nov respectively.

### **Lesser Redpoll (*Carduelis cabaret*)**

Irregular visitor, has bred

There was only one record of Lesser Redpoll in 2021 (three in 2020, 2019 and 4 in 2018). The species is becoming a rarer sight at Rostherne. Ten were within a mixed flock with c30 Siskin in the trees near the Boathouse on 18<sup>th</sup> Nov.

### **Goldfinch (*Carduelis carduelis*)**

Resident, breeds nearby

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>No of Days Recorded</b>	7	13	16	21	14	10	8	7	7	7	10	7
<b>Max nos</b>	5	c20	6	6	10	4	8	c20	c20	c20	42	c20

Goldfinch was recorded on 127 days (91 days in 2020, 128 in 2019 and 112 in 2018). There were 71 records from Jan to May but there were only five double figure counts. The highest was that of around 20 in the Alders in front of the Observatory on 21<sup>st</sup> Feb. Around 20 were seen on several dates from Aug to Dec. The maximum count of the year was 42 on 11<sup>th</sup> Nov. One was ringed during the year.

### **Siskin (*Carduelis spinus*)**

Passage migrant & winter visitor

Siskin was recorded on 19 days (19 days in 2020, 23 in 2019 and 25 in 2018). There were six records in the first winter period, all of several birds (one to three) visiting the Bird Table in front of the Observatory. There were three on 21<sup>st</sup> Feb. There were 13 records in the second winter period from 26<sup>th</sup> Oct to 31<sup>st</sup> Dec (range two to c100). The highest counts were in the Alders along Rostherne Brook on 17<sup>th</sup> Nov (c100), 5<sup>th</sup> (90), 9<sup>th</sup> (c50) and 30<sup>th</sup> Dec (c100).

### **Yellowhammer (*Emberiza citrinella*)**

Irregular visitor, may breed nearby

There were four records, all from hedgerows bordering the northern section of the Reserve. One was in the hedge near Cherrytree Farm on 27<sup>th</sup> Feb. There was one in the hedgerow next to Bobby Field on 15<sup>th</sup> Apr, 17<sup>th</sup> and 24<sup>th</sup> Jun.



Yellowhammer on 15<sup>th</sup> Apr, © Steve Collins.

### Reed Bunting (*Emberiza schoeniclus*)

Breeding resident

There were records on 99 days. The highest count from Jan to Mar was 25 during a movement of birds onto the Reserve from Cherrytree Lane on 1<sup>st</sup> Mar. Birds were first singing in Shaw Green Willows on 22<sup>nd</sup> Feb. There were eight in Shaw Green Willows on 13<sup>th</sup> Apr and 10 on 6<sup>th</sup>, nine on 18<sup>th</sup>, 27<sup>th</sup> and 30<sup>th</sup> May. A nest with four eggs was recorded in Long Pasture on 29<sup>th</sup> May. In June, there were counts of 10 on 2<sup>nd</sup>, eight on 6<sup>th</sup>, 11 on 9<sup>th</sup> and eight on 22<sup>nd</sup> in Shaw Green Willows. There were eight on 6<sup>th</sup> and 10 on 16<sup>th</sup> Jul. There were only 19 records of one or two birds recorded from Aug to Dec. Twenty-eight were ringed during the season. There were eight territories recorded during the Breeding Bird Survey with five in Shaw Green Willows.

Reported movements of Reed Buntings:

Ring no.	Ring code/sex	Date	Place	Movement
AYH3725	3M	21-10-19	Woolston Eyes, Warrington	
R		18-06-21	Rostherne Mere	11 km ESE

R – caught & released by ringer

3 – bird of the year

3J – bird of the year in juvenile plumage

4 – adult with year of hatching unknown but older than one year

F – adult female

M – adult male



Reed Buntings on 19<sup>th</sup> Jun, © Gunnar Menzel.

## BREEDING BIRD SURVEYS AT ROSTHERNE MERE NNR 2021

Except for 2001, when Foot & Mouth disease access restrictions applied, the Common Bird Census (CBC) has been undertaken in Harpers Bank Wood, Mere Covert and Wood Bongs since 1976 while the run of surveys in Shaw Green Willows began in 1977. The mere end of Long Pasture was surveyed each year since 2013. The last surveys were undertaken in 2019 with no survey in 2020 due to COVID-19 restrictions. However, prior to 2020, surveyors were finding the commitment to the project onerous and there were frequent personnel reshuffles. It was therefore decided to trial a new breeding bird survey in 2021 tailored to the wishes of the surveyors and ease of use. The new survey is not designed to replace the CBC and therefore comparisons in the findings of the two surveys should not be made.

### Methodology

Four areas were surveyed in 2021, namely, Mere Covert, Wood Bongs, Shaw Green Willows and Penny Croft/foot of Long Pasture. The results of the survey are based on a total of 26 visits with full details of who did what found in the 'Survey Visit Data 2021' below. During the survey, the number of singing birds were recorded in addition to the highest level of breeding activity observed. The results were analysed by Bill Bellamy and the number of territories per species per survey area were estimated. It should be noted that the calculation of the number of territories is an 'estimation' and not based on geographical plotting as in the CBC which also used a higher number of visits in the determination of the number of territories per species.

### 2021 Results - Summary

The 2021 survey results should be treated as 'new' data and comparisons are not made with the previous CBC dataset. In addition, comparisons between areas should be treated with caution due to the differences in the size of the survey areas, differences in the number of visits and the duration of each survey.

A total of 40 species are included in the results table and listed alphabetically.

Waterbirds are not targeted by this survey but *Mallard*, *Mandarin Duck* and *Teal* were all recorded. Of these, one *Mallard* nest with three eggs was found in Wood Bongs.

*Snipe* were seen Shaw Green Willows on 12<sup>th</sup> Apr and 6<sup>th</sup> May and *Water Rail* in Shaw Green Willows on 9<sup>th</sup> and 23<sup>rd</sup> Mar and Penny Croft/Long Pasture on 9<sup>th</sup> Mar.

*Pheasants* were recorded in all four areas but there was insufficient information to determine any territories.

There was one *Buzzard* territory in Mere Covert with courtship and display (D) seen on several dates.

There were two *Stock Dove* territories in Mere Covert and registrations in Wood Bong and Penny Croft/Long Pasture. *Woodpigeon* is generally not well covered by this type of survey but birds were nevertheless noted in all areas except Penny Croft/Long Pasture.

There were only two *Great Spotted Woodpecker* territories – one each in Mere Covert and Wood Bongs.

*Kestrel* was recorded in Wood Bongs where a pair displayed early in the season and appeared to prospect a nest site but they were not seen at this site after 20<sup>th</sup> Apr.

*Jay*, *Jackdaw*, *Magpie* and *Carrion Crow* were all present during the survey but no territories were recorded.

There were three *Coal Tit* territories, one in Mere Covert, Wood Bongs and Shaw Green Willows. There were 25 *Blue Tit* territories with 12 in Mere Covert and 10 in Wood Bongs. In comparison, there were a markedly lower number of *Great Tit* territories with nine in total.

*Cetti's Warbler* was recorded with single territories in Mere Covert, Shaw Green Willows and Penny Croft/Long



Pasture.

There were six *Long-tailed Tit* territories with two in each of Mere Covert, Wood Bongs and Shaw Green Willows. There was a nest containing eggs (NE) in Wood Bongs.

Two *Willow Warbler* territories were recorded with one in Mere Covert and Wood Bongs. A total of 14 *Chiffchaff* territories were recorded with the majority in Mere Covert (eight).

Only one *Sedge Warbler* territory was recorded – Shaw Green Willows. Malcolm Calvert undertakes a detailed study of the *Reed Warbler* population. However, it was interesting to note that 18 territories were recorded from three of the four survey areas with eight in Shaw Green Willows and six in Penny Croft/Long Pasture.

There were 17 *Blackcap* territories with 10 in Mere Covert. Two *Whitethroat* territories were recorded – both in Shaw Green Willows.

*Goldcrest* was recorded in both woods with three territories in total.

There were 35 *Wren* territories, unsurprisingly the most numerous of all the species recorded – 20 were in Mere Covert.

There were nine *Nuthatch* territories with one in the small copse in Shaw Green Willows. In comparison there were four *Treecreeper* territories in total.

A total of 12 *Blackbird* territories included only five in Mere Covert and seems on the low side as did *Song Thrush* territories (only three in total). Mistle Thrush was recorded in in both woods.

*Robin* territories were 19 in total with 16 in the two woods. There were three *Dunnock* territories.

A total of 10 *Chaffinch* territories were recorded with four in each of the woods. *Bullfinch* was recorded during survey work in two areas – Mere Covert and Penny Croft/Long Pasture. *Goldfinch* was recorded in all four areas

There were a total of eight *Reed Bunting* territories with five in Shaw Green Willows.

## RESULTS

Survey work in 2021 was carried out by Steve Collins (SC), Phil Dell (PD) and Sheelagh Halsey (SH).

### SURVEY VISIT DATA 2021

	Mere Covert	Wood Bongs	Shaw Green Willows	Penny Croft Long Pasture
No of visits	7	9	5	5
Duration	10 hrs 50 mins	15 hrs 15 mins	6 hrs 50 mins	6 hrs 50 mins
First visit	27 Mar	9 Mar	9 Mar	9 Mar
Last visit	29 May	27 May	27 May	27 May
Surveyor	PD (7)	SH (2) SC (7)	SH (5)	SH (5)

## RESULTS 2021

	Mere Covert	Wood Bongs	Shaw Green Willows	Penny Croft Long Pasture	Estimated Total/Highest Breeding Code
Blackbird (B)	5 FF	6 FF	1 T		12 FF
Blackcap (BC)	10 T	4 FF	2 T	1 T	17 T
Blue Tit (BT)	12 D	10 NY	2 T	1 T	25 NY
Bullfinch (BF)	r H			r H	r H
Buzzard (BZ)	1 D				1 D
Carrion Crow (C.)	r H	r H			r H
Cetti's Warbler (CW)	1 T		1 T	1 T	3 T
Chaffinch (CH)	4 T	4 FF	1 T	1 T	10 FF
Chiffchaff (CC)	8 FF	2 T	3 D	1 T	14 FF
Coal Tit (CT)	1 T	1 T	1 T		3 T
Dunnock (D)	1 T	1 D	1 T	r H	3 D
Goldcrest (GC)	2 T	1 T			3 T
Goldfinch (GO)	r S	r S	r S	r S	r S
Great Spotted Woodpecker (GS)	1 T	1 T			2 T
Great Tit (GT)	4 T	3 FF	1 T	1 T	9 FF
Jackdaw (JD)	r	r			r
Jay (J)	r H	r H	r H		r H
Kestrel (K.)		1 D			1 D
Long-tailed Tit (LT)	2 FF	2 NE	2 FF	r H	6 NE
Magpie (MG)	r H	r H			r H
Mallard (MA)	r H	1 NE	r H	r H	1 NE
Mandarin Duck (MN)		r H	r H		r H
Mistle Thrush (M)	r H	r H			r H
Nuthatch (NH)	5 T	3 FF	1 T		9 FF
Pheasant (PH)	r H	r H	r H	r H	r H
Pied Wagtail (PW)			r		r
Reed Bunting (RB)	1 D	r H	5 B	2 T	8 B
Reed Warbler (RW)	4 T		8 T	6 T	18 T
Robin (R)	10 FL	6 FF	2 T	1 T	19 FF
Sedge Warbler (SW)			1 T	r	1 T
Snipe (SN)			r H		r H

	Mere Covert	Wood Bongs	Shaw Green Willows	Penny Croft Long Pasture	Estimated Total/Highest Breeding Code
Song Thrush (ST)	1 T	1 T	1 T		3 T
Stock Dove (SD)	2 T	r H		r H	2 T
Teal (T)			r		r
Treecreeper (TC)	1 D	2 FF	1 T		4 FF
Water Rail (WA)			r H	r H	r H
Whitethroat (WH)			2 T		2 T
Willow Warbler (WW)	1 T	1 T			2 T
Wood Pigeon (WP)	r H	r S	r H		r S
Wren (WR)	20 D	7 FL	7 T	1 T	35 FL

#### Breeding Status Codes

- r Species recorded but probably not holding territory.
- H Species observed in breeding season in suitable nesting habitat.
- S Singing male present in breeding season in suitable nesting habitat.
- T Permanent Territory through registration or territorial behaviour on at least two different days a week or more part at the same place or many individuals on one day.
- D Courtship and display.
- B Nest building or excavating nest-hole.
- FL Recently fledged young.
- FF Adult carrying faecal sac or food for young.
- NE Nest containing eggs.

## RINGING TOTALS

	2021 pullus (p)	2021 full-grown (fg)	1972-2020		Grand Total		total
			p	fg	p	fg	
Snipe		1					1
Great Spotted Woodpecker		1		12		13	13
Pied Wagtail		1		1		2	2
Wren		12		472		484	484
Dunnock		6	2	195	2	201	203
Robin		7	60	350	60	357	417
Blackbird		1	25	236	25	237	262
Song Thrush		4	9	77	9	81	90
Cetti's Warbler		3		22		25	25
Sedge Warbler		18	5	633	5	651	656
Reed Warbler	18	59	4704	3774	4722	3833	8555
Whitethroat		2		130		132	132
Blackcap		12		668		680	680
Chiffchaff		24		995		1019	1019
Willow Warbler		1	33	760	33	761	794
Nuthatch		1	11	18	11	19	30
Treecreeper		7	6	149	6	156	162
Long-tailed Tit		8		644		652	652
Blue Tit		50	340	1697	340	1747	2087
Great Tit		12	341	663	341	675	1016
Jay		1		25		26	26
Jackdaw		1	12		12	1	13
Goldfinch		1	5	43	5	44	49
Bullfinch		2	3	142	3	144	147
Reed Bunting		28	77	874	77	902	979

	<b>pullus</b>	<b>full-grown</b>	
2021 TOTALS	18	263	
1972 – 2020 TOTALS	6045	14288	
GRAND TOTAL OF ALL SPECIES RINGED	6063	14551	20614

## **Cuckoo – a teasing revival?**

Sadly, the Cuckoo *Cuculus canorus* is no longer commonly encountered as a harbinger of spring in our corner of England.

Research has shown that a gens or race of Cuckoo parasitises a species of passerine dependent on nest and habitat in which it was raised, the female selecting nests of Meadow Pipit on moorland, Dunnock on farmland or Reed Warbler in marshland.

Recorded instances of Reed Warbler nests cuckolded in Cheshire are rare; the first being of an egg, which subsequently hatched, in a nest at Budworth Mere near Northwich in 1934. The next known event was in 1977 when I discovered a well-grown Cuckoo chick in the reeds at Rostherne Mere.

Although the warbler nests were regularly monitored no further parasitic activity was traced until 1988 when of the first known 18 Reed Warbler clutches laid at Rostherne, 9 contained a Cuckoo egg. This season heralded 6 continuous years in which at least 30 Cuckoo eggs were laid. The markings on the eggs indicated a strong reliance on the survival and return of an individual Cuckoo; I referred to her as 'Olive' from the egg colouration.

During these years the Cuckoo-Reed Warbler combination was recorded elsewhere in Cheshire, including at Woolston, Pickmere and Acton Bridge. Details of my findings are to be found in Calvert (2005).

From 1994 onwards Cuckoo calling or sight records became ever scarcer with none evidenced at Rostherne Mere in most years.

Two days in June 2020 produced surprise sightings of a silent Cuckoo over the Rostherne reed stands and on the late date of 20<sup>th</sup> Jul I discovered a Reed Warbler nest containing a sole Cuckoo egg which failed to hatch.

In 2021 a few observations of a silent Cuckoo at the Rostherne Reserve sharpened my senses and on 30<sup>th</sup> Jun I was delighted to find a Reed Warbler nest of 3 eggs, one of which was clearly the product of a Cuckoo. A visit on 5<sup>th</sup> Jul caused concern as one of the Reed Warbler eggs had disappeared from the well constructed and partially camouflaged nest, built on phragmites and surrounded by Yellow Loosestrife. All was well, however, as on the 8<sup>th</sup> the warbler egg had just hatched and the warmth of the Cuckoo egg indicated that it was still under incubation.

I ringed the healthy chick on 15<sup>th</sup> Jul but by then the Cuckoo egg was cold and neglected. The young Reed Warbler left the nest around 20<sup>th</sup> Jul and would have attempted its first short flights amongst the waterside vegetation some four days' later.

I corresponded with Nick Davies, an expert on Cuckoos and author of the monograph on the species (Davies 2015), and he confirmed my belief that different females had laid the eggs in the last two seasons.

The intrigue and fascination! After a long spell of no known parasitism one wonders whether a young Cuckoo will again be fostered in a Rostherne Reed Warbler nest.

References:

Calvert, M (2005) Reed Warblers at Rostherne Mere     English Nature

Davies, N (2015) Cuckoo Cheating by nature     Bloomsbury

**Malcolm Calvert**



## The Butterfly Report 2021

This report details the results of butterfly surveys undertaken during 2021 at Rostherne Mere NNR. The Rostherne Mere Butterfly Survey is the oldest in Cheshire, commencing in 1976. Rostherne Mere is a national recording site and part of the United Kingdom Butterfly Monitoring Scheme (UKBMS). This survey represents the eighth survey after a 10-year gap. Many thanks to Sheelagh Halsey for her considerable help during the survey.

Species	2021 Records	2014-20 Range	2021 (max/day)	2014-20 Range (max/day)
Small Skipper	28	2-73	11	1-26
Large Skipper	21	8-25	7	3-8
Brimstone	8	1-6	3	1-2
Large White	6	8-38	2	2-14
Small White	18	7-499	6	2-123
Green-veined White	332	312-454	59	51-79
Orange-tip	35	32-134	17	9-42
Purple Hairstreak	3	1-6	2	1-4
Small Copper	6	1-4	2	1-2
Common Blue	1	5-34	1	2-5
Holly Blue	4	1-5	1	1-5
Red Admiral	23	15-75	6	4-22
Painted Lady	1	1-37	1	1-13
Small Tortoiseshell	47	5-70	13	1-12
Peacock	66	15-124	10	3-20
Comma	40	4-48	16	1-16
Speckled Wood	230	186-375	52	22-52
Gatekeeper	149	88-251	73	27-124
Meadow Brown	774	535-1286	200	188-318
Ringlet	19	4	6	2

The survey ran for 26 weeks from 30<sup>th</sup> Mar to 26<sup>th</sup> Sep.

There was a total of 1811 butterfly records with an average of 70 per week over 26 weeks. This represents a marked decrease compared to 2020 (2849 records) and 2019 (2386 records) but higher than the years 2016 to 2018. It is thought cold weather during Apr, where a frost was recorded each day of the month, was an important factor in suppressing butterfly numbers in 2021.

A total of 20 species were recorded. The commonest butterfly in 2020 was once again Meadow Brown with 774 records and then Green-veined White with 332 records. It was a good year for Speckled Wood which was the third commonest butterfly with 230 records.

The 5 commonest butterflies for years 2021, 2020 and 2019 are shown below.

	2021	2020	2019
1 <sup>st</sup>	Meadow Brown	Meadow Brown	Meadow Brown
2 <sup>nd</sup>	Green-veined White	Small White	Green-veined White
3 <sup>rd</sup>	Speckled Wood	Green-veined White	Gatekeeper
4 <sup>th</sup>	Gatekeeper	Gatekeeper	Speckled Wood
5 <sup>th</sup>	Peacock	Speckled Wood	Orange Tip

Year	Weeks	Butterfly Total	Butterfly Average/Week
2014	24	2112	88
2015	26	2023	78
2016	26	1629	63
2017	26	1500	58
2018	24	1572	66
2019	26	2386	92
2020	17	2849	168
2021	26	1811	70

Date	Highest Count	Date	Lowest Count
16/07/2021	276	02/05/2021	3

Details of the species recorded in 2021 follow. The account of each species begins with a statement of its Cheshire status, as compiled by Barry Shaw the Cheshire and Wirral Butterfly Report 2015. This shows how recording at Rostherne fits into a county pattern.

#### **Small Skipper (*Thymelicus sylvestris*)**

*Cheshire status: Now an abundant and widespread resident, although virtually unknown in the county prior to the mid-1970's. Single-brooded from early July to mid-August. Most numerous in lowland areas of rough grassland, but also recorded in small numbers in the Pennine foothills.*

After an amazing year for records in 2020 (73) there was a decrease in 2021 with 28 records. The first Small Skippers were seen on 9<sup>th</sup> Jul. The maximum count was 11 on 16<sup>th</sup> Jul. They were seen on four of the 15 transects. These were along the permissive path through Church Field, across Mere Field, Long Pasture and Penny Croft and around the unimproved grassland around Gale Bog. The rough grassland around Long Pasture and Penny Croft continues to be the best area on the Reserve for the species. The last records were on 25<sup>th</sup> Jul. At every opportunity they were photographed from the front to check for Essex Skipper. Essex Skippers have black tips on the end of the antennae. All specimens examined were confirmed as Small Skippers.

#### **Large Skipper (*Ochlodes sylvanus*)**

*Cheshire status: A common and widespread resident, but some reduction in the size of colonies has been noted during the last few years. Single-brooded from late May to late July. Found in a range of habitats where uncultivated grasses are allowed to grow.*

There were 21 records in 2021 (25 records in 2020, 17 in 2019 and 12 in 2018). The first record was five seen on 15<sup>th</sup> Jun. The highest count was seven seen on 16<sup>th</sup> Jun. Large Skipper was seen on five transects. These were along the permissive path through Church Field, across Mere Field, Long Pasture and Penny Croft, around the unimproved grassland around Gale Bog and across Brook and Dolls meadows. The last records were on 30<sup>th</sup> Jun.

#### **Brimstone (*Gonepteryx rhamni*)**

*Cheshire status: A fairly common resident in the east of the county, but scarcer in the west. As recently as the mid-1970's there were no breeding sites in the county. Single-brooded flying from late July to September, but most frequently recorded following emergence from hibernation in early spring. In Cheshire breeding is confined to Alder Buckthorn (*Frangula alnus*).*

There were eight records in 2021 which is the highest since 2014. The first was one seen in Dolls Meadow on 2<sup>nd</sup> Apr. There were three on 22<sup>nd</sup> Apr with two in Wood Bongs and one in Penny Croft/Long Pasture. The last record was one on the permissive path through Church Field on 26<sup>th</sup> May.



**Brimstone on Bramble 22<sup>nd</sup> Apr, © Steve Collins.**

### **Large White (*Pieris brassicae*)**

*Cheshire status: A common and widespread resident with numbers sometimes augmented by immigrants. Double-brooded with the second emergence larger than the first and even a partial third brood in some years – recorded throughout the season. This is a highly mobile butterfly that occurs in a wide range of habitats, especially allotments and crop fields.*

There were only six records of Large White compared to 38 last year. Two were seen on 16<sup>th</sup> Jul. The absence of Large White in 2021 is probably a reflection on the crops grown in the fields immediately surrounding the Reserve being less suitable for the species compared to 2020.

### **Small White (*Pieris rapae*)**

*Cheshire status: An abundant and widespread resident, but seen in low numbers in upland areas. Double-brooded with the second emergence larger than the first although immigrants may augment these numbers. Occurs in a wide range of habitats and may be seen throughout the season from early April to early October.*

Records of Small White also took a dramatic plunge in 2021 with 18 compared to an amazing 499 in 2020. The species was recorded from 16<sup>th</sup> Jul to 15<sup>th</sup> Sep. The largest day count was six on 15<sup>th</sup> Sep. The high count in 2020 was largely due to the Sprout Field being sowed with Oilseed Rape which contained many wildflowers including a large patch of Scented Mayweed.

### **Green-veined White (*Pieris napi*)**

*Cheshire status: Widespread and abundant, especially in damp, sheltered areas. Breeds in a range of habitats from sea-level to the Pennine hills where it is the most likely “white” to be encountered. Double-brooded with the largest numbers normally seen during the second emergence.*

The Green-veined White is usually the “white” butterfly most commonly seen at Rostherne Mere with the species preference for the wet margins. It regained the spot as the second commonest butterfly in 2021 with 332 records. It is consistently seen throughout the survey season with the number of records ranging from 312 to 454 from 2014 to 2020. The highest day count in 2021 was 59 on 25<sup>nd</sup> Jul with 24 in Brook and Doll meadows combined.



Very worn Green-veined White on Bramble 28<sup>th</sup> Aug, © Sheelagh Halsey.

**Orange-tip (*Anthocharis cardamines*)**

*Cheshire status:* A common and widespread resident, especially in damp grassy habitats. Despite the loss of traditional meadows due to modern farming methods it is presently more numerous than ever. Single-brooded flying from mid-April to mid-June.

The species was not recorded in 2020 because the Reserve was closed due to COVID restrictions during the period when the species flies. There were 35 records in 2021 which is towards the lower end of the range, 32 to 134 from 2014-20. They were first recorded on 14<sup>th</sup> Apr. The highest day count was 17 on 22<sup>nd</sup> Apr when 12 were seen along the permissive path across Church Field. The last report was 9<sup>th</sup> Jun.



Male Orange-tip on a Dandelion 14<sup>th</sup> Apr, © Sheelagh Halsey.

### **Purple Hairstreak (*Favonius quercus*)**

*Cheshire status: Formerly considered scarce, but with recent survey work revealing many new breeding sites, especially on the Wirral and in the south-west of Cheshire. This is an inconspicuous treetop butterfly that has probably been overlooked in the past, although there is evidence to suggest some range extension in recent years. Single-brooded flying from late June to mid-August.*

This species is difficult to survey during transect work as it becomes most active on sunny evenings within the canopy of mature Pedunculate or English Oak. There were three records with two on 16<sup>th</sup> Jul and one on 25<sup>th</sup> Jul. The range from 2014 to 2020 has only been one to six records per year.



**Purple Hairstreak on an Oak in Wood Bongs on 25<sup>th</sup> Jul, © Sheelagh Halsey.**

### **Small Copper (*Lycaena phlaeas*)**

*Cheshire status: A common and widespread resident normally recorded in small numbers, although significant fluctuations occur in populations from year-to-year. Double-brooded at most sites, but can be continuously brooded during favourable weather conditions, Breeds in a range of habitats on Common Sorrel (*Rumex acetosa*) and Sheep's Sorrel (*Rumex acetosella*).*

There were six records of Small Copper which is the best showing since the survey recommenced in 2014. The first was seen in Dolls Meadow on 12<sup>th</sup> May. One was seen along Mere Field on 2<sup>nd</sup> Jun and two along the permissive path along Church Field on 16<sup>th</sup> Jun. Two were seen later in the year on 28<sup>th</sup> Aug with one along Mere Field and another in Penny Croft/Long Pasture.

### **Common Blue (*Polyommatus icarus*)**

*Cheshire status: Still a relatively widespread resident, but survey work has revealed significant losses extending over a number of years. Reductions at lowland sites can be attributed to loss of habitat caused by modern farming methods, but this does not explain why the butterfly has almost disappeared from the Pennine foothills. Normally double-brooded at most sites with breeding occurring in a range of habitat.*

The species was not recorded in 2020 and there was only one record in 2021 when one was seen along Mere Field on 25<sup>th</sup> Jul.

### **Holly Blue (*Celastrina argiolus*)**

*Cheshire status: Normally a common and widespread resident, although cyclical fluctuations occur with rapid increases in population followed by equally sharp declines. Double-brooded flying from mid-April to late May, with the second generation seen from mid-July to early September.*

There were four records of Holly Blue. Singles were on Doll's Meadow on 2<sup>nd</sup> Apr and 13<sup>th</sup> Apr (first generation) and then later along the permissive path across Church Field on 10<sup>th</sup> Aug and 15<sup>th</sup> Aug (second generation).





**Holly Blue on Bramble on 10<sup>th</sup> Aug, © Sheelagh Halsey.**

**Red Admiral (*Vanessa atalanta*)**

*Cheshire status: An annual immigrant of varying abundance, generally common and widespread with a scattering of sightings in even the poorest years. Negligible, though increasing, numbers have hibernated successfully in the county over the last few years. Breeds in a range of habitats with largest numbers generally recorded in the late summer.*

There were 23 records of Red Admiral. The range from 2014-19 was 15 to 75. The species was recorded from 15<sup>th</sup> Jun to 26<sup>th</sup> Sep. The highest day count was six on 15<sup>th</sup> Sep. There was a late record of one flying past the Observatory on 26<sup>th</sup> Oct.

**Painted Lady (*Vanessa cardui*)**

*Cheshire status: An annual immigrant, normally recorded in small numbers, although 1996 and 2009 produced massive influxes. Breeds in a range of habitats, especially where thistles grow in abundance. Peak numbers occur at any time between late July and early September depending on levels of migration.*

Not seen in 2020 and only one record in 2021 when a single was seen along the permissive path across Church Field on 30<sup>th</sup> Jun.

**Small Tortoiseshell (*Aglais urticae*)**

*Cheshire status: An abundant and widespread resident with immigration noted in some years. A recent population decline is disturbing, although there is little evidence of any long-term change of status. This is, however, a nomadic insect whose numbers tend to fluctuate from one year to another depending on weather conditions. It is normally double-brooded and also flies in early spring after hibernation.*

There were 47 Small Tortoiseshell records which represents a good account. The highest day count was 13 on 22<sup>nd</sup> Jun when there were five along the hedge path in Shaw Green Willows and six in Dolls Meadow.



**Peacock (*Inachis io*)**

*Cheshire status: An abundant and widespread resident, which has become more numerous since the 1970's, especially in the east of the county. It is a single-brooded butterfly with peak numbers from late July and throughout August, but flies again in early spring after hibernation.*

It was another good year for Peacock with 66 records (76 records in 2020). The range from 2014-20 was 15-124. First recorded during the first survey on 30<sup>th</sup> Mar and the last record on 8<sup>th</sup> Sep. The highest day counts were 10 on 2<sup>nd</sup> Apr and 22<sup>nd</sup> Apr.

**Comma (*Polygonia c-album*)**

*Cheshire status: A common and widespread resident that has been slowly extending its range in Cheshire since at least the 1940's. This range extension accelerated from the early 1980's with small numbers now often recorded in the Pennine foothills. This is a double-brooded insect that also hibernates to appear again in early spring. Its favoured habitats are woodlands and mature hedgerows.*

There were 40 records of Comma which is at the upper end of the range for the species at Rostherne. It was recorded from the first survey on 30<sup>th</sup> Mar to the last survey on 26<sup>th</sup> Sep. The highest day count was 16 on 15<sup>th</sup> Sep with eight along the permissive path across Church Field .

**Speckled Wood (*Parage aegeria*)**

*Cheshire status: An abundant and widespread resident. Since the late 1980's its range has significantly extended in a north-easterly direction and it can now be found in small numbers in the Pennine foothills. It would appear that the species has benefited from woods becoming shadier places, although warmer weather conditions may also have helped. Two or three overlapping broods mean that sightings can occur throughout the year from April to October.*

Speckled Wood was the third commonest species recorded. There were 230 records. The range from 2014-20 was 186-375. The highest day count was 52 on 8<sup>th</sup> Sep. There were seen in each of the 15 transects with eight on the permissive path along Church Field and 14 in the transects covering Mere Covert.

**Gatekeeper (*Pyronia tithonus*)**

*Cheshire status: Presently an abundant and widespread resident. In the 1930's this butterfly was virtually unknown on the Cheshire Plain, but a range expansion has been underway since that time which seems to have accelerated since the early 1980's. In the last few years breeding colonies have even become established in the Pennine foothills. Single-brooded flying throughout July and August.*

Gatekeeper was the fourth commonest species recorded as it was in 2020. There were 149 records. The range from 2014-20 was 88 to 251. The species was first seen on 9<sup>th</sup> Jul (1<sup>st</sup> Jul in 2020). It was last seen on 10<sup>th</sup> Aug (20<sup>th</sup> Aug in 2020). The maximum day count was 73 on 25<sup>th</sup> Jul with 30 along the permissive path along Church Field and 20 around the fields surrounding Gale Bog.

**Meadow Brown (*Maniola jurtina*)**

*Cheshire status: Nowadays an abundant and widespread resident, although in the early 1900's it was quite scarce in some areas of the county. Despite the loss of traditional farming methods which will have resulted in some declines in lowland area, there does not appear to be any change of status in the less intensely farmed upland regions where numbers have always been lower. Favoured habitat is unimproved grassland. Single-brooded flying from early June to late August.*

Once again, Meadow Brown was the commonest butterfly at Rostherne Mere NNR in 2021. There was a total of 774 records which was markedly lower than the record of 1286 in 2020. The grass meadows in transects 1, 3, 6 and 12 provide good habitat for the species. It was first seen on 16<sup>th</sup> Jun. The last records were on 22<sup>nd</sup> Sep. The highest day counts were 154 on 9<sup>th</sup> Jul and 200 on 16<sup>th</sup> Jul. There were 90 and 110 in the fields surrounding Gale Bog on 9<sup>th</sup> and 16<sup>th</sup> Jul respectively.

**Ringlet (*Aphantopus hyperantus*)**

*Cheshire status: Formerly a rarity in the county with no confirmed breeding records between 1937 and 1996. Since then the species has become established at many suitable sites, especially in the south of the country, but with increasing evidence that it is extending its range northwards. Single-brooded flying from mid-June to early August.*

There was a notable increase in Ringlet records during 2021 after it was first recorded on the Reserve in 2020. There were four records in 2020 which increased to 19 in 2021. The first record was two seen along Mere Field on 27<sup>th</sup> Jun. The highest day count was six on two occasions. There were six seen, all in Mere Field on 5<sup>th</sup> Jul and then two along the permissive path across Church Field, one along Mere Field and two across Dolls Meadow on 9<sup>th</sup> Jul. The last records of the year were two on 16<sup>th</sup> Jul. Ringlets were seen three of the 15 transects namely along the permissive path across Church Field, along Mere Field and across Dolls Meadow.



Ringlet on in Mere Field on 5<sup>th</sup> Jul, © Steve Collins.

## Dragonflies and Damselflies Survey 2021

Dragonflies and Damselflies were surveyed for the sixth year by Sheelagh Halsey.

There were 18 visits in total from 18<sup>th</sup> May until 26<sup>th</sup> Sep. References to locations replicate the transect numbers used in the Butterfly Survey. The areas covered by the survey included Transect 1 (Church Field including the Boathouse), Transect 3 (Mere Field), Transect 4 (Along the edge of Mere Meadow and Shaw Green Willows), Transect 5 (Shaw Green Willows), Transect 6 (Penny Croft) and Transect 15 (Dolls Meadow shoreline). The results are shown in the tables below:

Visit Number	Date	Start Time	Duration (hrs)	Weather
1	18/05	10:30	1.5	16°C, 2/8 cloud, light breeze
2	27/05	10:30	2	18°C, 4/8 cloud, light breeze
3	30/05	12:00	1.5	24°C, 0/8 cloud, light breeze
4	02/06	13:15	2	25°C, 3/8 cloud, moderate breeze
5	06/06	10:30	2	16°C, 7/8 cloud, calm
6	09/06	12:00	2.5	24°C, 4/8 cloud, light breeze
7	15/06	13:00	2	22°C, 0/8 cloud, light breeze
8	22/06	11:30	2.5	20°C, 4/8 cloud, light breeze
9	09/07	11:30	2.5	20°C, 7/8 cloud, calm
10	16/07	11:30	2.5	24°C, 0/8 cloud, light breeze
11	25/07	11:00	3	23°C, 4/8 cloud, light breeze
12	03/08	11:30	2.5	22°C, 1/8 cloud, light breeze
13	10/08	12:30	2.5	20°C, 3/8 cloud, moderate breeze
14	24/08	12:30	2	20°C, 8/8 cloud, light breeze
15	28/08	10:45	2.5	21°C, 1/8 cloud, light breeze
16	15/09	13:15	2	19°C, 2/8 cloud, light breeze
17	22/09	14:00	1	18°C, 3/8 cloud, light breeze
18	26/09	12:30	1.5	20°C, 6/8 cloud, moderate breeze

**Table 1 Visit Details.**

Species	Years	2016	2017	2018	2019	2020	2021
Azure Damselfly		383	1243	190	75	28	39
Blue-tailed Damselfly		544	299	249	218	203	104
Large Red Damselfly		7	16	31	7	10	27
Banded Demoiselle		44	22	23	6	12	23
Common Blue Damselfly		610	635	712	1320	868	972
Red-eyed Damselfly							7
Broad-bodied Chaser		2	5	3	2	1	25
Four-spotted Chaser		1	1	1			11
Black-tailed Skimmer		13	21	18	23	16	46
Common Darter		77	20	49	20	12	63
Brown Hawker		54	75	39	62	38	31
Southern Hawker		14	12	19	7	5	3
Emperor		3	9	3	11	6	27
Migrant Hawker		35	44	38	48	49	37
Ruddy Darter				1	15		1
Black Darter							1
<b>Total No. of Species</b>		<b>13</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>12</b>	<b>16</b>

**Table 2 Collated Records 2016-2021.**

Species	Visits	1	2	3	4	5	6 (no T15)	7	8	9	10
Azure Damselfly				6	8	5+	10+	10+			
Blue-tailed Damselfly				8	5	40+	12+	15+	10+	3	3
Large Red Damselfly			2	8	10	1	3	2	1		
Banded Demoiselle					5	8	6	2		1	
Common Blue Damselfly	2	6	5	30+	50+	70+	440+	120+	40+	80+	
Red-eyed Damselfly							5+				
Broad-bodied Chaser						1	3	8	5	4	1
Four-spotted Chaser							2	2	1	3	1
Black-tailed Skimmer					2	1	6	2	10	4	9
Common Darter											2
Brown Hawker										3	7
Southern Hawker											
Emperor							2	4	5	5	2
Migrant Hawker											
Ruddy Darter											
Black Darter											

**Table 2 Species Counts.**

Species	Visits	11	12	13	14	15	16	17	18
Azure Damselfly									
Blue-tailed Damselfly	2	2	2	1	1				
Large Red Damselfly									
Banded Demoiselle				1					
Common Blue Damselfly	40+	20+	25+	5+	20+	15+	3	1	
Red-eyed Damselfly	2								
Broad-bodied Chaser	1		2						
Four-spotted Chaser	1		1						
Black-tailed Skimmer	7	2	1		2				
Common Darter	8	8	15	3	9	11	2	7	
Brown Hawker	5	12	3	1					
Southern Hawker			1		1		1		
Emperor	7	2							
Migrant Hawker		1	2	4	12	7	6	5	
Ruddy Darter						1			
Black Darter	1								

**Table 2 Species Counts (continued).**

Species	Visits	Transect
Azure Damselfly		4, 5, 6
Blue-tailed Damselfly		1, 4, 5, 6, 15
Large Red Damselfly		4, 5, 6, 15
Banded Demoiselle		4, 5
Common Blue Damselfly		1, 3, 4, 5, 6, 15
Red-eyed Damselfly		4
Broad-bodied Chaser		3, 4, 15
Four-spotted Chaser		15
Black-tailed Skimmer		4, 15
Common Darter		1, 3, 4, 15
Brown Hawker		1, 4, 6, 15
Southern Hawker		4, 15
Emperor		1, 4, 15
Migrant Hawker		1, 3, 4, 5, 6, 15

Ruddy Darter	15
Black Darter	3

**Table 2 Species Counts (continued).**

Visits	Total no. species per visit
1	1
2	2
3	4
4	6
5	7
6	10
7	9
8	7
9	8
10	8
11	10
12	7
13	10
14	5
15	6
16	4
17	4
18	3

**Table 3 Total no. of Species Per Visit.**

Observatory/Boathouse (T1)	Common Blue Damselfly	Ovipositing
Bittern Hide (T4)	Common Blue Damselfly	Ovipositing
	Black-tailed Skimmer	Ovipositing
	Common Darter	Ovipositing
	Large Red Damselfly	Mating
Shaw Green Willows pond (T5)	Migrant Hawker	Mating
	Azure Damselfly	Mating
	Common Darter	Mating
	Brown Hawker	Mating
Penny Croft (T6)	Azure Damselfly	Mating
	Blue-tailed Damselfly	Mating
	Common Blue Damselfly	Mating
Dolls Meadow (T15)	Blue-tailed Damselfly	Mating
	Common Blue Damselfly	Ovipositing
	Broad-bodied Chaser	Ovipositing
	Four-spotted Chaser	Mating
	Black-tailed Skimmer	Ovipositing
	Common Darter	Ovipositing
	Emperor	Ovipositing

**Table 4 Observations on reproduction.**

There was a total of 16 species recorded during the survey which is the highest since the survey began in 2016. The new ponds and scrapes in Dolls Meadow, Mere Field, Mere Meadow and Old Meadow significantly increased the habitat for a number of species. There were notable increases in the number of records for Broad-bodied Chaser, Four-spotted Chaser, Black-tailed Skimmer and Emperor. Ruddy Darter was seen again after a no show in 2020. New species included Red-eyed Damselfly and surprisingly Black Darter!

### **Azure Damselfly (*Coenagrion puella*)**

The Azure Damselfly was seen on five visits from 30<sup>th</sup> May until 15<sup>th</sup> Jun. The highest counts for the year were 10+ on 9<sup>th</sup> and 15<sup>th</sup> Jun. A total of 39 records for the year is at the lower end of the range 28 to 1243 from 2016 to 2020. All sightings were in Shaw Green Willows (T4 and T5) and Penny Croft. The species was seen mating near the ponds in Shaw Green Willows (T5) and in Penny Croft (T6).

### **Blue-tailed Damselfly (*Ischnura elegans*)**

There were 104 records which is the lowest since the survey began in 2016. The species was seen on 13 visits from 30<sup>th</sup> May until 28<sup>th</sup> Aug. The highest count was 40+ on 6<sup>th</sup> Jun. It is the second commonest species and recorded from most of the areas surveyed. It was seen mating in Penny Croft (T6) and on the new ponds on Dolls Meadow (T15).

### **Large Red Damselfly (*Pyrrosoma nymphula*)**

The Large Red Damselfly is usually one of the first damselflies to be seen flying and earlier records were probably missed due to COVID-19 restrictions in 2020. There were 27 records in 2021 which represents a good showing. It was recorded from 27<sup>th</sup> May until 22<sup>nd</sup> Jun. The highest count was 10 on 2<sup>nd</sup> Jun. It was seen in Shaw Green Willows (T4 and T5), Penny Croft (T6) and in Dolls Meadow (T15). It was seen mating near the Bittern Hide (T4).



Large Red Damselfly on 30<sup>th</sup> May, © Sheelagh Halsey.

### **Banded Demoiselle (*Calopteryx splendens*)**

It was a good year for Banded Demoiselle with 23 records, range six to 44 from 2016 to 2020. It was seen on six visits from 2<sup>nd</sup> Jun until 10<sup>th</sup> Aug. Eight were seen on 6<sup>th</sup> Jun. The species was recorded from Shaw Green Willows (T4 and T5).

### **Common Blue Damselfly (*Enallagma cyathigerum*)**

Once again, Common Blue Damselfly was the commonest species seen on the Reserve. There were 972 records which is towards the upper end of the range 610 to 1320 from 2016-20. The species was the first seen on the Reserve and recorded in each of the 18 visits from 18<sup>th</sup> May until 26<sup>th</sup> Sep. High day counts included 440+ on 15<sup>th</sup> Jun which sets a new record. There were 120+ on 22<sup>nd</sup> Jun. The species was seen on all transects. It was seen mating in the Penny Croft area (T6) and ovipositing in near the Boathouse (T1), Bittern Hide (T4) and in Dolls Meadow (T15). There was a late record of one in Dolls Meadow on 4<sup>th</sup> Nov.

**Red-Eyed Damselfly (*Erythromma najas*)**

The species was recorded for the first time in 2021. It is closely associated with floating aquatic plants. There were seven records, all seen near pondweed in front of the Bittern Hide. Five plus were seen on 9<sup>th</sup> Jun and then two on 25<sup>th</sup> Jul.

**Broad-bodied Chaser (*Libellula depressa*)**

It was an excellent year for the species with a marked increase in records. There were a total of 25 compared to a range one to five from 2016-20. They were recorded from 6<sup>th</sup> Jun until 10<sup>th</sup> Aug with the highest day count of eight on 15<sup>th</sup> Jun. They were seen near the new ponds and scrapes in Mere Field, near the Bittern Hide and Dolls Meadow. It was seen ovipositing near the new wetland habitat in Dolls Meadow.



**Broad-bodied Chaser (female) on 14<sup>th</sup> Jun, © Gunnar Menzel.**

**Four-spotted Chaser (*Libellula quadrimaculata*)**

The species was not recorded in 2019 or 2020 and there have only been three records in total since 2016. However, the new wetland habitat in Dolls Meadow resulted in 11 records in 2021. It was first seen on the 9<sup>th</sup> Jun and last recorded on 10<sup>th</sup> Aug. The highest day count was three on 9<sup>th</sup> Jul. It was only seen on Dolls Meadow and mating was noted.



**Four-spotted Chaser on 16<sup>th</sup> Jul, © Sheelagh Halsey.**



**Black-tailed Skimmer (*Orthetrum cancellatum*)**

It was a very good year for Black-tailed Skimmer with 46 records which is much higher than the previous range 13 to 23 from 2016-20. It was recorded from 2<sup>nd</sup> Jun to 28<sup>th</sup> Aug. The highest count was 10 on 22<sup>nd</sup> Jun. It was found near the Bittern Hide (T4) and on the new ponds and scrapes in Dolls Meadow (T15). It was seen ovipositing at both these sites.

**Common Darter (*Sympetrum striolatum*)**

There were 63 records of Common Darter compared to only 12 last year, making it the commonest dragonfly on the Reserve. It is a late species and was first seen on 16<sup>th</sup> Jul and last recorded on 26<sup>th</sup> Sep. Counts ranged from two to 15 (10<sup>th</sup> Aug). It was seen mating near the Shaw Green Willows ponds (T5) and ovipositing near the Bittern Hide (T4) and in Dolls Meadow (T15). Outside of the survey season there was a very late record of a f on Dolls Meadow on 23<sup>rd</sup> Nov.

**Brown Hawker (*Aeshna grandis*)**

It was a poor year for Brown Hawker with only 31 records, the lowest since the survey began. It was seen from 9<sup>th</sup> Jul until 28<sup>th</sup> Aug. The highest count was 12 on 3<sup>rd</sup> Aug. It was seen in four of the six transects and mating near the ponds in Shaw Green Willows (T5).

**Southern Hawker (*Aeshna cyanea*)**

There were only three which represents the poorest showing since the survey began in 2016. It was seen on 10<sup>th</sup>, 28<sup>th</sup> Aug and 22<sup>nd</sup> Sep. All single records from near the Bittern Hide (T4) and Dolls Meadow (T15).

**Emperor Dragonfly (*Anax imperator*)**

Britain's largest dragonfly has been spreading north in recent years and was first recorded at Rostherne in 2016. It was a very good year for the species in 2021 with 27 records compared to range three to 11 from 2016-20. It was first on 9<sup>th</sup> Jun and last seen on 3<sup>rd</sup> Aug. The maximum count was seven on 25<sup>th</sup> Jul. It was seen near the Boathouse below the Observatory (T1), near the Bittern Hide (T4) and in Dolls Meadow (T15) in which it was seen ovipositing. Emperor was another species that increased after the creation of the new ponds and scrapes around the Reserve.

**Migrant Hawker (*Aeshna mixta*)**

There were 37 records of Migrant Hawker which represents an average showing. Migrant Hawker is usually one of the last dragonflies to be recorded on the Reserve and was seen from 3<sup>rd</sup> Aug until 26<sup>th</sup> Sep. The highest day count was 12 on 28<sup>th</sup> Aug. It was found in all areas surveyed. It was seen mating in front of the Bittern Hide (T4).



Migrant Hawker on 28<sup>th</sup> Aug, © Gunnar Menzel.

**Ruddy Darter (*Sympterym sanguineum*)**

One was seen in Dolls Meadow on 15<sup>th</sup> Sep. It is a rare species on the Reserve and has only been recorded previously in 2018 (one record) and 2019 (15 records) since the survey began in 2016.



Ruddy Darter on 15<sup>th</sup> Sep, © Pete Kelly.

**Black Darter (*Sympterym danae*)**

A Black Darter was seen on Mere Field behind the Bittern Hide on 25<sup>th</sup> Jul. This is a very rare species for Rostherne and the first record. It's breeding habitat includes acidic shallow pools, lake margins and ditches lowland heath and moorland so it was surprising to see it visit Rostherne!



Black Darter on 25<sup>th</sup> Jul, © Jules Hill.

## Hoverflies Survey 2021

The first survey of hoverflies was undertaken by Pete Kelly in 2021. Pete started visiting the Reserve in Jul. He photographed and recorded each hoverfly species he encountered until Oct. A total of 23 species were recorded and are listed below. A big thank you to Pete for his records and excellent photographs of this fascinating group of insects.

Sub-family	Tribe	Species List	Date		
Syrphinae	Bacchini	<i>Baccha elongata</i>	4 <sup>th</sup> Nov		
		<i>Melanostoma mellinum</i>	1 <sup>st</sup> Oct		
		<i>Melanostoma scalare</i>	27 <sup>th</sup> Oct		
	Syrphini	<i>Platycheirus scutatus</i> agg.	10 <sup>th</sup> Oct		
		<i>Platycheirus rosarum</i>	15 <sup>th</sup> Sep		
		<i>Episyrphus balteatus</i>	27 <sup>th</sup> Aug		
		<i>Epistrophe grossuloruae</i>	3 <sup>rd</sup> Nov		
		<i>Leucozona glauca</i>	3 <sup>rd</sup> Sep		
		<i>Melangyna umbellatarum</i>	3 <sup>rd</sup> Sep		
		<i>Syrphus ribesii</i>	1 <sup>st</sup> Oct		
		<i>Syrphus</i> sp.	11 <sup>th</sup> Jul		
		<i>Xanthogramma pedissequum</i> agg.	1 <sup>st</sup> Oct		
		Eristalinae	Eristalini	<i>Eristalis arbustorum</i>	3 <sup>rd</sup> Sep
				<i>Eristalis nemorum</i>	3 <sup>rd</sup> Sep
				<i>Eristalis tenax</i>	27 <sup>th</sup> Aug
<i>Helophilus hybridus</i>	1 <sup>st</sup> Oct				
<i>Myathropa florea</i>	27 <sup>th</sup> Aug				
<i>Volucella zonaria</i>	15 <sup>th</sup> Sep				
Vollucellini	<i>Volucella pellucens</i>		11 <sup>th</sup> Jul		
	<i>Volucella zonaria</i>		15 <sup>th</sup> Sep		
Xylotini	<i>Syrirta pipiens</i>		3 <sup>rd</sup> Sep		
	<i>Xylota segnis</i>		3 <sup>rd</sup> Sep		
Cheilosini	<i>Xylota sylvarum</i>		11 <sup>th</sup> Jul		
	<i>Rhingia campestris</i>		27 <sup>th</sup> Aug		



*Baccha elongata* on 4<sup>th</sup> Nov, © Pete Kelly.





*Episyrrhus balteatus* on 27<sup>th</sup> Aug, © Pete Kelly.



*Leucozona glauca* on 3<sup>rd</sup> Sep, © Pete Kelly.



*Xanthogramma pedissequum* agg. on 1<sup>st</sup> Oct, © Pete Kelly.



*Helophilus hybridus* on 1<sup>st</sup> Oct, © Pete Kelly.





*Myathropa florea* on 27<sup>th</sup> Aug, © Pete Kelly.



*Volucella pellucens* on 11<sup>th</sup> Jul, © Pete Kelly.



*Xylota sylvarum* on 11<sup>th</sup> Jul, © Pete Kelly.



*Rhingia campestris* on 27<sup>th</sup> Aug, © Pete Kelly.



## Plant Survey 2021

Plants were surveyed in 2021 by Jules Hill. The previous survey was undertaken by Sue Downs in 1996 and 1997. The surveys are not directly comparable as Sue surveyed nearly all of the Reserve over two years while Jules survey was primarily targeted to examine the impact of the new wetland habitat in several areas.

The species recorded in the two surveys are shown in the table below. A total of 143 species were recorded in 1996/7 while 127 were recorded by Jules in 2021. This represents an excellent showing considering the COVID restrictions during 2021. There were 93 species which were found in both 1996/7 and 2001 and 33 species which were 'new' in 2021. However, many of these may not have been included in the 1996/7 surveys.

Common Name	1996/97	2021
Barren Strawberry		✓
Bindweed, Hedge	✓	✓
Birdsfoot Trefoil, Great	✓	✓
Birdsfoot Trefoil, Common	✓	✓
Bistort, Amphibious	✓	✓
Bistort, Common		✓
Bittercress, Large		✓
Bittercress, Wavy	✓	✓
Bog Pondweed	✓	
Watercress	✓	
Beaked Hawksbead	✓	
Bedstraw, Fen	✓	✓
Bedstraw, Heath/Hedge		✓
Bedstraw, Common Marsh		✓
Black Knapweed		✓
Bluebell	✓	✓
Bramble		✓
Bugle	✓	✓
Burdock	✓	
Bur-reed, Branched		✓
Buttercup, Bulbous	✓	✓
Buttercup, Creeping	✓	✓
Buttercup, Meadow	✓	✓
Campion, Red	✓	✓
Campion, White	✓	
Cats Ear	✓	
Celandine, Lesser	✓	✓
Celandine, Greater	✓	✓
Celery Leaved Crowfoot	✓	✓
Cleavers	✓	✓
Clover, Alsike	✓	
Clover, Red	✓	✓
Clover, White/Dutch	✓	✓
Chickweed, Common	✓	✓
Chickweed, Greater	✓	✓

Common Name	1996/97	2021
Chickweed, Mouse Ear	✓	✓
Chickweed, Sticky Mouse Ear	✓	
Chickweed, Water	✓	✓
Common Dog Violet	✓	✓
Common Figwort	✓	
Common Fumitory		✓
Common Hemp Nettle	✓	✓
Common Nettle	✓	✓
Corn Mint	✓	
Cow Parsley	✓	✓
Creeping Cinquefoil	✓	✓
Cuckoo Flower	✓	✓
Daffodil (grd)	✓	✓
Daisy	✓	✓
Dandelion	✓	✓
Dead Nettle, Red	✓	✓
Dead Nettle, White	✓	
Dock, Broad Leaf	✓	✓
Dock, Curled	✓	✓
Dock, Redveined	✓	
Dock, Water		✓
Dock, Wood	✓	✓
Dogs Mercury	✓	✓
Enchanters Nightshade	✓	✓
English Stonecrop	✓	
Evergreen Alkanet	✓	
Eyebright		✓
Fleabane	✓	
Fools Parsley		
Fools Watercress	✓	
Forgetmenot, Wood		✓
Forgetmenot, Tufted	✓	✓
Forgetmenot, Water	✓	✓
Foxglove	✓	✓
Garlic Mustard		✓
Giant Hogweed	✓	
Gipsywort	✓	✓
Golden Saxifrage	✓	
Ground Elder	✓	
Ground Ivy	✓	✓
Groundsel	✓	✓
Hawkweed, sp		✓
Mayweed, Unscented		✓
Hemlock Water Dropwort	✓	✓
Hemp Agrimony	✓	

Common Name	1996/97	2021
Herb Robert	✓	✓
Hogweed	✓	✓
Honesty	✓	
Honeysuckle	✓	
Indian Balsam	✓	✓
Knot Grass	✓	
Lord's and Lady's	✓	✓
Marsh Cudweed	✓	
Marsh Marigold	✓	✓
Meadowsweet	✓	✓
Milfoil	✓	
Mostchatel	✓	✓
Nipplewort	✓	✓
Nodding Burmarigold	✓	✓
Opp Lvd Gold Saxifrage		✓
Orchid, Early Purple	✓	
Orchid, Southern Marsh		✓
Orchid, Spotted Heath?		✓
Pale Persicaria	✓	
Pignut	✓	✓
Pineapple Weed	✓	✓
Pink Hyacinth	✓	
Plantain, Greater		✓
Plantain, Hoary	✓	
Plantain, Ribwort		✓
Plantain, Water	✓	
Primrose	✓	
Purple Loosestrife	✓	✓
Ragged Robin	✓	
Ragwort, Common	✓	✓
Ragwort, Marsh	✓	✓
Ramsons	✓	✓
Raspberry Canes		✓
Redshank	✓	✓
Self-heal	✓	
Shepherds Purse	✓	
Silverweed	✓	
Skullcap	✓	
Sneezewort	✓	
Snowdrop	✓	✓
Sorrel, Common	✓	✓
Sorrel, Sheep	✓	
Sow-thistle, Smooth	✓	✓
Sowthistle, Prickly	✓	✓
Spearwort, Lesser	✓	✓

Common Name	1996/97	2021
Spearwort, Greater	✓	
Speedwell, Brooklime	✓	✓
Speedwell, Common Field	✓	✓
Spdwell, Germander	✓	✓
Spdwell, Ivy Leaved	✓	✓
Speedwell, Wood	✓	✓
Speedwell, Thyme-leaved	✓	✓
Square Stem St John's Wort	✓	
Stitchwort, Bog		✓
Stitchwort, Greater	✓	✓
Stitchwort, Lesser		✓
Sweet Flag	✓	
Thistle, Creeping	✓	✓
Thistle, Marsh	✓	✓
Thistle, Spear	✓	✓
Trailing Tormentil	✓	
Valerian, Common	✓	✓
Vetch, Tufted	✓	
Vetching, Meadow	✓	✓
Wall Lettuce	✓	
Water Crowfoot	✓	
Water Mint	✓	✓
Water Pepper, sp (Tasteless?)	✓	✓
Water Plantain sp.	✓	
Water Starwort	✓	
White Hyacinth	✓	
Wild Angelica	✓	✓
Wild Chamomile	✓	✓
Wild Radish	✓	
Willowherb, American		✓
Willowherb, Broadleaf		✓
Willowherb, Great	✓	✓
Willowherb, Hoary		✓
Willowherb, Marsh	✓	
Willowherb, Rosebay	✓	✓
Wood Anemome	✓	✓
Wood Avens	✓	✓
Wood Sorrel	✓	✓
Woody Nightshade	✓	✓
Woundwort, Hedge	✓	✓
Woundwort, Marsh	✓	✓
Yellow Archangel	✓	✓
Yellow Flag/Flag Iris	✓	✓
Yellow Loosestrife	✓	✓
Yellow Pimpernel	✓	✓

<b>Common Name</b>	<b>1996/97</b>	<b>2021</b>
<b>Yellow Poppy</b>		✓
<b>Bracken</b>		✓
<b>Good Friday Grass</b>		✓
<b>Soft rush</b>		✓
<b>Rhododendrons</b>		✓
<b>Broad buckler fern</b>		✓
<b>Sedge sp</b>		✓
<b>Merestails sp</b>		✓