ROSTHERNE MERE NNR BIRD REPORT 2020



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Compiled by Dr Bill Bellamy

Introduction

Welcome to the Rostherne Mere NNR Bird Report 2020.

Unfortunately, birdwatching at Rostherne Mere was seriously impacted by COVID-19 restrictions during the year. The Reserve was completely closed during the first UK lockdown period from 23rd Mar until 7th Jun. Furthermore, it was only partially opened from 7th Jun and the Observatory, Bittern Hide and the Dave Clarke Hide remain closed at the time of writing (Mar 2021). Subsequently, bird recording has been restricted with sometimes only partial views of the Mere being made from the graveyard at St Mary's Church, the permissive path, the public footpaths around Rostherne and the roads surrounding the Mere. Subsequently, comparisons of records from 2020 with previous years should be treated with extreme caution. The timing of the main period of lockdown from late Mar to early Jun resulted in the under representation of many of the spring migrants and breeding residents. However, the restrictions did result in the generation of more records from the margins of the Reserve such as around Bobby Field, the Sprout Field, Manor Wood, Marsh Lane and along Dirty Lane as more observers walked and cycled these routes as part of their permitted daily exercise.

Regrettably, the Common Bird Census (CBC) could not be undertaken in any area on the Reserve which represents the first complete cessation since 2001 when the Reserve was closed due to Foot and Mouth restrictions. There were also no Wetland Bird Survey (WeBS) counts during Apr and May. Several surveys commenced after 7th Jun including the Bird Ringing Study, the Butterfly Survey and the Dragonfly and Damselfly Survey.

A big thank you to everybody who has sent me bird records and photos throughout the year. I'm particularly grateful to Phil Dell and Sheelagh Halsey for providing weekly bird records. Thanks also to Geoff and Shelia Blamire who provided records from their local walks in the area. I would also like to thank Malcolm Calvert and John Adshead for their contributions in regard to bird ringing and associated photos. Thanks also to Jake Gregory and Ingrid Cerbertowicz for inspecting the Barn Owl boxes.

The Rostherne Butterfly Survey was undertaken in 2020 for the seventh consecutive year after an absence of 10 years. Unfortunately, it was curtailed by COVID-19 restrictions and began in week 10 on 7th Jun. 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 65.

Sheelagh Halsey undertook a comprehensive Dragonfly and Damselfly Survey in 2020 for the fourth consecutive year. Although the survey commenced on 7th Jun it was less affected by COVID-19 restrictions than the Butterfly Survey as the majority of dragonflies and damselflies emerge later in the year than butterflies. The results from the survey are shown on page 75.

The order of bird species in the Systematic List has been changed in line with the latest Cheshire and Wirral Bird Report (2018) 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 ¾ 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

The Reserve was completely closed from 23rd Mar until 7th Jun and the Observatory, Bittern Hide and Dave Clarke Hide remain closed at the time of writing in Mar 2021.

A total of 122 different bird species were recorded in 2020.

Around 700 Canada Geese and at least 100 Greylag Geese fed on spilled grain within the stubble on Bobby Field during Sep. Earlier in the summer around 70 Canadas and 60 Greylags moulted on the Reserve and the 130 flightless birds caused significant damage by foraging on the reeds surrounding the Mere. One pair of Canada Geese bred and five young fledged. A pair of Mute Swan bred for the second time in three years with two cygnets surviving to fledge. Fourteen Whooper Swans landed on the Mere in Oct and Egyptian Geese visited the Reserve on 12 days.

Mandarin Ducks reached highs of 32 in Sep and 36 in Oct. A female with three recently fledged young were seen in Jun. It was a poor year for **Shoveler**, **Gadwall** and **Wigeon**. Numbers of **Mallard** and **Teal** also remained at a low level. Overall counts of **Tufted Duck** were similar compared to recent years but the Jan and Dec maximums of only 10 were the lowest since the 1960s! **Common Scoter** was recorded on two days while the monthly maxima for **Goldeneye** were the highest since 2014 peaking at 20 in Jan and Oct. There were 20 **Goosanders** seen on three dates in Dec, the highest count since Feb 2012.

Two **Grey Partridges** were seen on six days in Bobby Field, on the edge of the Reserve.

An occupied **Little Grebe** nest was found in May and a juvenile was seen on four dates later in the year. There were 40 **Great Crested Grebes** in Sep but the Dec high of just five was the lowest for the month since 1979! Two **Black-necked Grebes** were seen in Nov. There were five records of **Bittern**, all of single birds. One was seen in Aug which is the first for the month since 2010. Seven **Grey Herons** were also recorded in Aug. There was a **Great White Egret** on Dolls Meadow in Feb. It was the best year on record for **Little Egret** with singles present on 11 days and two and then three recorded in Sep, matching the highest ever count from 2017. 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 348 in Jun when both adults and juveniles were present. Nest building started on 28th Jan and a total of 135 nests were recorded by Jun which was a notable decrease from the record breaking high of 176 seen last year.

Two **Sparrowhawks** mobbed a **Peregrine** along Mere Covert in Jan while one was mobbed by 10 **Magpies** in Oct. Up to two **Sparrowhawks** hunted the **Starling** roost from Oct to Dec. A **Marsh Harrier** visited the Reserve during May and there were three records of **Red Kite** with one sitting on the dead Alder near the Boathouse, also in May. The highest count of circling **Buzzards** was 10 over Bobby Field in Apr. Pairs nested in Mere Covert and Harpers Bank Wood and at least one juvenile was seen around the Reserve begging for food. Up to five **Water Rails** were heard calling from the reeds during the winter. Both **Moorhen** and **Coot** bred with fledged offspring recorded. The number of **Coot** peaked at 55 in Aug.

Waders included **Oystercatcher**, **Lapwing**, **Curlew**, **Woodcock**, **Jack Snipe**, **Snipe**, **Common Sandpiper**, **Green Sandpiper** and **Greenshank**. Around 100 **Lapwings** were rising from the fields north of the Reserve in Jan. A pair bred on Bobby Field with two chicks seen in May. **Woodcock** was recorded on five days. Single **Jack Snipe** were flushed from the foot of Long Pasture on two days and 14 **Snipe** were flushed in Dec. There was only one record of **Common Sandpiper** and **Green Sandpiper**. A **Greenshank** flew across the Mere in Aug.

Around 5000 Black-headed Gulls roosted on the Mere in Dec. Two Mediterranean Gulls were seen in Mar. Common Gull numbers were low with no double figure counts. There were 14 records of Great Black-backed Gull with six on the roost in Feb. The highest Herring Gull count was only 20. Caspian Gull was recorded on three days with two visiting the roost in Oct and Nov. There were 10 Yellow Legged-Gull records with three seen during one evening in Oct. Around 500 Lesser Black-backed Gulls were seen in Oct which was the highest count for 20 years.

There were two sightings of **Common Tern** with singles seen in Jul and Aug.

Pairs of **Stock Doves** bred in four of the six **Barn Owl** boxes. There were 23 on Church Field in Sep, the largest flock since 1993. Around 400 **Woodpigeons** were seen feeding on spilled grain in Bobby Field in Aug. During Oct, 41 **Collared Doves** were counted sitting on the wires just off the Reserve.

A female **Cuckoo** was seen on two days in Jun and laid an egg in a **Reed Warbler** nest in the reeds at the edge of Mere Covert. It remained unhatched. This was the first evidence of **Cuckoo** parasitism of **Reed Warblers** since 1993.

Barn Owls were seen on 56 days with three recorded on three occasions. A pair attempted to breed in the **Mere Meadow** box but unfortunately the eggs were abandoned. **Tawny Owls** were recorded on 13 days and two newly fledged juveniles were seen on the Split Limes in Jun. **Little Owl** was recorded on five days with the majority of sightings near Shaw Green Farm.

Around 50 **Swifts** were feeding on flies over Shaw Green Willows in Jun. **Kingfishers** were seen along the Mere shoreline on 19 days.

There were three records of **Lesser Spotted Woodpecker** and three **Great Spotted Woodpeckers** were heard drumming around the Reserve in Jan and Feb. One was caught in Gale Bog during Sep, the 12th to be ringed. It was a poor year for **Green Woodpecker** with the species recorded on only three days.

Kestrels were seen almost daily from Jan to Mar and a pair prospected last year's nesting site in the dead Alder near the Boathouse but there is some doubt as to how successful they were as two dead birds were found on the Reserve in Mar. **Hobby** was recorded in Apr, the first record for the month since 2014. Two were seen in Sep. It was a good year for **Peregrine** which was seen on 17 days and birds were occasionally viewed at close quarters flying parallel to the permissive path.

Ten **Magpies** mobbed a **Sparrowhawk** in Oct. Around 250 **Jackdaws** and 70 **Rooks** were seen feeding on Bobby Field in Sep. **Ravens** were recorded on 18 days with two seen on five dates.

Observations of **Sand Martins** were severely impacted by the COVID-19 restrictions with the species only seen on three days. Around 80 **Swallows** were over the Mere in Apr but there were no three figure counts. There were c100 **House Martins** feeding over the Mere in Aug. Two seen on 22nd Oct was the latest date since 1995.

A pair of **Willow Tits** bred on the edge of the Snipe Marsh and an adult and juvenile were ringed in Sep. Malcolm trapped 22 **Blue Tits** and 7 **Great Tits** on 1st Jan. **Skylarks** were seen on 16 days with eight over Church Field in Feb.

It was another excellent year for **Cetti's Warbler** with the species seen on 89 days and breeding was confirmed. Malcolm ringed a further 10 birds bringing the total to 22. An amazing total of seven were singing from different locations around the Reserve in Sep with the first song from Gale Bog.

It was a poor year for **Willow Warbler** and **Sedge Warbler** but 53 **Chiffchaffs** were ringed and family parties were seen around the Reserve on several dates.

On 20th Jun Malcolm trapped the 20,000th bird on the Reserve since he started his survey in 1972! It was fittingly a juvenile **Reed Warbler**. An estimated 55 pairs bred on the Reserve with 114 adults and 81 juveniles netted. The third oldest Rostherne bird was caught in Jun, originally ringed in 2010!



Malcolm at the net on 20th Jun 2020, © Sheelagh Halsey.



The 20,000th bird ringed at Rostherne Mere NNR, a juvenile Reed Warbler on 20th Jun 2020, © Sheelagh Halsey.

There was a family party of 11 **Blackcaps** seen in Jun and there were single records of **Garden Warbler** in Apr and **Lesser Whitethroat** in Jul. There were only five records of **Whitethroat** with a juvenile seen in Penny Croft in Jun.

A **Firecrest** was reported in front of the Observatory in Mar and there were 13 **Goldcrests** seen within a winter tit flock in Nov.

There was a family party of 14 **Wrens** in Shaw Green Willows in Jun. A pair of **Treecreepers** nested near the permissive path in Wood Bongs and provided fascinating views until the young fledged in May.

Up to 50,000 **Starlings** were roosting in the reeds near Shaw Green Willows by Nov which then resulted in the flattening of the reed bed by late Dec.

During Jan, 135 **Fieldfare** and 310 **Redwings** visited the Reserve and a winter flock of 11 **Song Thrushes** was recorded feeding on the Sprout Field, the highest since 1972!

Spotted Flycatcher was only recorded on three consecutive days in Sep and there was no evidence of breeding.

There were three juvenile **Grey Wagtails** seen on Brook Meadow in Jun.

The oilseed rape crop on the Sprout Field and the subsequent stubble sustained several species throught the summer and early autumn including **Meadow Pipit**, **Chaffinch**, **Linnet** and **Goldfinch**. **Linnet** flocks peaked at around 50 while there were over 100 **Goldfinch** seen during Oct.

There were two records of **Brambling** and a juvenile **Yellowhammer** was seen in Sep.

Bullfinches were often seen on the Bird Table from Jan to Mar and a winter flock of 10 was seen in Penny Croft in Dec. Malcolm trapped a juvenile Greenfinch on the edge of Mere Field in Jun, only the fourth ever ringed on Reserve.

The photos below illustrate different views around the Reserve during the year.



Flooding in the Snipe Marsh on 1st Mar 2020, © Sheelagh Halsey.



St Mary's Church, Rostherne on 25th Oct 2020, © Bill Bellamy.



Rostherne Mere on 30th Dec 2020, © Bill Bellamy.



Mere Meadow on 30th Dec 2020, © Bill Bellamy.

Systematic List 2020

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
Monthly max	40	18	32	nc	nc	70	75	86	c700	45	1	96

Whilst the annual total of monthly maxima was lower than last year it was still the second highest since 2008. However, the only three figure counts were recorded in Sep when around 700 birds fed on spilled grain within the stubble on Bobby Field. This was highest count since an amazing 2663 geese descended on the Mere in Sep 2005.

Numbers were low from Jan to Mar with 40 the highest count on 29th Jan. One pair bred and five juveniles were seen on 24th Jun. Around 70 birds moulted on the Reserve between Jun and Jul, the highest numbers since 2009 (c75). Together with 60 moulting Greylag Geese they caused significant grazing damage to the reed beds around the margins on the Mere. The maximum count in Aug was 86 recorded on 5th. The highest counts of the year were recorded in Sep with flocks of 336 on 8th, c700 on 13th, c500 on 14th and c400 on 16th. These were all on the stubble on Bobby Field and often in the company of Greylag Geese. The flock would often fly the short distance onto the Mere to preen and rest before returning to the field to feed. Interestingly, a total of 740 were recorded in a coordinated WeBS count between Rostherne Mere and Tatton Park on 20th Sep with 162 on Rostherne Mere and 578 on Melchett and Tatton meres.

The number of geese fell markedly during early Oct and only one was seen throughout Nov and the majority of Dec. Cold weather and snow during late Dec probably resulted in 96 visiting the Mere to seek refuge from the freezing conditions on 30th.



Canada and Greylag Geese on Bobby Field in Sep 2020, © Phil Dell.



Common Reed grazed by Canada and Greylag Geese on 20th Jul 2020, © Malcolm Calvert.

Greylag Goose (Anser anser)

Feral (some possibly wild), irregular visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly max	33	5	4	nc	nc	60	60	28	c100	55	0	0

There were double figure counts on seven days in Jan with 33 the highest on 21st. Numbers fell away during Feb and Mar but 60 birds moulted on the Reserve through Jun and into Jul. This was the highest number since 202 stayed to moult in 1992! The total number of moulting Canada and Greylag Geese was around 130 birds which resulted in significant grazing of the outer margin of reeds surrounding the Mere. Gradually numbers fell away during Jul with 28 recorded on 1st Aug. There were then only two double figure counts (both 14) during the rest of the month with singles seen on seven dates. The highest counts of the year were during Sep when around 100 birds were seen with large flocks of Canada Geese feeding on spilled grain in stubble on Bobby Field on 13th and 14th. These were the highest Sep counts since 135 were recorded in 2008. The last record of the year was 55 on 18th Oct with no record of the species in Nov and Dec.

Figure 1 shows the marked increase in the number of geese remaining to moult at Rostherne Mere from 2016 to 2020. The proportion of Canada and Greylag Geese have been about equal over this period.

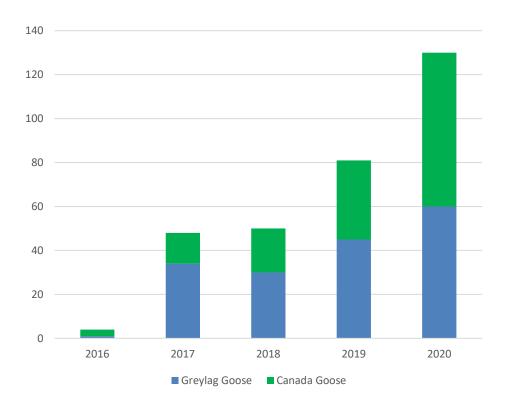


Figure 1 Numbers of moulting Canada and Greylag Geese 2016-2020.

Pink-footed Goose (Anser brachyrhynchus)

Irregular visitor, skeins Sep-Mar

There were seven records in 2020 (two in 2019, six in 2018 and five in 2017). There was only one record in the first half of the year, but it was an interesting one. Twenty birds flew over on 23rd Mar which was a late date for an overflying skein at Rostherne. Previous Mar records have included three which landed on the Mere on 12th Mar 2016, three on the Reserve from 18th Feb to 20th Mar 2011 and then one which was often seen accompanying Canada Geese on 21 dates from Feb 20th to Mar 27th 1999.

One was seen roosting on the Mere during the evening on 27^{th} Sep. Around 100 flew over heading south-west on 5^{th} Oct. The largest skein of the year of was of c600 which flew south-east on 17^{th} Oct. Interestingly, 30 minutes later c400 were seen flying in the opposite direction north-west. Around 150 were heading towards Ashley on 29^{th} Oct. There was a small skein of 20 flying over at 16:45 on 4^{th} Nov. The last record of the year was c500 birds seen heading south on 20^{th} Dec.

Mute Swan (Cygnus olor)

Regular visitor at all times, bred in 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	3	2	nc	nc	2	2	2	6	12	11	2	4

Mute Swan bred for the second time in three years. One cygnet fledged and left the Mere in 2018 and although there was no breeding in 2019 it is thought that two cygnets successfully fledged in 2020.

The resident pair were present for the majority of the year and an intruder was aggressively chased off by the male on 3rd and 23rd Jan. The pair nested at a favoured location in the reeds at the edge of Shaw Green Willows. Four cygnets were first recorded on 7th Jun. These were reduced to three by 15th Jul. The three cygnets were seen with the two adults almost daily until 3rd Nov. One of the cygnets had to be returned to the Mere after it was found wandering on its own on Marsh Lane on 17th Oct. Unfortunately, a predated dead cygnet was found

in Brook Meadow on 12th Nov, but it is thought that the resident pair and the other two cygnets had already left the Mere by this date as they were last seen on 10th. Occasionally, immature birds landed on the Mere but they were given short shrift by the resident male and chased off quickly. There was one on 31st Aug, seven on 12th Sep and six on 22nd Oct. A pair were occasional visitors during Dec and an adult with three immature birds were seen on 26th.



Mute Swan and cygnets on 17th Jun 2020, © Malcolm Calvert.

Whooper Swan (Cygnus cygnus)

Uncommon visitor, Sep-May

There were three records during the year. One visited the Mere on 21^{st} Apr. Fourteen landed on 22^{nd} Oct. This is the third largest count for the Reserve and the highest since 15 were seen in Nov 1993. Four (two adults and two juveniles) were recorded on 2^{nd} Dec.



Whooper Swans on 22nd Oct 2020, © Sheelagh Halsey.

Egyptian Goose (Alopochen aegyptiacus)

Uncommon visitor. Presumed escaped or feral birds

The species was recorded on 12 days (18 days in 2019, 32 in 2018 and seven in 2017). There were three records in Jan with two seen on 3rd and 8th. Another flew over on 28th. One was heard calling from Brook Meadow on 8th Feb. Singles were recorded on 18th Jun and 1st Jul. There were six records from Sep to Dec. Four flew from Brook Meadow towards the Bittern Hide on 12th Sep. There were two seen feeding on spilled grain within the stubble on Bobby Field on 13th Sep with large numbers of Canada and Greylag Geese. Then there were four on Brook Meadow on 20th Sep. Two were recorded on 4th Oct, 27th Nov and 2nd Dec.

It is thought that the birds visiting Rostherne are most probably part of the breeding feral population which have been reported at Tatton Park. A pair with six young goslings was seen in front of Tatton Hall on 4th Jun. In addition, the species was often recorded during WeBS counts in Tatton Park with 3 adults and 2 juveniles on 5th Jul and seven and nine seen on Melchett Mere on 18th Oct and 15th Nov respectively.

Shelduck (Tadorna tadorna)

Irregular visitor

There were four records in 2020 (two in 2019, three in 2018 and four in 2017). Three were seen on 12th and two flew over Harpers Bank Wood on 24th Feb. Three were recorded on 4th Mar. Two were seen later in the year on 30th Aug.

Mandarin Duck (Aix galericulata)

Irregular visitor, origin unknown, bred in 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	20	8	6	8	18	6	7	5	32	36	28	24

Monthly maxima were lower than last year. However, several high counts were recorded with three of them above 30. Twenty flew onto the Mere at 10:45 on 8th Jan. Several days later 18 were recorded on 12th comprising of 12 m and 6 f. The next double figure count was 18 (16 m, two f) which flew low from the Mere towards Cicely Mill Pool on 13th May. A f with three recently fledged young was seen on 7th Jun. The highest counts of the year were between Sep and Dec and were often made at dusk as birds emerged from the wet woodland margins to congregate on the open water. There were 32 on 28th Sep and then 24 on 3rd, 35 on 8th and 36 on 18th Oct. Twenty-eight were seen at 16:00 on 4th Nov and 24 on 2nd Dec.

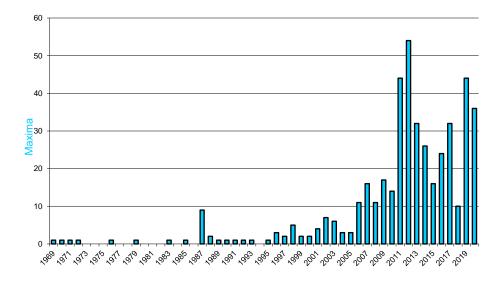


Figure 2 Annual maximum counts of Mandarin Duck 1969 to 2020.

Shoveler (Anas clypeata)

Autumn & winter visitor, has bred

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2		3						12	18	38	3
4			2				5		2	2	2
4	1							23	50	5	2
							6	6	82	4	4

The numbers of Shoveler were the lowest since 2017 which in turn were the lowest since 2004. The highest count in Jan was four on 13th and 17th. There were no double figure counts in the first half of the year, the first time since 2000. Numbers started to increase through Sep with 23 recorded on 18th. The highest counts occurred during late Oct with 50 on 22nd, 55 on 25th, 82 on 27th, 56 on 29th and 45 on 30th. There were 34 on 1st and 38 on 4th Nov. Numbers then dropped markedly with four the Dec maximum on 30th.

Gadwall (Anas strepera)

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

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly			1				4	2		6	4	3
max												

Gadwall were recorded on only 7 days (20 days in 2019, 19 in 2018 and 30 in 2017). All the records were single figure counts. The last double figure count was in Oct 2013. There was only one record in the first half of the year with a m seen on 8th Mar. Four were seen in eclipse on 14th Jul. The highest count of the year was six on 22nd Oct. The last two records of the year were four on 4th Nov and three on 30th Dec.

Wigeon (Anas penelope)

Winter visitor, passage migrant

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
110	60	60						7	2	2	15
88	82	32								37	92
38	60	22						2	7	27	129
64	42							2	66	22	110

The total of monthly maxima was slightly higher than last year which was the lowest since 2012. The maximum count in Jan was 110 on 8th. The Feb and Mar highs were 82 and 60 respectively. The last record in the first winter period was 22 on 19th Mar. The first record in the second winter period was seven on 4 Sep. Numbers were low throughout the majority of Sep and Oct. However, 66 on 25th Oct was the second highest count for the month since 1992 (102). Wigeon were transient through Nov until mid-Dec with no birds seen on the Mere on several days as they probably visited other local waters. There were increases to 37 on 14th Nov and 92 on 16th Dec . Numbers were higher towards the end of Dec during a period of cold and wintery weather. They peaked at 129 on 23rd which was the lowest annual maximum since 2011 when no three figure counts were recorded during the year.

Mallard (*Anas platyrhynchos*)

Resident, small breeding population

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12	6	16	nc	nc	102	66	30	16	58	35	50
46	32	8	nc	nc	76	35	14	35	10	55	58
24	16	8	nc	nc	76	56	15	148	92	10	52
30	10	nc	nc	16	20	30	40	20	37	20	45

Monthly maxima were slightly higher than last year but they remain at a very low ebb. The maximum in the first winter period was only 46 on 12th Jan, the lowest Jan count on record. A f with 12 ducklings was recorded on

27th May. Seven large ducklings were recorded on 7th and four on 15th Jun. A f with four young ducklings was recorded 15th Jul. There were only two three figure counts with 102 on 7th Jun and 148 on 20th Sep. Highs during the second winter period were 92, 55 and 58 for Oct, Nov and Dec respectively.

A Domestic Mallard was seen within the flock on 9th, 15th Jun and then later in the year on 27th Nov.

Teal (Anas crecca)

Winter visitor, otherwise small numbers at any time

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
14	28	30	nc	nc						38	24
118	90	72	2	nc						103	78
10	71	12	nc	nc				2	18	8	150
9	40	nc	nc	nc			9			18	108

Numbers were slightly higher than last year's which were the lowest on record. There was only one three figure count in the first winter period with 118 recorded on 12th Jan. Numbers dropped markedly with 10 the maximum for the rest of the month. Interestingly, eight m were seen displaying to a f on 31st Jan. There were highs of 90 in Feb and 72 in Mar. While the Reserve was closed a m and f were seen near the mouth of Rostherne Brook from the road near Manor Wood on 15th Apr. Nine were recorded on 30th Aug. However, there were only two counts from Sep to Oct. Three figure counts in the second winter period included 103 on 15th Nov, 150 on 20th and 108 on 30th Dec.

Pochard (Aythya ferina)

Autumn & winter visitor, small numbers summer

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	3						4	3	1	5	2	2

There were only 12 records of Pochard and no double figure counts. The highest count in the first winter period was three. Four were seen on 31st Jul and then three on 7th and 20th Aug. The highest count of the year was just five (three m, two f) on 18th Oct. Interestingly, WeBS counts in Tatton Park recorded 43 in Aug, 34 in Sep, 24 in Oct, Nov and 25 in Dec. It seems surprising that few if any of these birds made the short distance to Rostherne during 2020.

Tufted Duck (Aythya fuligula)

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	5	7	nc	nc	9	66	130	35	20	22	4
6	10	2	nc	nc	4	72	110	14	17	7	10
5	2		nc	nc	10	134	74	16	25		5
10	4	nc	nc	nc	8	124	50	20	44	10	4

Monthly maxima have been at a similar level since 2014. However, the Jan maximum of 10 on 28th was the lowest since 1965 (seven)! Ten were also recorded on 11th Feb. As in most years, there was a notable post-breeding build-up, peaking at 134 on 21st Jul. Other three figure counts included 112 on 17th, 100 on 30th and 124 on 31st Jul, 130 on 7th and 110 on the 11th Aug. The Oct high of 44 was highest for the month since 2013 (58). However, 10 seen on 16th Dec was the lowest maximum for the month since 1967 (eight)!

Common Scoter (Melanitta nigra)

Uncommon passage migrant; rare in winter

There were two records. An adult was seen on 21st Jul and then an immature on 27th Nov.

Goldeneye (Bucephala clangula)

Passage migrant & winter visitor, occasional in summer

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
14	15	19	1	nc						13	7
20	16	12	nc	nc						12	10
15	13	6	nc	nc				2	16	7	16
12	17	nc	nc	nc					20	7	5

The total of monthly maxima was the highest since 2014. The highest count during the first half of the year was 20 (four m, 16 f) on 12th Jan. The last record was of a m on 2nd Apr. The first returning birds were seen on 22nd Sep when two f/immatures were logged. This is the highest Sep record since 1997 (three). Interestingly, there were no further records until 11 (two m, nine f) were recorded on 18th Oct. Highs of 16 on 22nd and 20 on 25th Oct (the highest for the month) were recorded. The Nov and Dec maximums were 13 (one m, 12 f) and 16 (four m, 12 f) respectively. The Dec count was the highest since 2013 (21).

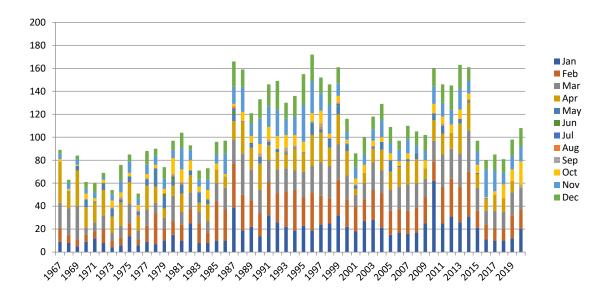


Figure 3 Annual totals of Goldeneye based on monthly maxima 1967-2020.

Goosander (Mergus merganser)

Irregular passage migrant & winter visitor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
9	11	6	nc	nc					4	7	4
9	10	3	nc	2					2	4	14
9	8	3	nc	nc					3	10	20
10	7	nc	nc	nc					5	2	20

Monthly maxima during 2020 were slightly lower than in 2019 which were the highest since 2013. Double figure counts were usually made just before dusk suggesting that birds flew into roost on the Mere.

Ten (seven m, three r/h) roosted during the evening of 28th Jan, 11 (six m, five r/h) on 6th and 10 (five m, five r/h) on 10th Feb. Two r/h flew onto the Mere on 12th May, viewed from the road by Manor Wood. The first record of the second winter period was four r/h on 3rd Oct. Five (r/h) on 25th Oct is the highest count for the month. Ten (three m, seven r/h) flew into roost on 23rd Nov and 14 (five m, nine r/h) on 16th Dec. Cold and snowy weather towards the end of Dec may have contributed towards the highest counts of the year. There were 20 on 20th, 25th and 27th. These were the highest numbers since Feb 2012 (26) and the highest Dec counts since 2010 (29) during another very cold snap.

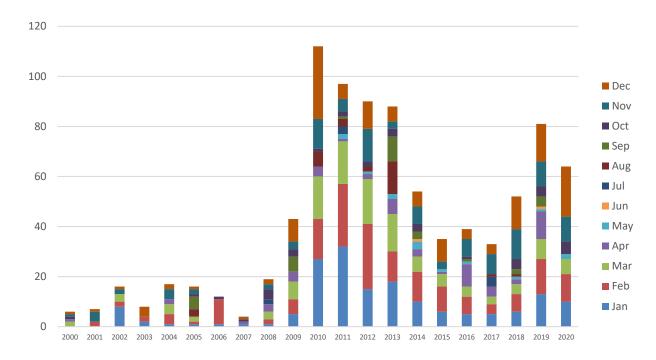


Figure 4 Annual totals of Goosander based on monthly maxima 2000-2020.



Male Goosander on 16th Jan 2020, © Sheelagh Halsey.

Grey Partridge (*Perdix perdix***)**

Rare visitor (probably from local releases)

In recent years, there have been several local releases and this was reflected in the number of records. There were seven in 2020, all from Bobby Field. Two were seen on 5th Apr, 21st May, 4th Jul, 23rd Aug and then 3rd, 4th Sep. The last record of the year was a single seen on 8th Oct.

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 15 on 31st Jan, 20 on 6th, 11th Feb, 15 on 25th Oct, 12 on 4th, 27th Nov and finally 10 on 2nd Dec.

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

Regular visitor at all times, irregular breeder

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	3	2	2	nc	1	0	1	1	0	0	3	3

Three were seen on 12th and 21st Jan. Trilling was heard on 23rd, 31st Jan and 8th Feb. An occupied nest was reported on 5th May but there were no other reports of breeding evidence until later in the year when a single juvenile was recorded on 12th, 21st Jul and 23rd, 26th Aug. The species was not seen during Sep and Oct but three were seen on six dates from 15th Nov to 23rd Dec.



Juvenile Little Grebe on 23rd Aug 2020, © Sheelagh Halsey.

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

Breeding resident

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	19	15	nc	nc	11	14	20	40	18	8	5
21	19	17	nc	nc	16	20	28	27	14	7	4
13	8	8	nc	3	12	20	37	34	8	5	3
11	7	nc	nc	6	nc	30	34	25	9	7	5

Monthly maxima were similar to 2019. Twenty-one seen on 12th Jan was slightly lower than last year (26) which was the highest count for the month since 2010 (44). Display and courtship were noted on 16th Feb and 24th Jun. Numbers gradually increased towards the end of Jul with 30 recorded on 28th. Malcolm Calvert found an eggshell in the reeds fringing Gale Bog in early Aug and one juvenile was seen with a pair on 7th Aug but it was not seen again during the year. Thirty-seven were recorded on 20th Aug. The annual maximum was 40 on 6th Sep. This was the highest Sep count since 2013 (68). Monthly maxima of 18, eight and five were recorded in Oct, Nov and Dec respectively. The Dec count of five on 5th and 30th was the lowest for the month since 1979 (2)!

Black-necked Grebe (Podiceps nigricollis)

Uncommon visitor, has bred

There was only one record in 2020. Two were seen near the Boathouse on 10th Nov.

Bittern (Botaurus stellaris)

Uncommon visitor

Although access to the Reserve was restricted for the majority of the year, there were five sightings of Bittern. There have only been two sightings in the last two years. All were made during the second half of the year and were of birds in flight from the reeds. One flew from the Boathouse reed bed at 19:50 on 24th Aug. The last Aug record was in 2010 when the species was seen on five dates during the month and 66 days during the year!

During Oct, one flew from the Boathouse reed bed at 13:50 on 5^{th} and one from near the Bittern Hide at 17:00 on 30^{th} . One was flushed on 11^{th} Nov and one was seen flying along the shoreline from the permissive path in Wood Bongs on 5^{th} Dec.

Grey Heron (Ardea cinerea)

Regular visitor at all times

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	2	2	2	nc	nc	4	5	7	3	4	6	4

Notable counts included five on 21st Jul and 12th Aug, six on 22nd Nov and seven on 11th Aug. This was the highest count since eight in Jun 2018.

Great White Egret (Ardea alba)

Very rare vagrant

One was on Dolls Meadow during the morning of 25th Feb. This represents the eighth record for the Reserve.



Great White Egret on Dolls Meadow on 25th Feb 2020, © Bill Bellamy.

Little Egret (Egretta garzetta)

Rare vagrant

There were 13 records in 2020 which represents the best ever showing which is remarkable considering that viewing opportunities were restricted for the majority of the year (11 records in 2019, four in 2018 and eight in 2017). All sightings were of birds perched along the western shoreline from the Boathouse to the end of Harpers Bank Wood. Singles were seen on 28th Jan, 12th Feb, 17th, 24th, 25th Jul, 6th, 7th, 12th 23rd Aug, 3rd, 4th Oct. Two and three were seen below the Cormorant trees on 6th and 20th Sep respectively. The count of three matches the highest count on record which was made on 6th Sep 2017.



Little Egret on 7th Aug 2020, © Photo Sheelagh Halsey.

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
40	71	122*	nc	200	348	210	110	100*	52*	75*	25

^{*}evening roost count

Monthly maxima were the lowest since 2001. However, access restrictions to the Reserve after Mar reduced the number of counts that could be made. There appears to be a trend towards fewer birds using Rostherne as a roost outside of the breeding period compared to the 10-years from 2006 to 2015. Interestingly, this could be due to fewer suitable trees being available at the shoreline as many of the original ones have succumbed to the pressure of the roost over the years. The first three figure count of the year was 110 made during the evening of 5th Mar. The highest count for the year was 348 on 7th Jun.

Nesting activity was first observed on 28th Jan (2nd Feb in 2019). There were 54 active nests by 12th Mar but because of restrictions they were not counted again until 7th Jun when 135 were recorded. This represents a marked decrease compared to recent years as illustrated in the figure below.

Numbers decreased after the breeding period with 210 and 110 the Jul and Aug maximums respectively. Evening roost counts of only 52 in Oct and 75 in Nov were low while the Dec maximum was only 25.

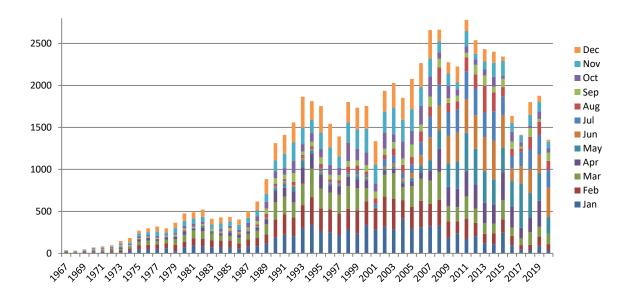


Figure 5 Annual totals of Cormorants based on monthly maxima 1967-2020.



Figure 6 Numbers of Nests at Rostherne Mere 2004 to 2020. The trend line represents a moving average.



Cormorants on 24th Jun 2020, © Sheelagh Halsey.

Sparrowhawk (Accipiter nisus)

Breeding resident

There were 38 records in 2020 (56 in 2019, 57 in 2018 and 42 in 2017). The first record of the year documented the spectacle of two birds harrying a Peregrine Falcon along Mere Covert on 5th Jan. Most accounts were of single birds in flight but there were also some notable comments of additional records. A pair was seen in Bobby Field on 9th and one displaying over Harpers Bank Wood on 11th Mar. A female was seen hunting a Goldfinch in the Sprout Field on 18th Sep and one was mobbed by 10 Magpies on 17th Oct!

As in most years, there were fascinating views of birds hunting the Starling roost from the end of Oct to Dec. Three were seen on 11th, 18th Nov and 2nd Dec. Two were recorded on 30th Oct, 10th, 25th Nov, 7th and 22nd Dec. Interestingly, only two kills were witnessed during these observations.

Marsh Harrier (Circus aeruginosus)

Rare passage migrant

One flew low over the Mere on 5th May.

Red Kite (Milvus milvus)

Very rare vagrant

There were three records in a year when there were reports of birds flying over the nearby locations of Ashley, Altrincham and Knutsford. One flew over Dolls Meadow and settled on the dead Alder near the Boathouse on 26th May. One flew over the Mere towards Cicely Mill Pool on 16th Jul. Later in the year, one was seen over the Church on 18th Oct.

Buzzard (Buteo buteo)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	7	6	10	10	nc	3	3	4	5	2	2	2

The species was recorded on 110 days (176 days in 2019, 151 in 2018 and 176 in 2017). Numbers were higher in the first half of the year compared to the second half. Double figure counts included 10 circling over the Mere on 19th Mar. There were also 10 circling over Bobby Field on 30th Apr.

A pair were seen displaying over Mere Covert on 20th Jun. It is thought that two pairs attempted to breed with a nest in Harpers Bank Wood and another in Mere Covert. However, it is not known how successful these attempts were. There were six records of single juvenile birds begging for food. Four accounts were from Mere Covert on 21st, 31st Jul, 7th and 11th Aug. The remaining two records were from Wood Bongs on 20th and 31st Aug. It is possible that they could all refer to the same bird as it moved around the Reserve. Numbers were low after Sep with a maximum of only two seen from Oct to Dec.

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
No of Days Recorded	8	7	4						2	6	9	7
1 bird	3	3							2	3	3	1
2 birds	2	3	3							3	2	2
3 birds	3	1	1								2	2
4 birds											1	1
5 birds											1	1

The reed beds around Shaw Green Willows and the Boathouse are the most popular areas to hear 'sharming' Water Rails. There were 43 records in 2020. Three birds were recorded on five dates from Jan to Mar. The last record during this period was three on 19th Mar. The first record in the second half of the year was a single heard on 22nd Sep. Interestingly, two were heard in the Snipe Marsh on 28th Oct, an uncommon location for the species. Five were heard on 1st Nov and 16th Dec, with four in Shaw Green and another from the Boathouse.

Moorhen (Gallinula chloropus)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	2	3	3	nc	nc	2	3	5	1	2	3	1

Moorhen was recorded on 54 days (69 days in 2019, 73 in 2018 and 63 in 2017). The highest count in the first half of the year was three, recorded on 6th Feb and 8th Mar. An adult and two chicks were seen in front of the Bittern Hide on 17th Jul and the medium sized chicks were seen on their own in the same location on 31st Jul. The two juveniles were recorded back with an adult on 7th Aug but only one was seen with four adults on 11th Aug. Three adults were seen on 4th, 15th and 27th Nov.

Coot (Fulica atra)

Breeding resident

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	8	12	nc	nc	28	28	43	12	18	24	20
8	15	8	nc	nc	28	18	55	12	7	22	24
20	10	10	nc	nc	12	21	30	28	26	25	24
10	6	nc	nc	nc	16	30	26	26	33	27	5

Monthly maxima were similar to last year in the months where counts were made. The highest count in the first winter period was only 20 on 17th Jan. A pair were seen mating in front of the Bittern Hide on 14th Mar. Two occupied nests were found on an inspection of the Reserve on 5th Apr. Two juveniles were recorded on 7th Jun and a single juvenile was recorded on 9th, 20th and 24th Jun. Interestingly, two smaller juveniles were recorded on 7th Aug. Post-breeding numbers peaked at 55 on 11th Aug (56 in 2019). Numbers fell after this period. Maximums in Oct, Nov and Dec were 33, 27 and 24 respectively. 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.



Coot on 24th Jul 2020, © Sheelagh Halsey.

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

Oystercatcher was recorded on 12 days (7 days on 2019. 17 in 2018 and 2017). One flew up and down the Mere on 2nd Feb (the earliest record since one flying over on 15th Jan 2012). Another flew over Harpers Bank Wood on 17th Feb. There were six records in Mar with two circling the Mere on 5th, three over Gale Bog on 8th and two calling as they flew over on 19th. The only bird seen to land on the Reserve was one on Bobby Field on 15th May. Two flew over on 19th May and the last record of the year was a single over on 7th Jun (7th Jul in 2019).

Lapwing (Vanellus vanellus)

Declining resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	c100	40	12	2	3	1				c50	75	10

Lapwing was only recorded on 21 days (56 days in 2019, 60 in 2018 and 46 in 2017). The majority of winter sightings referred to flocks flying up from farmland west of the A556 and north of Gale Bog. Around 100 were seen on 12th Jan, the only record for the month. Thirty-five were seen on 2nd and 40 on 17th Feb. There were eight records in Mar but numbers were low ranging from one to 12.

There was an interesting series of sightings on Bobby Field from the roadside during the spring. A pair were seen on 3rd and then an adult near a nest on 15th Apr. Approximately a month later, an adult was seen with two chicks on 21st May. The only other record of breeding activity was that of bird displaying near Cherrytree Farm on 20th lun

There were only four records during the second winter period with 50 over on 4th Oct and 75 and 55 over Gale Bog on 1st and 15th Nov respectively.

Curlew (Numenius arquata)

Passage migrant, summer & winter visitor, has bred

Curlew was recorded on three consecutive days in Mar. One flew over on 6th and 7th with two over on 8th (six days in 2019, 2018 and nine days in 2017).

Woodcock (Scolopax rusticola)

Winter visitor, former breeding resident

There were five records of Woodcock (two in 2019, 10 in 2018 and one in 2017). One was seen in the Snipe Marsh on 29th Jan, one flew past the Observatory and over Church Field on 11th Feb. One was flushed from Wood Bongs on 27th Nov and singles were flushed from Shaw Green Willows on 1st and 7th Dec.

Jack Snipe (Lymnocryptes minimus)

Uncommon winter visitor; Oct-Apr

One was flushed with two Snipe from 'The Triangle' at the foot of Long Pasture on 12th Jan and one from the same location on 3rd Nov. There were two records last year which were the first since 2009.

Snipe (Gallinago gallinago)

Winter visitor, former breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly max	7	5	3		1				1	1	6	14

Snipe was recorded on 17 days and numbers were low with only one double figure count (31 days in 2019, 15 in 2018 and 18 in 2017). The majority of the records were from 'The Triangle' at the foot of Long Pasture. Monthy maxima in the first winter period included seven on 3rd Jan and five on 1st Feb. During May, one was flushed from Shaw Green Willows on 5th. May records are occasional with one seen on 5th May 2018 and then 2nd May 2013. The first sighting in the second half of the year was one flushed from Mere Field on 28th Sep. There were only five records from Oct to Dec with six flushed from 'The Triangle' on 4th Nov and 14 flushed on 30th Dec which coincided with a spell of cold and wintery weather.

Common Sandpiper (Actitis hypoleucos)

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

There was only one record in 2020 (one in 2019, 2018 and four in 2017). One was seen on Brook Meadow on 20^{th} Aug.

Green Sandpiper (Tringa ochropus)

Uncommon visitor

One was seen in Brook Meadow on 1st Oct (one in 2019, 12 in 2018 and 11 in 2017).

Greenshank (Tringa nebularia)

Irregular autumn passage migrant, very rare spring

One was seen flying low over the Mere calling at 06:50 on 29th Aug. The species was recorded in Aug last year which was the first sighting since Aug 2013.

Black-headed Gull (Chroicocephalus ridibundus)

Regular visitor at all times

There were six roost counts which are listed in the Gull Roost table below. Unfortunately, there was no roost count made in Jan. The highest day count was c400 on 23rd. Around 1000 were recorded in the roost on 11th Feb, 4th Nov and 30th Dec. There were c1500 during the evening of the 22nd Oct and the highest roost count of the year was c5000 on 22nd Dec. This was the highest count since c8000 were recorded in Jan 2013. The largest day count during Dec was c500 on 16th Dec. A leucistic bird was seen on 13th Oct.

Mediterranean Gull (Ichthyaetus melanocephalus)

Rare visitor

There were four records. All in Feb and Mar. An adult was seen during the evening of 5th, 9th Feb and 5th Mar. Two were then seen in the roost on 8th Mar.

Common Gull (Larus canus)

Passage migrant & winter visitor

Common Gull was recorded on 19 days. Numbers were low and there were no double figure counts. Five were recorded in the roost on 11th Feb and seven on 5th Mar. The highest count in the second winter period was only two on 15th Nov and 16th Dec.

Great Black-backed Gull (Larus marinus)

Winter visitor

There were 14 records with 11 from Jan to Feb (10 in 2019, eight in 2018 and 17 in 2017). Two visited the Mere on 16th Jan. There was then a series of sightings during the evenings of 31st Jan (1), 2nd (3), 6th (1), 7th (1), 8th (1), 9th (2), 10th (1), 11th (3), 16th (6) and 24th (2) Feb. Six seen on the 16th Feb was highest count since 10 in Nov 2015. One was seen on 5th Mar. The species was not recorded again until one was seen on 4th Nov. The last record of the year was of an adult seen in roost on 16th Nov.

Herring Gull (Larus argentatus)

Winter visitor

There were 41 records (44 in 2019, 39 in 2018 and 32 in 2017). Numbers were very low with the only double figure count being 20 in the roost on 11th Feb. Singles were seen on 10 dates from Jun to Aug. The highest counts in the second winter period were five on 22nd Oct, 4th and 14th 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 17th Nov 2018.

There were three records of birds recorded in the gull roosts and one logged as a Yellow Legged Gull/Caspian Gull on 15th Jan. All the records were made by Mike Duckham.

An adult was recorded in the roost on 20th Jan. Later in the year two birds were seen in the roost on 20th Oct. They were described as an adult and a 1st winter bird which were acting aggressively towards several Herring Gulls in the roost and interacting between themselves. The adult had the appearance that p10 was not fully grown. During the evening of 16th Nov there were two adults and possibly three in the roost.

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 11th 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 Scare Birds of Cheshire & Wirral, Allan Conlin and Eddie Williams, 2017).

Yellow Legged-Gull (Larus michahellis)

Scarce visitor

There were 10 records in 2020 (12 in 2019, 21 in 2018 and five in 2017). All the sightings were made during the evening gull roost by Mike Duckham and are listed below:

```
15<sup>th</sup> Jan
                                   logged as a Yellow Legged Gull/Caspian Gull.
20<sup>th</sup> Jan
                       2
                                   one adult, one 3<sup>rd</sup> winter.
5<sup>th</sup> Feb
                                   3<sup>rd</sup> winter.
                       1
11<sup>th</sup> Feb
                                   adult.
                       1
24<sup>th</sup> Feb
                       1
                                   adult.
                                   4<sup>th</sup> winter.
5<sup>th</sup> Mar
                       1
8<sup>th</sup> Mar
                                   3<sup>rd</sup> winter.
                       1
27<sup>th</sup> Sep
                       1
                                   adult.
28<sup>th</sup> Sep
                       1
                                   adult.
20<sup>th</sup> Oct
                                   one 1st winter, one 2nd winter, one near adult.
                       3
```

Lesser Black-backed Gull (Larus fuscus)

Passage migrant & winter visitor

The species was recorded on 134 days (161 days in 2019, 170 in 2018 and 165 in 2017).

The highest Jan count was 60 on 16th but there was no roost count during the month. There were two three figure counts in the first half of the year with 470 during the evening of 9th and 300 in the roost on 11th Feb. There were 17 on Bobby Field on 12th Apr. Numbers ranged from one to 15 from May to Jun. In Aug, c100 were recorded on 11th and 13th with 140 on 31st. A count of 120 were recorded on 13th and c100 on 27th Aug. The highest counts in the second winter period were c500 in the roost on 22 Oct and c300 on 4th Nov. The count of around 500 is the highest since Jan 2000 (650)!

Mike Duckham recorded single gulls of the subspecies *Larus fuscus intermedius* on 6th, 11th Feb, 27th Sep and 16th Nov. He also recorded a pale *Larus fucus graellsii* on 27th Sep.

Gull Roost

The following table shows all the gull roost counts made in 2020.

	Black-headed Gull	Common Gull	Herring Gull	Lesser Black -backed Gull	Great Black -blacked Gull
Date					
11 Feb	1000	5	20	300	3
05 Mar	200	7		20	1
22 Oct	1500		5	500	
04 Nov	1000	1	5	300	1
22 Dec	5000		2		
30 Dec	1000		4	10	

Common Tern (Sterna hirundo)

Annual passage migrant, Apr-Oct

There were two records in 2020 (two in 2019, nine in 2018 and 10 in 2017). One was seen on 12th Jul and another on 26th Aug.

Commic Tern (Sterna spp.)

One recorded as a 'Commic' Tern was seen on 23rd Jul.

Feral Pigeon (Columba livia)

Irregular visitor, probably under-recorded

The species is often seen in Rostherne village but rarely recorded far within the NNR boundary. One was seen on Bobby Field on 6^{th} Oct.

Stock Dove (Columba oenas)

Breeding resident

Stock Dove was recorded on 79 days (114 days in 2019, 112 in 2018 and 114 in 2017). Three birds were recorded on 20th Jan, 6th Feb and 2nd Mar. Five were recorded in Harpers Bank Wood on 5th Mar. Display was first seen on 23rd Jan. Single birds were seen visiting the Mere Meadow Barn Owl box on 1st Feb, 17th Mar with two on 14th Mar. Two were seen in Bobby Field on 3rd Apr. Three were recorded on 7th Jun.

The Barn Owl boxes were inspected by Jake Gregory and Ingrid Cerbertowicz on 1st Jul and the following information on Stock Doves was discovered:

Mere Field Box – A female present sitting on eggs.

Mere Meadow Box – A nest with eggs but they appeared to be abandoned. There was also a Barn Owl nest with eggs which was also abandoned.

Penny Croft Box – Two squabs ringed.

In addition, there also appeared to be a Stock Dove family using the Dolls Meadow Box but the box was not inspected closely. It appears that Stock Doves attempted to breed in four out of the six Barn Owl boxes on the Reserve.

Counts during the latter part of the summer included six on 26th Aug, five on 8th and six on the Sprout Field on 28th Sep. The highest count by far was 23 seen on Church Field during the evening of 7th Sep. This was the first double figure count since May 2010 (11) and the largest since 1993 when 30 were counted roosting in Harpers Bank Wood on 5th Dec. There were only six records from Oct to Dec with the highest number two on 22nd Oct and 16th Dec.



Stock Dove squab from the Penny Croft Barn Owl Box on 1st Jul 2020, © Sheelagh Halsey.

Woodpigeon (Columba palumbus)

Breeding resident

During the first three months counts ranged from one to 20. On 3rd Apr, 183 were seen feeding on Bobby Field. There were 60 feeding within the Oilseed Rape crop on the Sprout Field on 7th Jun and c100 roosting in Harpers Bank Wood on 1st and 5th Aug. Larger numbers visited the Reserve in Aug with around 400 feeding on grain in Bobby Field on 4th and 5th and then c200 on 8th and 10th. The Woodpigeons fed on the crop while it stood causing the stems to collapse shedding more grain which provided food for large numbers of Canada and Greylag Geese after the crop was harvested (see the section on Canada Geese and Greylag Geese). Later during Aug around 200 Woodpigeons roosted in woodland surrounding the Mere. Additional high roost counts included c200 on 22nd, 25th and 27th Oct, 16th Dec and c250 on 1st Nov. The highest was c400 in Harpers Bank Wood on 13th 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. There were records on 48 days. Five were seen on the Sprout Field on 7th Aug and then two on 8th Sep. During Oct, four and then 21 were seen on the Sprout Field on 5th and 22nd Oct respectively. The highest count of the year was 41 seen sitting on the wires near the Natural England Workshop on 27th Oct and then 30 were on the wires across the Sprout Field on 1st Nov.

Cuckoo (*Cuculus canorus*)

Summer visitor, Apr-Sep, has bred; decreasing

There were two records in 2020 (one in 2019, none in 2018 and 10 in 2017). A silent bird (most probably a f) was seen on consecutive days on 11th (over Long Pasture) and 12th Jun (Shaw Green Willows). Interestingly, Malcolm

Calvert found a cuckoo egg in a Reed Warbler nest in the northern Mere Covert reeds on 20th Jul. This was the first evidence of Cuckoo parasitism in Reed Warbler nests since 1993! Malcolm was surprised to see the egg so late in the season and assumed it was laid too late in the clutch timing. A full account of the history of Cuckoo parasitism and Reed Warblers can be found on page 105 of Malcolm's excellent English Nature publication Reed Warblers at Rostherne Mere, English Nature 2005, ISBN 1 85716 871 2.



Cuckoo egg in a Reed Warbler nest on 20th Jul 2020, © Malcolm Calvert.

Barn Owl (Tyto alba)

Rare visitor, bred 2017, 2018, 2019

There were 57 records in 2020 which represents a very good showing (37 in 2019, 54 in 2018 and 40 in 2017). A pair did attempt to be breed in the Mere Meadow box but unfortunately the eggs were abandoned. Interestingly, a pair of Stock Doves also tried to breed in the same box and their nest and eggs were also abandoned. It is suggested that box sharing of the two species was detrimental to the breeding attempts of both.

The list of records from Barn Owl boxes reveals a pattern where a pair were seen together in the spring in the Mere Field box but then moved to the Mere Meadow box to breed. An inspection of Barn Owl boxes on the Reserve by Jake Gregory and Ingrid Cerbertowicz on 1st Jul revealed that pairs of Stock Doves had bred in the Mere Field Box, Brook Meadow and the Penny Croft boxes and had attempted to breed in the Mere Meadow box (see the section on Stock Dove, page 29).

Three birds were seen on three days. There was one in each of the boxes in Mere Field, Brook Meadow and Penny Croft on 3rd Feb. Three (two in the Mere Field box and one in the Penny Croft box) were also seen on 6th and three (two in the Mere Field box and one in the Brook Meadow box) on 11th Feb.

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 2^{nd} , 9^{th} (hunting), 12^{th} , 15^{th} , 16^{th} , 23^{rd} , 28^{th} , 29^{th} , 31^{st} Feb 1^{st} , 3^{rd} , 6^{th} (2), 9^{th} (2), 11^{th} (2), 12^{th} , 18^{th} , 21^{st} , 26^{th} , 27^{th} Mar 1^{st} , 5^{th} , 8^{th} , 14^{th} , 15^{th} , 19^{th} Apr 5^{th} , 6^{th} , 15^{th}

Mere Meadow Box

Jan 22nd
Apr 14th
Jun 3rd (2)
Jul 1st (nest with eggs, abandoned), 27th (2)
Oct 18th, 28th, 30th
Nov 10th, 11th, 18th, 23rd, 25th

Penny Croft Box

Jan 3rd, 31st

Brook Meadow Box

Feb 1^{st} , 8^{th} , 11^{th} , 16^{th} , 18^{th} , 22^{nd} Mar 5^{th} , 8^{th} , 15^{th}

Other records from around the Reserve included one flying from Harpers Bank Wood across the front of the Observatory on 1st Jan. In addition, one flew out of the Boathouse on 24th Feb and 17th Mar. Two were seen hunting near Dirty Lane on 15th Feb. The highest count of the year was of four birds on 3rd Jun when two were seen hunting just off the Reserve near Marsh Lane while there were still two in the Mere Meadow box. One was seen at 09:45 as it was disturbed from Shaw Green Willows on 11th Aug.



Barn Owl in the Mere Field Box on 28th Feb 2020, © John Hancock.

Tawny Owl (Strix aluco)

Breeding resident

Tawny Owl was recorded on 13 days (24 days in 2019, 19 in 2018 and 6 in 2017).

There were only four records from Jan to Jul. Two were calling on 1st Jan, one from Wood Bongs and another from Mere Covert. Later during the month there were two calling from the Split Limes on the evening of 15th and then one in the Treble Limes on the 16th. There was one calling from the Split Limes on 17th Feb. The species was not recorded again until 15th Jun when two recently fledged young owls were seen in the Split Limes.

The majority of records were from Aug to Dec (nine in total). One was flushed from the path near the Boathouse towards Dolls Meadow on 20th and 23rd Aug. Two were calling on Marsh Lane on 13th Sep. One was calling near the Sprout Field on 22nd and two from Shaw Green Willows on 28th Aug. One was calling from near the Cricket

Pitch on 4th and one from Wood Bongs on 10th Nov. During Dec, one was calling from Rostherne House in the village on 12th and a pair were calling to each other in Wood Bongs on 22nd.

Little Owl (Athene noctua)

Previous breeding resident now scarce

There were five records in 2020 (10 in 2019, eight in 2018 but none in 2017). All of the records were of single birds. Four records were of birds seen near Shaw Green Farm on 9th Jan, 3rd Aug, 13th Sep and 28th Oct. This is a location where Little Owls have been previously recorded in recent years. Interestingly, one was seen in the Natural England car park on 14th Dec.

Swift (Apus apus)

Passage migrant & summer visitor, Apr-Oct

Swift was recorded on 20 days (26 days in 2019, 37 in 2018 and 23 in 2017). The first record of the year was c50 seen feeding over the Mere on 5th May (same date in 2019). There were only two records during May but obviously access to the Reserve was prohibited due to COVID restrictions. In comparison, there were seven records in Jun when restrictions were less severe. Double figure counts included around 50 on 7th, 9th and 30th, when they were feeding on flies over Shaw Green Willows. Around 20 were recorded on 20th and 27th Jun. There were 10 records in Jul with c20 on 5th and c30 over the Mere on 15th. The last record of the year was of 12 which flew over Rostherne village towards the Mere on 5th Aug (13th Aug in 2019).



Swifts over the Mere on 7th Jun 2020, © Sheelagh Halsey.

Kingfisher (*Alcedo atthis*)

Irregular visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1 bird	2		2	1		1	5	5	1	1	1	

Kingfisher was recorded on 19 days (23 days in 2019, 45 in 2018 and 49 in 2017). All the records were of single birds. Locations were given for 10 of the records and birds were broadly seen in two areas. These were at the south-east corner of the Mere between the Bittern Hide and Long Pasture and along the Dolls Meadow/Brook Meadow shoreline.

Birds were seen flying past the Bittern Hide on 1st, 3rd Jan and 23rd Aug. One was seen near Blackburn's Bridge on 30th Jun and 22nd Jul with one near Long Pasture on 3rd Aug.

One was seen on the Boathouse roof on 16^{th} Mar and a bird flew across the shoreline of Brook Meadow on 20^{th} Sep and then Dolls Meadow on 30^{th} Oct.

Interestingly, a bird flew right across the Mere from Dolls Meadow on 14th Mar.



Kingfisher flying past a Grey Heron on 30th Oct 2020, © John Hancock.

Lesser Spotted Woodpecker (*Dendrocopos minor***)**

Scarce resident

There were only three records of Lesser Spotted Woodpecker in 2020 (19 in 2019, six in 2018 and eight in 2017). Unfortunately, COVID restrictions meant that last year's nest site could not be monitored until Jun so it is unknown if a breeding attempt was made on the Reserve.

One was calling in Wood Bongs on 1st Feb. Two were in Manor Wood just off the Reserve on 13th Mar and one flew across the Reserve from a dead tree in Marsh Lane on 20th Apr.

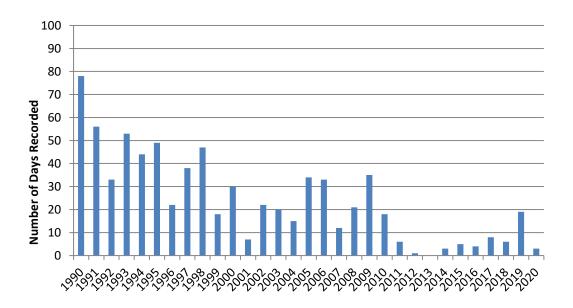


Figure 7 The number of days Lesser Spotted Woodpecker was recorded from 1990 to 2020.

Great Spotted Woodpecker (*Dendrocopos major***)**

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max nos	3	3	2	nc	nc	1	2	1	1	2	2	1

The species was recorded on 71 days (87 days in 2019, 140 in 2018 and 119 in 2017). There were 14 records in Jan with a m and f seen on 13th. Three birds were drumming from different parts of the Reserve on 31st. One was drumming near the Observatory, one in Shaw Green Willows and another in Mere Covert. This was repeated on 1st Feb although two were drumming from Wood Bongs while another was drumming in Old Hall Wood. Two were recorded on 6th, 16th, 21st Feb and 8th Mar. Two were seen in Wood Bongs on 1st Jul and Malcolm caught an adult in Gale Bog on 22nd Sep, the 12th to be ringed on the Reserve since 1972. Two were recorded on 5th Oct and two on 15th Nov with one on the Split Limes and one in Harpers Bank Wood.

Green Woodpecker (Picus viridis)

Breeding resident

It was a very poor year for Green Woodpecker records despite the COVID restrictions. The species was only seen on three days (17 days in 2019, 96 in 2018 and 44 in 2017) There was one on Mere Field on 8th Feb, one in Wood Bongs on 4th Aug and one seen during the evening of 18th Oct.

Kestrel (Falco tinnunculus)

Breeding resident

Kestrel was recorded on 73 days (142 days in 2019, 83 in 2018 and only 13 in 2017). There were 52 records between Jan and Mar with a pair seen on 22 dates in the vicinity of the dead Alder near to the Boathouse. This was the site of a nest inside the hollow dead tree in which they bred in 2018 and 2019. The pair were seen mating on 16th and 21st Feb. There was a dramatic encounter on 29th Jan when the m and two fs were interacting with each other at the top of the Alder and then had to defend the nest site from four Carrion Crows.

There is confusion as to what happened to the breeding pair just before the Reserve was closed in late Mar. Sadly, two dead Kestrels were found on 20th Mar, one on the Cricket Pitch and another in Wood Bongs. However, a pair were then seen on the dead Alder from the Churchyard on 13th Apr but this was the only record of the month. A single was recorded near the Boathouse on 14th and 20th Jun. Interestingly, a juvenile was seen in the Churchyard on 24th Jun. This begs the question as to whether the pair did breed again in the dead Alder in 2020? A pair was seen again at the nest site on 27th and the female on 28th Jun. A juvenile was then recorded again in the same area on 1st Jul.

Away from Church Field, a single was hunting over Bobby Field on 21st May and one was over Shaw Green Willows on 26th Aug, an unusual location. Later in the year, singles were seen either hunting or sitting on the wires over the Sprout Field on 12th, 14th, 22nd Oct, 14th Nov and 22nd Dec. One was hunting over the Sprout Field on 1st Nov while there was another hunting over Gale Bog.

Hobby (Falco subbuteo)

Scarce passage migrant & summer visitor, Apr-Oct

There were only 10 records (42 in 2019, 10 in 2018 and 15 in 2017). The first was of a single which flew over the Mere on 22nd Apr (9th Jun in 2019). This is the first Apr record since 2014 (27th Apr) and the earliest since 2013 (17th Apr). There was one over Shaw Green Willows on 11th and 23rd Jun. In Jul, there was one on 17th and one on top of the dead Alder on 21st. There was a single reported on 19th and one chasing House Martins on 29th Aug. There were three records in Sep with two on the top of the dead Alder on 4th, two on 22nd and one on 25th, the last record of the year (11th Oct in 2019).

Peregrine (Falco peregrinus)

Irregular visitor at all times, primarily in autumn and winter

It was a good year for sightings of Peregrine. There were 17 records with 12 in Jan and Feb (eight in 2019, four in 2017 and seven in 2017). One flew past Mere Covert on 5th, 12th, 13th and 28th Jan. However, it was seen at much closer quarters flying from Harpers Bank Wood across Church Field on 9th, 31st Jan, 18th, 21st, 24th, 27th Feb and 20th Mar. The species was not recorded again until 28th Jul when one was over the Natural England Workshop and Wood Bongs. It was seen swooping upon Coot on 18th Sep, who took evasive action by diving. It was then recorded on 22nd Oct and 15th Nov.

Jay (Garrulus glandarius)

Resident, probably breeding regularly

The majority of records referred to one or two birds seen in the woodland surrounding the Mere. One was seen in Shaw Green Willows on 23rd Mar and 20th Jun. Higher counts were as follows:

```
Five -18^{th} Sep.
Four -21^{st} Feb, 5^{th} Oct, 4^{th} Nov.
Three -14^{th} Mar, 8^{th}, 29^{th} Sep, 18^{th} Oct, 2^{nd} Dec.
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Magpie (*Pica pica*)

Breeding resident

Magpie was often seen on the fields surrounding the Mere. The highest count was of 10 mobbing a Sparrowhawk on 17^{th} Oct. Five were recorded on 22^{nd} Oct and four on 8^{th} , 18^{th} , 20^{th} Sep and 1^{st} Nov.

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 c30 on 16th Feb and 1st Mar. During the summer there were c40 over the village on 17th and c50 on the Cricket Pitch on 31st Jul. Numbers started to increase in

Aug as the year's young joined the flocks with c70 on 5th, c50 on 15th and c80 on 20th. The highest numbers of the year were seen feeding on Bobby Field during Sep with c250 on 4th, c50 on 8th and c200 on 10th. There were c30 over the Reserve on 4th Oct and 22nd Nov. Around 50 were feeding on the Sprout Field on 7th and c40 over the Reserve on 23rd 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 four records in 2020, all of birds feeding on Bobby Field during Sep. There was one on 7^{th} , two on 8^{th} , one on 10^{th} and c70 on 16^{th} .

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

Breeding resident

Carrion Crow was recorded throughout the year with numbers ranging from one to six. A notable record was of four harassing three Kestrels (1 m, 2 f) on the dead Alder near the Boathouse on 29th Jan. The highest count by far was that of 20 which were seen feeding on Bobby Field on 8th Sep.

Raven (Corvus corax)

Scarce visitor, has bred

Raven was recorded on 19 days (22 days in 2019, 21 in 2018 and 16 in 2017).

The majority of records referred to single birds flying over the Reserve. All records with the exception of tick-list only entries are shown below. Comments other than 'flying over' are shown:

2 over the Church 1 Mere Covert at dusk
2 1 Split Limes
2
1
1
1
1
1 Split Limes
1 Split Limes
1 Shaw Green Willows
1
2
1
2
1
1



Raven sitting on the Split Limes on 17th Sep 2020, © Phil Dell.

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. Three were seen on six days with one of the three singing on 3^{rd} Jan. The highest count was four on 6^{th} Feb.

Willow Tit (*Poecile montanus*)

Former breeding resident now scarce

Willow Tit was not recorded in 2019 but there were 14 records in 2020 with confirmation of breeding on the Reserve. The last strong evidence of breeding on or near the Reserve was in 2012 when Malcolm Calvert trapped an adult female bird with a clearly identifiable brood patch on 17th May.

The first record in 2020 was of a single seen in the scrub near Blackburn's Brook between Shaw Green Willows and the Snipe Marsh on 20th Aug. All of the subsequent records bar one was from this area where the species is thought to have bred.

A single was recorded on 26th Aug and then a juvenile was ringed by John Adshead on 29th before one was seen on 31st. During Sept, two were recorded on 6th, and then an adult with the previously trapped juvenile were caught on 16th. Later during the month, one was seen in Long Pasture on 28th.

While there were no records in Oct, singles were seen on seven days throughout Nov until early Dec at the original location. Birds were recorded on 1st, 4th, 5th, 11th, 22nd, 27th Nov and 2nd Dec.



Juvenile Willow Tit ringed by John Adshead on 29th Aug 2020, © John Adshead.



Willow Tit on 4th Nov 2020, © Steve Collins.

Blue Tit (Cyanistes caeruleus)

Breeding resident

Malcolm ringed 22 birds near the Bittern Hide on 1^{st} Jan of which three were retraps. High counts included 20 on 31^{st} Jan and 14 on 6^{th} , 21^{st} , 26^{th} Feb and 19^{th} Mar. During Jun, family parties of five on 7^{th} and four on 9^{th} and 15^{th}

were seen near the Bittern Hide. Family parties of unknown numbers were recorded on 26th Jul and 22nd Aug. The only double figure count in the second half of the year was of several family parties in a flock of 14 in Shaw Green Willows on 31st Aug.



Blue Tit on 28th Feb 2020, © John Hancock.

Great Tit (Parus major)

Breeding resident

Seven were ringed by Malcolm near the Bittern Hide on 1st Jan with one retrap. Eight were recorded on 23rd, 31st Jan, 6th, 21st Feb and 19th Mar. A family party of nine were ringed by John Adshead and Jake Gregory in Shaw Green Willows on 11th Jun. Family parties were also recorded on 15th Jun and 26th Jul. The highest count in the second winter was five on 27th Nov.

Skylark (Alauda arvensis)

Autumn passage migrant, irregular visitor, may breed occasionally

Skylark was recorded on 16 days (7 days in 2019, 10 days in 2018 and 11 days in 2017). All records are listed below, with the exception of tick-list only entries:

12th Feb 1 singing over the Sprout Field 26th Feb 8 over Church Field 5th Mar 2 in Bobby Field 13th Mar 3 in Bobby Field 14th Mar 1 over Long Pasture 12th Apr 2 in Bobby Field 1st May 1 singing over the Sprout Field 5th Oct 2 over 11th Oct 1 over 17th Oct 4 over Long Pasture 22nd Oct 1 in the Sprout Field 25th Oct 1 in Bobby Field $22^{nd}\ Nov$ 1 in Mere Field

Sand Martin (Riparia riparia)

Passage migrant, Feb-Oct

It is thought that the observations of Sand Martins were significantly impacted by the COVID restrictions. There were only three records (24 in 2019, 2018 and 31 in 2017). The first arrival of the species was missed but it can be stated that with a degree of confidence that the species had not arrived by 23rd Mar. Two were seen over the Mere on 7th Jun, a single on 20th Jun and two over on 5th Jul.

Swallow (Hirundo rustica)

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

Swallow was only recorded on 31 days (49 days in 2019, 76 in 2018 and 60 in 2017). The first record was of a flock of around 60 which flew from east to west on 3rd Apr (30th Mar in 2019). Eighty were seen with 20 House Martins feeding over the Mere on 28th Apr. Double figure counts included 12 over Bobby Field on 5th and 10 over the Mere on 15th Jul. The path along the Sprout Field was a good location to watch Swallows feeding over the field and resting on the wires. There were 12 on 8th, 35 on 10th and 20 on 13th Aug. The last record of the year was five over the Reserve on 20th Sep (30th Sep in 2019).

House Martin (Delichon urbicum)

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

The species was recorded on 18 days (22 days in 2019, 21 in 2018 and 18 in 2017). The first record was three over on 3rd Apr (2nd May in 2019). There were around 20 feeding over the Mere with 80 Swallows on 28th Apr. Double figure counts included c50 on 7th, 10 on 20th and c20 on 27th Jun. There were around 20 over St Mary's Church on 15th Jul. During Aug, there were 10 on 4th, 10 over the Sprout Field on 11th, 10 on 23rd and c100 over the Mere on 29th. There were no sightings in Sep but two in Oct with six on 5th and two on the 22nd, the last record of the year (1st Oct in 2019). The 22nd Oct record is the latest since 27th Oct 1995 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
No of Days Recorded	5	8	11	2	1	8	9	8	10	12	10	3
Max nos	1	2	2	1	1	4	2	1	7	4	3	2

It was another very good year for records of Cetti's Warbler at Rostherne. The species was logged on 89 days (76 days in 2019, 13 in 2018 and none in 2017).

The first record of the year was a bird singing from near the Bittern Hide on 12th Jan. The majority of records from Jan to Mar came from the Boathouse reed bed. Birds were singing from both locations on 6th Feb, 14th, 17th and 19th Mar. The first bird caught by Malcolm Calvert in 2020 was a male (originally trapped on 17th Oct 2019) caught between the Bittern Hide and Blackburn's Bridge on 23rd Mar just as the Reserve was about to close! Subsequently, there were only three records in Apr and May, of singles near the Boathouse heard from the Churchyard.

Four birds were heard singing (from near the Bittern Hide, Blackburn's Bridge, Boathouse and Dolls Meadow) on 7th Jun when the Reserve reopened. Malcolm trapped a male near Blackburn's Bridge on 9th Jun. He added 10 birds to the total Cetti's ringing list, taking the total to 22 birds ringed since 2009. Six juvenile birds of the year were included in the tally confirming breeding. Cetti's bred in 2010, 2019 and now 2020.

A recently fledged juvenile was caught near the Bittern Hide on 10th Jul. Interestingly, a second juvenile was caught in the southern half of the Mere Covert reed bed on 13th Jul. Later during the year an amazing seven birds

were heard singing at various locations around the Mere including Gale Bog on 16th Sep, the first evidence of a Cetti's from this area. Four birds were singing (from near the Bittern Hide, Blackburn's Bridge, the reed bed below Wood Bongs and the small pond in Shaw Green Willows) on 22nd Sep. Four were also singing from various locations on 18th Oct. There were fewer records in Nov and Dec with the highest count of three on 15th Nov. The last record of the year was a retrapped male on 22nd Dec.

An article on Cetti's Warbler - The story of a successful addition to British Avifauna is on page 60-63.

Reported movements of Cetti's Warbler

Ring no.	Ringing code/sex	Date	Place	Movement	
AZB7774 R	3F	18-09-19 20-06-20	Rostherne Mere Tewin Bury Farm, Welwyn, Hertfordshire	227 km SE	

3F - bird of the year, female



Male Cetti's Warbler caught on 10th Sep 2020, © Malcolm Calvert.

Long-tailed Tit (Aegithalos caudatus)

Breeding resident

The species was recorded on 94 days (114 days in 2019, 117 in 2018 and 136 in 2017). Double figure counts during the first winter period included 10 on 8th, 13 on 23rd Jan and 10 in Mere Covert on 11Th Feb. Later in the year family parties were recorded on 7th Jun (10 in Mere Covert) and 8th Jun (eight). On 1st Jul, a family party of 10 were seen the near the Cricket Pitch. Family parties were also reported on 18th, 26th Jul and 22nd Aug but no numbers were given.

There were 18 on 28th Sep and 15 near Mere Field on 1st Nov. Through Nov and Dec there were a series of high counts from the copse between Shaw Green Willows and the Snipe Marsh with 18 on 3rd, 12 on 4th and 15 on 14th Nov, 20 on 2nd, 12 on 7th, 16 on 16th and 13 on 23rd Dec.

A total of 19 Long-tailed Tits were ringed in 2020 with nine from the Church Field reed bed on 10th Aug. In addition, two birds were retraps.

Willow Warbler (*Phylloscopus trochilus*)

Breeding summer visitor, Mar-Nov; declining

It was a very poor year for records of Willow Warbler. The species was only seen on eight days (28 days in 2019, 42 in 2018 and 27 in 2017). The first record of the year was of a bird singing near Observatory Wood on 16th Apr (7th Apr in 2019). An adult f was ringed on 11th Jun in Shaw Green Willows. All the remaining records were made in Aug with one in Long Pasture on 7th, one on 11th, one in Observatory Wood on 15th, a tick-list only entry on 19th and two on 23rd the last record of the year (27th Aug in 2019). Interestingly, a juvenile was caught in the reeds below Church Field on 10th Aug as evidence of breeding on the Reserve. A total of five birds were ringed in 2020.

Chiffchaff (Phylloscopus collybita)

Breeding summer visitor, rare in winter

Chiffchaff was recorded on 57 days (89 days in 2019, 105 in 2018 and 98 days in 2017). The first record for the year was one singing in Brook Meadow and another near Blackburn's Brook on 17th Mar (28th Feb in 2019). Three were recorded on 19th Mar, singing from Brook Meadow, Blackburn's Brook and Wood Bongs.

The species was not recorded again until 23rd May when one was logged. There were 53 records from May until 5th Oct (last record was 16th Oct in 2019). Eight were recorded on 7th Jun and a family party of six was seen near the Bittern Hide on 24th Jun. Malcolm ringed two juveniles from Gale Bog on 25th Jun confirming breeding on the Reserve. There was a family party of seven in Shaw Green Willows on 21st Jul. During Aug, there were family parties of 10 recorded from Penny Croft on 7th and 10 near the Boathouse on 20th. The last double figure count of the year was a family party of 10 in Shaw Green Willows on 13th Sep. Interestingly, an overwintering bird was recorded in the Snipe Marsh during a cold period on 30th Dec. The last Dec records were in 2014.

A total of 53 Chiffchaffs were ringed in 2020 with two retraps.

Sedge Warbler (Acrocephalus schoenobaenus)

Breeding summer visitor, Apr-Sep

The species was recorded on only 11 days (23 days in 2019, 27 in 2018 and 27 in 2017). The first record of the year was one in Shaw Green Willows on 7th Jun (23rd Apr in 2019). Two were ringed in Shaw Green Willows on 8th and three on 30th Jun. Two were seen on 18th an 21st Jul. There were three records from ringing during Aug. A juvenile was caught at the edge of Mere Field on 6th Aug confirming breeding on the Reserve. A f was caught in the reeds below Church Field on 10th and an adult f and juvenile in Penny Croft on 14th Aug, the last record of the year (5th Sep in 2019).

Additional Notes by Malcolm Calvert

Sedge Warblers were reported as scarce at many locations in England, possibly due to bad weather on migration around the Mediterranean in early Apr (This might account for missing m).

Although Jake Gregory caught plenty of birds at Pickmere, Sedge Warblers were acutely short in supply on the Rostherne Reserve.

We only caught nine birds: a m ringed on the Reserve on 12 May 2018 and caught again in 2019; six adult f; 2 juveniles (eight birds ringed).

The m and three of the f were at Shaw Green Willows but none were caught after 10th Jul.

Two of the f were netted in the reed bed at northern Mere Covert on 17th Jul; a juvenile was caught at Mere Field on 6th Aug; a f and juvenile were trapped at Cattle Drink below Penny Croft on 14th Aug.

Reed Warbler (Acrocephalus scirpaceus)

The first record of the year was a single heard near the Boathouse reed bed on 23rd Apr (12th Apr 2019). The last record was of a juvenile caught by Malcolm on 29th Sep (18th Sep 2019).

There were an estimated 55 pairs in territory around the Mere (57 pairs in 2019). A total of 114 adults were caught with 81 newly-ringed and 30 retrapped from earlier seasons; three were ringed elsewhere.

As Reserve access was not possible until 7th Jun birds were not caught in early season, resulting in the retrap rate of birds from earlier seasons falling to 26.32% compared to 50.10% (1998-2020).

A total of 81 juveniles were ringed, starting with one on the early date of 9th Jun. A total of 25 nestlings were ringed, mainly in the Mere Covert reed bed; the last ringed were three chicks in a brood on 14 Aug.

Of interest were three long-surviving Reed Warblers that returned to the Reserve in the 2020 season:-

Ring no.	Ringing & Retrap dates	Days since ringing	Age status	
X659589	Pullus Male 11/07/10 to 30/06/20	3641	3 rd known Ros	therne oldest
Y782074	Juvenile Male 31/08/12 to 30/06/20	2847	20 th	u
Y782236	Adult Male 21/06/13 to 10/07/20	2576	24 th	u

Rostherne ringed RW nestlings as percentage of national ringed RW nestlings:-

Years	Rostherne Pullus/National Pullus	National Pullus Rostherne %
1973-1982	1007 / 7183	14.02%
1973-1992	2269 / 15166	14.96%
1973-2002	3646 / 29193	12.49%
1973-2012	4480 / 41519	10.79%
1973-2019	4639 / 51737	8.97%

Reported movements of Reed Warblers:

Ring no.	Ringing code/sex	Date	Place	Movement
APJ8035 R	3)	20-06-20 07-08-20	Rostherne Mere (& 10-07-20) Chenal.Chenac – Saint Seurin d-Uzet, Charente- Maritime, FRANCE	880 km S
AEF2439 R	3J M	03-08-19 07-06-20	Woolston Eyes, Warrington Rostherne Mere	11 km ESE
AREO815 R	3	23-07-19 17-06-20	Betley Mere, Betley, Staffordshire Rostherne Mere	38 km N
S875527 R R	4M	13-08-17 07-05-19 23-06-20	Knustford Moor Rostherne Mere (& 11-05-19, 14-05-19) Rostherne Mere	5 km N

AEF0408 R	3J	07-07-19 10-07-20	Twentys Syndicate, Wincham, Northwich Rostherne Mere	11 km NE
AHF0606 R	3	27-07-19 20-07-20	Rostherne Mere Pickmere	10 km SW
APJ8077 R	4	17-07-20 31-07-20	Rostherne Mere Squire's Down, Stalbridge, Dorset	265 km S

Pull – pullus

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 nestlings on 6th Aug 2020, © John Adshead.

Blackcap (Sylvia atricapilla)

Breeding summer visitor, occasional in winter, no Feb records

Blackcap was recorded on only 38 days (80 days in 2019, 98 in 2018 and 86 in 2017). The first record of the year was two on 23rd May (27th Mar on 2019). A m and three juveniles were ringed near the Boathouse on 15th Jun. A family party of 10 in Wood Bongs on 1st Jul. A family party of five were seen below the Observatory feeding on Elderberries on 14th Jul. A juvenile was ringed in Old Hall Wood on 10th Sep. The last record of the year was a tick-list entry on 7th Oct (22nd Sep in 2019).

A total of 16 were ringed with one retrap.

Reported movement of Blackcap:

Ring no.	Ringing code/sex	Date	Place	Movement
AZC6019	3F	17-08-18	Rostherne Mere	
XF pred.		11-04-20	Prenton, Birkenhead, Merseyside	46 km W



Juvenile Blackcap ringed on 10 Sep 2020, © Malcolm Calvert.

Garden Warbler (Sylvia borin)

Summer visitor, Apr-Sep

There was only one record. One was recorded from the permissive path on 21st Apr.

Lesser Whitethroat (Sylvia curruca)

Passage migrant, occasionally breeds; Apr-Sep

There was a single record but it was an interesting one. A bird was seen eating berries in the dead Hawthorn below the Observatory on 26^{th} Jul.



Lesser Whitethroat on 26th Jul 2020, © Phil Dell.

Whitethroat (Sylvia communis)

Passage migrant, breeds irregularly; Apr-Sep

Whitethroat was recorded on only 5 days (23 days in 2019, 20 in 2018 and 11 in 2017). The first record was one in Bobby Field on 7^{th} May (23^{rd} Apr in 2019). There was one in Shaw Green Willows on 7^{th} and 15^{th} Jun. A juvenile was seen in Penny Croft on 16^{th} Jun. The last record was one on 17^{th} Jul (24^{th} Jul in 2019).

A total of two were ringed in 2020.



Male Whitethroat ringed on 9th Jun 2020, © John Adshead.

[Firecrest (Regulus ignicapilla)]

Very rare winter visitor and migrant

One was reported from in front of the Observatory on 8th Mar but no further details were provided. This is a very rare species at Rostherne and any report should be accompanied by a description.

Goldcrest (Regulus regulus)

Breeding resident

Goldcrest was recorded on 46 days (53 days in 2019, 50 in 2018 and 61 in 2017). Records were usually of one or two birds. Three were seen on 19th Mar and 4th Nov. A recently fledged juvenile was recorded in the reeds at the foot of Church Field on 10th Aug. Five were trapped in Shaw Green Willows by Malcolm on 22nd Sep. However, the biggest count of the year was 13 within a tit flock moving through the copse in Shaw Green Willows on 3rd Nov. This represents the second highest count on the Reserve, only surpassed by 14 in Wood Bongs in Oct 1990!

A total of eight Goldcrest were ringed in 2020.

Wren (Troglodytes troglodytes)

Breeding resident

Birds were first heard singing on 23rd Jan. Double figure counts included 16 on 6th, 12 on 9th and 10 on 24th Jun. A family party was included in a count of 14 in Shaw Green Willows on 15th Jun. A family party of eight was seen in Wood Bongs on 17th Jul. Ten were recorded on 11th Aug. A juvenile Wren was ringed by John Adshead on 29th Aug. Eleven were seen on 8th Sep.

A total of 20 were ringed with four retraps.



Wren on 28th Sep 2020, © John Hancock.

Nuthatch (Sitta europaea)

Breeding resident

Ones and twos were recorded throughout the year. Four were recorded on 21st Feb and 8th Mar. There were family parties in Wood Bongs on 20th Aug, 28th Sep, 4th, 18th, 22nd Oct and 22nd Nov. Five were seen on four dates; 12th Feb, 23rd Jun, 1st and 27th Nov.



Nuthatch on 1st Mar 2020, © Rob Wang.

Treecreeper (Certhia familiaris)

Breeding resident

Two were recorded on 12^{th} Jan and then two in Wood Bongs on 14^{th} Mar. This may have been the first record of a pair which nested near the permissive path and were seen by Geoff and Sheila Blamire during May. The following notes provide a fascinating account of their observations:

1 st May	Found nest by some loose bark on a truck. Two birds seen, seem to be incubating eggs or have a very young chick.
4 th May	Pair seen.
7 th May	Both Treecreepers were actively feeding the nestlings and occasionally taking away a faecal sac.
15 th May	Pair still feeding their young in the nest coming in with insects/caterpillars every 1 minute or so.
17 th May	No sign. Seems they have successfully fledged because the nest is intact, so not been predated.

A family of 5 were ringed in Shaw Green Willows on 9th Jun and an adult and juvenile were seen in the same location on 24th Jun. Later in the year two were seen on 8th Sep, 4th Nov and 7th Dec (Shaw Green Willows). There were three within a tit flock that contained 13 Goldcrests moving through the copse in Shaw Green Willows on 3rd Nov.

Eight were ringed in total during 2020.



Treecreeper with a caterpillar at the nest in Wood Bongs on 15th May 2020, © Geoff Blamire.

Starling (Sturnus vulgaris)

Breeding resident

Starling was recorded on 57 days (47 days in 2019, 48 in 2018 and 38 in 2017).

Several thousand roosted in the reed beds in Shaw Green Willows during Jan and Feb. There were c10,000 on 1^{st} Jan which dropped to around 5000 by the 3^{rd} and remained at this level until 16^{th} . However, an estimated 10,000 roosted on 22^{nd} with around 6000 on 23^{rd} . There were c2000 on 5^{th} and 11^{th} Feb with an increase to c3500 on 12^{th} .

During the summer there was a small murmuration of around 200 on 24th Jun and c300 on 3rd Aug. Ten were seen feeding on the Sprout Field on 7th Aug.

Starlings started roosting back in the Shaw Green Willow reed bed on 8th Oct when an accurate count of 2055 was made from a series of photos. Numbers remained at this level until 17th Oct when there was a marked increase to c25,000. This had increased to c30,000 on 28th and 30th Oct. During the day, 25 were seen feeding on the Sprout Field on 22nd Oct. The highest counts of the year were in Nov. Around 30,000 were recorded on 10th and 11th and then c50,000 on 12th. Numbers decreased to c20,000 on 19th but there were c30,000 on 25th. Counts decreased to c15,000 by 2nd Dec and remained at around this level until 22nd as the reed beds became more flattened by the weight of roosting Starlings. The last roost count of the year was c3000 on 24th Dec.

Blackbird (Turdus merula)

Breeding resident

There were nine double figure counts during the year. Ten were seen on the Sprout Field on 17^{th} Jan, 10 on 11^{th} Feb, 10 on 16^{th} and 20 on 27^{th} Sep. There were 12 on 22^{nd} and 10 on 27^{th} Nov. There were 15 on 2^{nd} , 15 on 5^{th} and 10 on 30^{th} Dec. The only record of a family was on 26^{th} Jul but no numbers were provided.

Fieldfare (Turdus pilaris)

Winter visitor & passage migrant

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	3	3								1	4	9
Max nos	135	5								6	5	5

Fieldfare was recorded on 20 days (11 days in 2019, 19 in 2018 and 12 in 2017). There were only six records in the first winter period. There were 135 feeding on the Sprout Field on 18th Jan. The last record in the first winter period was five in Mere Field on 11th Feb. The first record in the second winter period was six on the Cricket Pitch during the evening of 18th Oct. During Nov there were five on the Cricket Pitch on 22nd and five feeding on the Sprout Field on 27th. There were nine records in Dec with five on 2nd and five feeding on the Sprout Field with 10 Redwings on 22nd.

Redwing (Turdus iliacus)

Winter visitor & passage migrant; Sep-Apr

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	14	12	4							6	7	5
Max nos	310	c60	c50							c50	c50	c100

Redwing was recorded on 48 days (58 days in 2019, 42 in 2018 and 2017).

There were 14 records in Jan. Around 50 were in the Split Limes on 1st. A total of 310 birds were seen on 3rd with around 300 in Penny Croft and 10 in Wood Bongs. This is the highest count since c350 recorded in Oct 2013. There were c150 feeding in Mere Meadow on 12th and c70 feeding in the Sprout Field on 18th. Around 50 were in Mere Meadow on 31st. There were 12 records in Feb. There was only one count over 50 when c60 were seen in the Split Limes on 8th Feb. Around 50 were seen over Church Field on 10th Mar. Fifteen seen in Shaw Green Willows on 19th which was the last record in the first winter period.

There were 18 records in the second winter period. Around 50 were feeding on the Sprout Field on 17th Oct (the first record). There were around 50 over Gale Bog on 18th Oct. The highest count in Nov was c50 on the Sprout Field on 18th while there were c100 in the same location on Dec 27th, the last record of the year.

Song Thrush (*Turdus philomelos*)

Breeding resident

Song Thrush was recorded on 67 days (87 days in 2019, 96 in 2018 and 67 days in 2017). There was a winter flock of 11 birds seen on the Sprout Field on 18th Jan; the largest flock recorded since 14 were seen in Mar 1972! Song was first heard on 23rd Jan. Four were heard singing on 2nd Mar with one near the Sprout Field, one in Wood Bongs, one in Old Hall Wood and another near the Boathouse. Four were singing on 24th Jun and 1st Jul. A recently fledged juvenile was seen in Shaw Green Willows on 6th Aug.

Mistle Thrush (Turdus viscivorus)

Scarce breeding resident

The species was recorded on 47 days (81 days in 2019, 70 in 2018 and 63 in 2017). There were 21 records from Jan to Jun. Mainly ones or twos were seen, the exception was nine on the Sprout Field on 18th Jan. There were 26 records from Sep to Dec. The largest counts were three in the Sprout Field on 8th Sep, 22nd, 29th Oct, 1st Nov and 2nd Dec.

Spotted Flycatcher (Muscicapa striata)

Scarce, breeding summer visitor, Apr-Oct

There were only three records in 2020 (28 in 2019, 31 in 2018 and 16 in 2017). One was seen on three consecutive dates in Sep. It was seen near the Boathouse on 6th and in front of the Observatory on 7th and 8th.

Robin (Erithacus rubecula)

Breeding resident

The highest count during the first winter period was nine on 31st Jan and 6th Feb. Nine were recorded on 7th Jun. A juvenile was ringed by Malcolm in Gale Bog on 26th Jun. The only double figure count was 12 on 5th Oct.

A total of eight birds were ringed with one retrap.

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 51 records in 2020 with the majority of sightings in Rostherne village. Ten were recorded on 11th Aug, 15 on 4th Oct, 10 on 4th Nov and 23rd Dec.

Dunnock (*Prunella modularis*)

Breeding resident

Ones and twos were recorded throughout the year. Song was first recorded on 23rd Jan. Three were recorded on 6th Feb. A female was ringed on 17th Mar which was originally caught with a brood patch on 1st Sep 2011.

A total of six birds were ringed including a retrap.

Grey Wagtail (Motacilla cinerea)

Irregular visitor, had bred

There were 7 records in 2020 (11 in 2019, nine in 2018 and two in 2017). Three juveniles were seen on Brook Meadow on 7th Jun. There was a single on 8th Jun. One was seen near the Church Tower on 18th Aug, 19th and 27th Sep. There were three around the Church on 26th Sep. The last record of the year was one on Dolls Meadow on 18th Oct.

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

Breeding resident

There were 31 records (51 in 2019, 44 in 2018 and 33 in 2017). There were five on the Cricket Pitch on 16th Feb. One was seen on Bobby Field on 3rd Apr and there was one on Church Field on 27th May. There were 18 records from Sep to Dec. Seven was seen feeding on the Sprout Field on 28th with three on 26th Sep. There were six on the Cricket Pitch on 3rd Oct and later in the month there were two feeding on the Sprout Field on 22nd. The remaining records of the year were singles with the exception of two near the Church on 22nd Nov.

Meadow Pipit (Anthus pratensis)

Passage migrant & scarce winter visitor; no known June records

There were 9 records in 2020 (16 in 2019, 20 in 2018 and 17 in 2017). One flew past the Observatory on 12th Feb and there was one near Dirty Lane on 17th Mar. There were six records from Sep to Oct when birds were seen feeding on the Sprout Field. There were two on 10th and five on 26th Sep, two on 22nd and singles on 27th and 29th. The exception was that of a single seen in Long Pasture on 18th Oct. The last record of the year was a single in the Sprout Field on 7th Dec.



Meadow Pipit on 10th Sep 2020, © John Hancock.

Chaffinch (Fringilla coelebs)

Breeding resident

Double figure counts during the first winter period included 10 on the Sprout Field on 17th Jan and 12 on Mere Field on 23rd Jan. There was a big flock of 20 in Wood Bongs on 12th Feb. A family party was recorded in Shaw Green Willows on 20th Jun (four). There were 10 on the Sprout Field on 8th Sep and 20 in a mixed flock of 40 birds on 12th Oct. Twenty were also seen on the Sprout Field on 28th Nov.

Brambling (Fringilla montifringilla)

Passage migrant & winter visitor, Oct-May

There were two records. One was seen in front of the Observatory on 18th Oct. There was also one in a Holly near the Rowans just off the Reserve on 19th Dec.

Bullfinch (Pyrrhula pyrrhula)

Breeding resident

_	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	20	25	16	nc	nc	0	1	6	5	7	3	10
Max nos	6	6	6	nc	nc	0	1	5	2	4	4	10

Bullfinch was recorded on 93 days in 2020 (72 in 2019, 164 in 2018 and 145 days in 2017). This is an impressive total considering that sightings were severely impacted by the closure of the Observatory from late Mar as Bullfinches are often seen visiting the Bird Table. There were no records of the species in Apr and May. During the period when the Observatory was open (Jan-late Mar) the species was seen almost daily on the Bird Table with a total of 61 records. Five were recorded on seven dates during this period. The maximum was six on 16th Jan (2 m, 4 f) and 21st Feb (4 m, 2 f) and 9th Mar (3 m, 3 f).

During the summer, family parties were recorded on 20th Jul (Gale Bog), 5th (five), 22nd and 23rd Aug. Away from the Observatory, two were seen in Shaw Green Willows on 13th and one in Dolls Meadow on 20th Sep.

During the second winter period, four were recorded on 5^{th} Oct and 22^{nd} Nov. The highest counts were during Dec when winter flocks were seen in Penny Croft. There were seven (6 m, 1 f) on 2^{nd} , 10 (5 m, 5 f) on 5^{th} and six on 16^{th} . The last record of the year was four on 30^{th} .

One was ringed by Malcom Calvert bringing the total of full grown birds ringed to 142 from 1972-2020 with three pullus.



Female Bullfinch on 8th Mar 2020, © Jules Hill.

Greenfinch (Carduelis chloris)

Resident, breeds nearby

Greenfinches are common in the gardens of properties surrounding Rostherne Mere, especially in Rostherne village. However, they are infrequently recorded on the Reserve. There were 31 records in 2020 (23 in 2019, 11 in 2018 and 2017). The majority of records were of single birds seen near the Natural England car park but two were singing from this location on 2nd Feb, the first record of song. One was seen in front of the Observatory on 16th Jan and one visited the Bird Table on 8th Feb. There was one seen in Wood Bongs on 12th Feb. A single was recorded in Shaw Green Willows on 20th Jun and Malcolm ringed a juvenile at the edge of Mere Field on 23rd Jun. This is only the fourth Greenfinch to be ringed on the Reserve since 1972! and the first ringed since two in 2017. The Sprout Field provided the location for four records from Aug to Nov. There were five on 7th Aug, three on 5th,

two on 8th Sep and 12 on 27th Nov. Twelve matches the high count from the Cricket Pitch, just off the Reserve in Dec 2008.

Linnet (Carduelis cannabina)

Irregular visitor, has bred

It was a good year for sightings of Linnet with a total of 20 records (nine in 2019, four in 2018 matching 2017). All the records were in the period Aug to Oct and from the Sprout Field where Oilseed Rape was grown. In which there was also a large patch of wildflowers mixed with the crop. Linnets were often seen in mixed flocks with Goldfinches. A full list of the records follows:

```
Aug
7<sup>th</sup>
              c50 in a mixed flock
11^{\text{th}}
              15
20^{th}
              c20
23<sup>rd</sup>
              c10
26<sup>th</sup>
              c20
31<sup>st</sup>
              c10
Sep
4<sup>th</sup>
              14 in a mixed flock.
8<sup>th</sup>
              c10
10^{\text{th}}
              5
18^{\text{th}}
              2
26^{\text{th}}
              5
28^{th}
              c10
29^{th}
              c20
Oct
4<sup>th</sup>
              c20
5<sup>th</sup>
              c10
8<sup>th</sup>
              c50 in a mixed flock
11<sup>th</sup>
22^{\text{nd}}
              c50
23<sup>rd</sup>
              44
25<sup>th</sup>
```



Four Linnets with one Goldfinch on the Sprout Field on 28th Sep 2020, © John Hancock.

Lesser Redpoll (Carduelis cabaret)

Irregular visitor, has bred

Lesser Redpoll was seen on only three days matching last years account (4 days in 2018 and 11 in 2017). Singles were seen near the Observatory on 18th, 29th Oct and 10th Nov.

Goldfinch (Carduelis carduelis)

Resident, breeds nearby

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days												
Recorded	16	17	8	nc	2	5	8	7	10	8	5	5
Max nos	c50	10	4	nc	2	2	5	c20	131	c50	13	2
IVIAX IIUS	CJU	10	-	110	_	_	,	C20	131	CJU	13	_

Goldfinch was recorded on 91 days (128 in 2019, 112 in 2018 and 106 days in 2017). There were 41 records from Jan to Mar but there were only five double figure counts. The highest was that of around 50 in the Alders in front of the Observatory on 7th Jan. The maximum counts of the year were from the Sprout Field in Sep and Oct when mixed flocks of Goldfinches and Linnets were often recorded. During Sep, there were 45 on 4th, c40 on 8th, 10th, c60 on 18th, c100 on 25th, 26th, c50 on 28th and a maximum of 131 on 29th. Numbers remained high into early Oct with c50 on 5th, 8th and c40 on 12th.



Goldfinch and Linnets on the Sprout Field on 28th Sep 2020, © John Hancock.

Siskin (Carduelis spinus)

Passage migrant & winter visitor

Siskin was recorded on 19 days (23 in 2019, 25 in 2018 and 41 in 2017). There were 16 records in the first winter period with just three from Oct to Dec. The majority of records were single figure counts. The highest numbers were c50 in Old Hall Wood on 13^{th} Jan and c50 in the Alders in front of the Observatory on 16^{th} Feb. There were c30 on 21^{st} Feb and one visited the Bird Table to feed on 8^{th} Mar. The only double figure count in the second winter period was c30 in the Alders on 23^{rd} Dec.

Yellowhammer (Emberiza citrinella)

Irregular visitor, may breed nearby

The only record was that of a juvenile seen sitting on the wires over the Sprout Field on 4th Sep.

Reed Bunting (Emberiza schoeniclus)

Breeding resident

There were records on 47 days. The highest count from Jan to Mar was four on 14^{th} Mar. Family parties of 12 on 7^{th} , eight on 9^{th} , 11 on 15^{th} and 14 on 24^{th} Jun were recorded in Shaw Green Willows. Three juveniles were ringed on 17^{th} Jun. Ones to threes were recorded from Aug to Dec with the exception being four on 22^{nd} Sep.

A total of 24 birds were ringed with one retrap.



Male Reed Bunting ringed on 9th Jun 2020, © John Adshead.

Escapes

White-faced Whistling Duck (Dendrocygna viduata)

Presumed escaped bird

One was seen with the Canada Goose flock on 8th and 13th Sep. Interestingly, it was also seen on Tatton Mere during the Wetland Birds Survey (WeBS) on 20th Sep.



White-faced Whistling Duck with Canada Geese on 13th Sep 2020, © Sheelagh Halsey.

RINGING TOTALS

					l Total		
	2020 pullus (p)	2020 full-grown (fg)	1972-2 p	2019 fg	1972-2 p	2020 fg	total
			•		-		
Stock Dove	2		15		17		17
Great Spotted	Woodpecker	1		11		12	12
Wren		20		452		472	472
Dunnock		6	2	189	2	195	197
Robin		8	60	342	60	350	410
Blackbird		3	25	233	25	236	261
Song Thrush		1	9	76	9	77	86
Cetti's Warble	r	10		12		22	22
Sedge Warble	r	8	5	625	5	633	638
Reed Warbler	25	162	4679	3612	4704	3774	8478
Whitethroat		2		128		130	130
Blackcap		16		652		668	668
Chiffchaff		53		942		995	995
Willow Warble	er	5	33	755	33	760	793
Goldcrest		8		36		44	44
Long-tailed Tit	:	19		625		644	644
Willow Tit		2		140		142	142
Blue Tit		72	340	1625	340	1697	2037
Coal Tit		1	11	13	11	14	25
Great Tit		25	341	638	341	663	1004
Treecreeper		8	6	149	6	157	163
Chaffinch Greenfinch		4 1	28	224 3	28	228 4	256 4
Bullfinch		1	3	141	3	142	145
Reed Bunting		24	77	850	77	874	951

	pullus	full-grown	
2019 TOTALS	27	460	
1972 – 2019 TOTALS	6018	13828	
GRAND TOTAL OF ALL SPECIES RINGED	6045	14288	20333

Cetti's Warbler - The story of a successful addition to British Avifauna

'It assaults you from dense cover with a robust, abrupt and riveting song, slips surreptitiously away unseen and then suddenly erupts into a loud burst of clear notes' (Simms 1985).

The daytime song is a loud series of clearly defined notes that starts and finishes abruptly and lasts between two and five seconds. Territorial males also have a nocturnal song that begins in the early hours and continues until dawn. It is delivered from a fixed song perch and with greater frequency than daytime song. It elicits no response from other males and is thought to advertise the territory to unmated females. It is given in England by both single and mated males. In autumn and winter, a quieter less energetic sub-song is given with reduced frequency. Song is delivered from regularly used song posts (often 100-250m apart) as the bird moves around its territory, typically with a long pause between each burst (Kennerley and Pearson 2010).

Found in thick vegetation from reed bed margins to poplar and willow carr, bramble, blackthorn, willowherb, sedge, meadowsweet, nettle, etc., usually near water or marshy land (Baker 1997). The birds are mainly associated with marshy scrub or *Salix* carr but seem able to adapt to a wide range of habitat structures from low dense scrub to tall trees forming a closed canopy, providing the scrub remains (Fuller 1982).

Cetti's Warbler, which used to be regarded as a sedentary species, first began to spread north soon after 1920 during a particularly warm phase of the amelioration which continued through the 1930s. This was noticed first of all in the west of France, reaching the Seine basin by 1932. In south-east France a similar northward expansion took place up the Rhone valley. Their advance was slowed down between 1940 and 1952, a period during which there were several hard winters, but it resumed in earnest soon afterwards. By 1960 they had colonised the north coast of Brittany and reached the Channel Islands (Burton 1995).

The first British record was of a singing bird on 4 March 1961 at Titchfield Haven, Hampshire. The bird remained until at least 10 April and was mist-netted on 19 March (Palmer 2000).

British breeding was first confirmed at Stodmarsh, Kent in 1973. As part of its rapid expansion in range, the species became established at Wicken Fen for five years, 1980-84 with up to four males.

The total British population in 1984 was estimated to be 316 singing males, mostly in North Kent and in East Anglia and in marshes on the South Coast. Those at a number of eastern sites, however, were decimated in the harsh 1984/85 winter. A succession of mild winters in the late 1980s and early 1990s enabled the numbers in Britain to rise again to over 300 singing males. Most of the increase has, however, been in south-west England and South Wales, where climatic conditions are more suitable for winter survival (Friday 1997).

Various authors have provided examples of polygamy in Cetti's Warbler, the male sometimes having three or four females. Some Cetti's Warblers have second broods (BTO Bird Facts).

Post-juvenile movements mainly take place from September with females moving further than males (Robinson *et al* 2007). There is very little movement after birds have become established as breeders (Redfern & Alker 2002). In Cetti's Warbler the species is dimorphic, males being longer winged, they are heavier than females throughout the year.

The first Cheshire record was of a bird trapped at Frodsham on 20 April 1984. The occurrence at Rostherne Mere of a singing bird at Shaw Green Willows on 8 and 9 May 1989 constituted the second record.

Ringing proved invaluable with the first proven Cheshire breeding at Oxmoor local nature reserve, Runcorn in 2009 (Norman 2009) closely followed by Rostherne Mere in the ensuing year with male and brood-patched female (she had been ringed with a scheme ring and colour rings as a juvenile on 18/07/09 at Upton Warren, Droitwich, Worcestershire) caught plus a freshly-fledged juvenile (Calvert 2010).

A period of apparent absence at Rostherne over ensuing years was broken when a young female was trapped on 26 September 2015 near the Whitley hide.

No activity was reported in either 2016 or 2017 but an unaged female was trapped on 17 October 2018, again by the Bittern hide (site of former Whitley hide). This occurrence marked the first of 13 records to 24 November. The majority of accounts referred to a single bird calling in the reed bed near the Boathouse although two were noted on 20 November, the additional bird being near the Bittern hide.

2019 began with evidence of a bird near the boathouse on 1 January followed by one at the Bittern hide on 22 February. March produced seven days of singing which continued through April and May, recorded on 22 days.

Calling was heard from the Boathouse and Bittern hide on 29 August; there were 14 records in October, 6 in November and 7 in December. Singing was heard from 3 birds in separate locations on 22 and 24 November and 17 December.

Ringing again had a part to play commencing with a singing male at Penny Croft caught on 28 March, this individual being retrapped at Old Boathouse reeds (below Wood Bongs) on 7 May and at Blackburn's Brook bridge on 30 June and 14 September. Six juveniles (mostly females) were caught and ringed between 26 June and 18 September (five at Shaw Green Willows – Long Pasture, one at Old Boathouse reeds). An unaged singing male was caught by the Bittern hide on 17 October.

Nesting on the reserve in 2019 was proven and clearly successful. Differences in the shade of pink in the legs of juveniles strongly suggested that at least two broods were involved. During the year eight birds were ringed, including an adult male and at least six juveniles, mostly females.

2020 was a year of even more activity. The species was recorded on 89 days with one to two birds singing from reeds near the Boathouse and the Bittern Hide from January to March. During June, four birds were singing with Blackburn's Bridge and Dolls Meadow adding to the previous two locations. This was surpassed in September when an amazing seven birds were singing around the Mere on 16th with the first record of a bird in Gale Bog. There was a total of 32 records from September to November reflecting the spread of juveniles around the Reserve with four recorded on another two dates. However, there were only four records in December with the last on 22nd.

Mist-netting came into play on 23 March (the day before the big lockdown) when the male from 17 October was retrapped between the Bittern hide and Blackburn's Bridge; this bird was caught again near the Bittern hide on 22 December. A new singing male was netted near the Bittern hide on 9 June and retrapped in the Long Pasture reedbed two days' later.

The next encounter was of a juvenile (probably female) at the Bittern hide on 10 July. This reappeared at the field edge of the Old Boathouse reed bed on 6 August. On 13 July the ringers were surprised to pick out a juvenile (female?) from the reed bed fronting southern Mere Covert. An adult female in extreme wing and tail moult was caught near the small pond at SGW on 22 July; it was found below Long Pasture on 20 August with moult completed and rehandled again by the Bittern hide on 16 September (see Cetti's Warbler in moult on page 64).

An adult female was caught at the mere edge below Old Hall Wood on 10 August. A young female was netted on 14 August in the reeds below Penny Croft and she reappeared alongside Blackburn's Bridge on the 20th.

29 August was a special day for John Adshead as he caught and ringed three young Cetti's Warblers within two hours: one bird was near the SGW pond and the other two near Blackburn's Bridge; one from the latter site, a male, was re-encountered by the small pond on 16 September.

An adult male was caught below Old Hall Wood on 10 September, recaught at Old Boathouse reeds on 16 September and discovered by the Bittern hide on 4 November.

Ten new birds have been ringed and a further bird from 2019 caught on the reserve in 2020: of the five adults, 3 were males, 2 were females; at least one of the six juveniles was male (the others all or mainly female). Another positive breeding season was achieved.

One of last year's young females from near Blackburn's Bridge has been found nesting elsewhere:

AZB7774 18/09/19 3F Rostherne Mere R 20/06/20 Tewin Bury Farm, Welwyn, Hertfordshire

In recent times Cetti's Warblers have become established elsewhere in Cheshire. Two were ringed at Pickmere in 2019, one of which, a male, was retrapped there in 2020 together with an adult female and eight juveniles. The species is frequently reported from Wincham, Marbury Park (first recorded on 31st December 2015), Woolston Eyes, Burton Mere Reserve, Burton Marsh and Frodsham.

Eight apparent passage birds were caught and ringed on Knutsford Moor in September/October 2017-19. Another Knutsford bird, trapped in September 2016, had been ringed at Old Moor, South Yorkshire in the previous July as a young female.

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Malcolm Calvert

Cetti's Warbler in Moult

An adult female Cetti's Warbler (AHF0849) was mist-netted in Shaw Green Willows on 22 July 2020 in extreme wing and tail moult. At recapture in the long pasture reed bed on 20 August this bird was found to have completed its moult. It was trapped again near the Bittern hide on 16 September.

The wing length (longest primary on second handling) of 57 mm and the comparatively light weights of 13.6, 12.9 and 12.0 grams supported the identification of female.

Malcolm Calvert



Female Cetti's Warbler in moult on 22nd Jul 2020, © Malcolm Calvert.



Completed moult on 20th Aug 2020, © Malcolm Calvert.

The Butterfly Report 2020

This report details the results of butterfly surveys undertaken during 2020 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 seventh after a 10-year gap.

COVID-19 restrictions had a significant impact upon the survey in 2020, as the Reserve was completely closed from 23rd Mar until 7th Jun. The majority of surveying was undertaken by Sheelagh Halsey in 2020 and many thanks to Sheelagh for all her efforts and excellent photographs.

Species	2020	2014-19	2020	2014-19
	Records	Range	(max/day)	Range
				(max/day)
Small Skipper	73	2-27	26	1-6
Large Skipper	25	8-17	6	3-8
Brimstone	2	1-6	2	1-2
Large White	38	8-31	9	2-14
Small White	499	7-132	123	2-39
Green-veined White	312	322-454	51	65-79
Orange-tip	0	32-134	0	9-42
Purple Hairstreak	4	1-6	4	1-4
Small Copper	2	1-4	1	1-2
Common Blue	0	5-34	0	2-5
Holly Blue	2	1-5	1	1-5
Red Admiral	19	15-75	4	4-22
Painted Lady	0	1-37	0	1-13
Small Tortoiseshell	33	5-70	10	1-12
Peacock	76	15-124	25	3-20
Comma	21	4-48	5	1-16
Speckled Wood	211	186-375	46	22-52
Gatekeeper	243	88-251	55	27-124
Meadow Brown	1286	535-1098	318	188-201
Ringlet	3		2	

The survey commenced on Survey Week 10 (7th Jun) and ran until Survey Week 26 (28th Sep). This provided a total of 17 weeks of recording compared with the usual total of 26 weeks. Subsequently, many of the early butterflies were missed, especially Orange Tip. The range of results from 2014-19 are shown but any comparisons with the 2020 data should obviously be treated with caution.

There was a total of 2849 butterfly records with an average of 168 per week over 17 weeks. This represents a marked increase in comparison to 2019 (2386 records with an average of 92 per week over 26 weeks) and the highest since the survey recommenced in 2014. It should be noted that Orange Tip, Common Blue and Painted Lady were not recorded at all in 2020.

A total of 17 species were recorded with Ringlet seen for the first time. The commonest butterfly in 2020 was once again Meadow Brown with 1286 records (1098 in 2019). However, it was an amazing year for Small White with 499 records, pushing Green-veined White into third place (312 records).

The 5 commonest butterflies for years 2020, 2019 and 2018 are shown below.

	2020			2019		2018
1 st 2 nd 3 rd 4 th 5 th	Meadow E Small Whir Green-veil Gatekeepe Speckled V	te ned White er		Meadow Brow Green-veined V Gatekeeper Speckled Wood Orange Tip	White	Meadow Brown Green-veined White Speckled Wood Small White Gatekeeper
Year	We	eeks	Butterf	ly Total	Butterfly Avera	age/Week
2014	24		2112		88	
2015	26		2023		78	
2016	26	i	1629		63	
2017	26	i	1500		58	
2018	24		1572		66	
2019	26	i	2386		92	
2020	17		2849		168	
Date 17/07/	•	ghest Count 6		Date 28/09/2020	Lowest Count 7	

Details of the species recorded in 2020 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.

There were an amazing 73 records during the year compared to only seven last year. The first records were four seen on 20th Jun. The maximum count was 26 on 17th Jul. They were seen on six of the 15 transects. These were along the permissive path through Church Field, across Mere Field, the path along the Hawthorn Hedge in Shaw Green, Long Pasture and Penny Croft, around the unimproved grassland around Gale Bog and through Doll's Meadow. The last record was a single on 7th Aug. At every opportunity they were photographed from the front to check for Essex Skipper which was seen in Cheshire at several locations in 2020. Essex Skippers possess black tips on the end of the antennae. All specimens examined were confirmed as Small Skippers.



Small Skipper, © Sheelagh Halsey.



Small Skipper, examination of the antennae, © Sheelagh Halsey.



Small Skippers mating, © Sheelagh Halsey.

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 25 records in 2020 (17 in 2019, 12 in 2018 and 14 in 2017). The first record was four seen on 7th Jun. The highest count was six seen on 15th Jun. Large Skipper was seen on six transects including the path across Mere Field, the path along the Hawthorn Hedge in Shaw Green, the path along Blackburn's Brook in Shaw Green, Long Pasture and Penny Croft, around the unimproved grassland around Gale Bog and through Doll's Meadow. The last record was one on 1st Jul.

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 two records with one seen on the path along the Hawthorn Hedge in Shaw Green and another seen in Penny Croft on 24th Jun. Brimstone is often recorded as it emerges from hibernation in early spring and there were no surveys until 7th Jun, so early records were missed.

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 38 records of Large White. The range from 2014-19 was 8 to 31. The first record was a single seen on the Sprout Field on 20th Jun. Nine were seen on 31st Jul. The last record was two seen on the Sprout Field on 13th Sep.

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.

There were an amazing 499 records of Small White surpassing the previous record of 395 in 1976! (2014-19 range was 7 to 132). The species was recorded from 20th Jun to 28th Sep and was the second commonest seen on the Reserve. The largest day count was 123 on 17th Jul. The majority of records were from the Sprout Field near the Natural England car park. The field was sowed with Oilseed Rape but also contained many wildflowers including a large patch of Scented Mayweed.



The Sprout Field in Jul 2020, © Bill Bellamy.



The Sprout Field in Aug 2020, © Phil Dell.



Small White, © Sheelagh Halsey.

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. However, it was pushed into third place in 2020 by Small White (see above). There were 312 records (378 records in 2019). The highest day count was 51 on 22nd Jul. Double figure counts on individual transects ranged from 10 to 15. The highest counts were from Doll's Meadow.

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 four records in 2020 matching 2019 which represents the normal frequency of sightings. All records were made on the same day with two seen in the canopies of oaks in both Wood Bongs and in Shaw Green.

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).

Small Copper continues to be a rare butterfly at Rostherne. There were only two records in 2020. One was seen on the permissive path along Church Field on 11^{th} Aug and another on the boardwalk near the Bittern Hide on 20^{th} Sep.



Small Copper, © Sheelagh Halsey.

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 two records of Holly Blue. Singles were on Doll's Meadow on 7th and 11th Aug.

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 19 records of Red Admiral. The range from 2014-19 was 15 to 75. The species was recorded from 7th Jun to 13th Sep. The highest day count was four on 13th Sep. The species was seen in five of the 15 transects.

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 33 Small Tortoiseshell records in 2020. The highest day count was 10 on the first day of the survey on 7th Jun when four were seen on the Sprout Field and three in Penny Croft.

Peacock (Inachs 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 a good year for Peacock with 76 records. The range from 2014-19 was 15-124. An early record was of one near the Bittern Hide on 17th Mar just before the Reserve was closed. The highest day count was 25 on 22nd Jul. Eleven were seen in the Penny Croft and the foot of Long Pasture on 22nd Jul. Peacock was seen in seven of the 15 transects.

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 21 records of Comma, 28 in 2019. It was recorded from 20th Jun to 28th Sep. Additional late records included three on 5 Oct and two on 11 Oct. Two were often seen near the Bittern Hide. The highest day count was five on 10th Jul.

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 fifth commonest species recorded, dropping one place from 2019. There were 211 records. The range from 2014-19 was 186-175. The highest day count was 46 on 20th Aug. There were six on the permissive path along Church Field and six in Wood Bongs. Speckled Wood was recorded on each of the 15 transects surveyed making it the most widespread butterfly on the Reserve.

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, dropping one place compared with 2019. There were 243 records. The range from 2014-19 was 88 to 251. The species was first seen on 1st Jul (4th Jul in 2019). It was last seen on 20th Aug (13th Aug in 2019). The maximum day count was 55 on 11th Aug. High counts on single transects included 25 on the permissive path along Church Field on 11th Aug and 21 in Penny Croft on 22nd Jul.

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 2020. There was a total of 1286 records setting a new high since 2014. The range was 535 to 1098 from 2014-19. The grass meadows in transects 1, 3, 6 and 12 provide a good habitat for the species. It was first seen on 7th Jun during the first survey and some of the early records might have been missed in 2020. The last records were on 20th Aug. T12 (grassland

around Gale Bog) posted the highest numbers with 150 recorded on 24th Jun. The highest individual day count for the whole site was a notable 318 on the same date.

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 if extending its range northwards. Single-brooded flying from mid-June to early August.

Ringlet was recorded on the Reserve for the first time in 2020 by Sheelagh Halsey. There were four records in total. One was seen on the permissive path at the top of Wood Bongs and another in Mere Field on 1st Jul. Another was seen in Mere Field on 10th Jul and one in Penny Croft by Bill Bellamy on 16th Jul.



Ringlet, © Sheelagh Halsey.



Ringlet, © Sheelagh Halsey.



Ringlet, © Bill Bellamy.

Dragonflies and Damselflies Survey 2020

Dragonflies and Damselflies were surveyed for the fifth year. The survey was impacted by COVID-19 restrictions with visits not commencing until 7th Jun. However, the survey was not as affected to the same extent as the Butterfly Survey as many species of dragonfly and damselfly emerge much later in the year than many butterflies.

There were 19 visits in total from 7th Jun until 11th Oct. 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	07/06	11:40	2	16°C, 6/8 cloud, light breeze
2	09/06	11:00	2.5	17°C, 6/8 cloud, light breeze
3	15/06	10:00	2.5	22°C, 4/8 cloud, calm
4	24/06	10:15	2	26°C, 0/8 cloud, calm
5	01/07	14:30	2.5	20°C, 6/8 cloud, moderate breeze
6	10/07	14:00	1.5	15°C, 5/8 cloud, strong breeze
7	17/07	11:00	2.5	21°C, 7/8 cloud, calm
8	21/07	11:00	3	19°C, 6/8 cloud, light breeze
9	31/07	10:45	2	30°C, 0/8 light breeze
10	07/08	10:45	2	26°C, 6/8 cloud, light breeze
11	11/08	11:30	2.5	28°C, 3/8 cloud,calm
12	20/08	10:45	2	20°C, 4/8 cloud, moderate breeze
13	28/08	14:00	1.25	17°C, 7/8 cloud, moderate breeze
14	08/09	10:30	1.75	20°C, 7/8 cloud, calm
15	13/09	12:45	1.75	23°C, 1/8 cloud, light breeze
16	18/09	12:30	2	19°C, 1/8 cloud, moderate breeze
17	28/09	12:00	1.25	14°C, 7/8 cloud, calm
18	05/10	11:45	1	15°C, 4/8 cloud, light breeze, some rain
19	11/10	13:00	1.25	12°C, 4/8 cloud, light breeze

Table 1 Visit Details.

Species Years	2016	2017	2018	2019	2020
Azure Damselfly	383	1243	190	65	28
Blue-tailed Damselfly	544	299	249	218	203
Large Red Damselfly	7	16	31	7	10
Banded Demoiselle	44	22	23	6	12
Common Blue Damselfly	610	635	712	1320	868
Broad-bodied Chaser	2	5	3	2	1
Four-spotted Chaser	1	1	1		
Black-tailed Skimmer	13	21	18	23	16
Common Darter	77	20	49	20	12
Brown Hawker	54	75	39	62	38
Southern Hawker	14	12	19	7	5
Emperor	3	9	3	11	6
Migrant Hawker	35	44	38	48	49
Ruddy Darter			1	15	
Total No. of Species	13	13	14	13	12

Table 2 Collated Records 2016-2020.

Species Visits	1	2	3	4	5	6	7	8	9	10
						(no T15)				
Azure Damselfly	5+	10+	5+	5+	1	2				
Blue-tailed Damselfly	35+	40+	60+	15+	35+	5+	5+	3	2	
Large Red Damselfly	1	6	1	2						
Banded Demoiselle	1	5	2	1	1	1			1	
Common Blue Damselfly	60+	70+	140+	220+	100+	30+	60+	60+	35+	60+
Broad-bodied Chaser	1									
Black-tailed Skimmer		2	1	4	1		2	1	1	2
Common Darter										2
Brown Hawker				1	1	2	5	1	8	9
Southern Hawker						1				
Emperor				1	1		1		1	1
Migrant Hawker										1

Table 2 Species Counts.

Species V	isits 1	1	12	13	14	15	16	17	18	19
Azure Damselfly										
Blue-tailed Damselfly	1			1						
Large Red Damselfly										
Banded Demoiselle										
Common Blue Damself	iy 2:	5+	6	2						
Broad-bodied Chaser										
Black-tailed Skimmer	2									
Common Darter	1				3	3	1	2		
Brown Hawker	7		2							
Southern Hawker			1			2	1			
Emperor	1									
Migrant Hawker	1		5	1	9	10	9	4	2	7

Table 2 Species Counts (continued).

Species Vi	sits Transect	
Azure Damselfly	4, 5	
Blue-tailed Damselfly	1, 4, 5, 6, 15	
Large Red Damselfly	4, 5, 15	
Banded Demoiselle	4, 5, 6	
Common Blue Damself	y 1, 3, 4, 5, 6, 15	
Broad-bodied Chaser	6	
Black-tailed Skimmer	4, 15	
Common Darter	3, 4, 15	
Brown Hawker	1, 3, 4, 5, 6, 15	
Southern Hawker	1, 5, 15	
Emperor	1, 4	
Migrant Hawker	1, 3, 4, 5, 15	

Table 2 Species Counts (continued).

Visits	Total no. species per visit
1	6
2	6
3	6
4	8
5	7
6	6
7	5
8	4
9	6
10	7
11	7
12	4
13	3
14	2
15	3
16	3
17	2
18	1
19	1

Table 3 Total no. of Species Per Visit.

Observatory/Boathouse (T1)	Blue-tailed Damselfly	mating
	Brown Hawker	ovipositing
Bittern Hide (T4)	Common Blue Damselfly	ovipositing
	Black-tailed Skimmer	mating
	Common Darter	mating
	Migrant Hawker	mating
Shaw Green Willows pond (T5)	Azure Damselfly	ovipositing
	Blue-tailed Damselfly	mating
Penny Croft (T6)	Blue-tailed Damselfly	mating
	Common Blue Damselfly	mating
Dolls Meadow Mere Edge (T15)	Blue-tailed Damselfly	mating
	Common Blue Damselfly	ovipositing
	Common Darter	mating

Table 4 Observations on reproduction.

There was a total of 12 species recorded during the survey which is the lowest since the it began in 2016 and one less than last year. Four-spotted Chaser was not recorded in 2020 or 2019. In addition, Ruddy Darter was not seen in 2020 after it was seen in 2018 and 2019. Numbers of the majority of species were the lowest since the survey began. The pond in Shaw Green Willows is becoming overgrown which marginal vegetation probably restricting the habitat available.

Azure Damselfly (Coenagrion puella)

The Azure Damselfly was seen on six visits from 7th Jun until 10th Jul. The highest counts for the year were only 10+ on 9th Jun which are the lowest since the survey began in 2016. All sightings were in Shaw Green Willows (T4 and T5). The species was seen ovipositing near the ponds in Shaw Green Willows (T5).



Azure Damselfly (male), © Sheelagh Halsey.

Blue-tailed Damselfly (Ischnura elegans)

A total of 203 were recorded in 2020 which represents the lowest since the survey began in 2016. The species was seen on 12 visits from 7th Jun until 28th Aug. The highest count was 60+ on 15th Jun which was higher than last year (50+). It is a common species recorded from most of the areas surveyed. It was seen mating on near the Boathouse (T1), Shaw Green Willows (T5), Penny Croft (T6) and along the edge of the mere in Dolls Meadow (T15).



Blue-tailed Damselflies (copulating), © Sheelagh Halsey.

Large Red Damselfly (Pyrrhosoma nymphula)

The Large Red Damselfly is usually the first damselfly to be seen flying and earlier records were probably missed due to COVID-19 restrictions. The species has a short flight period. It was recorded from 7th until 24th Jun. The highest count was six on 9th Jun. It was seen in Shaw Green Willows (T4 and T5) and along the edge of the mere in Dolls Meadow (T15).

Banded Demoiselle (Calopteryx splendens)

It was a better year for Banded Demoiselle compared to 2019. There were 12 records in 2020 (only six in 2019). It was seen on seven visits from 7th Jun until 31st Jul. Five were seen on 9th Jun. The species was recorded from Shaw Green Willows (T4 and T5) and Penny Croft (T6).



Banded Demoiselle (male), © Sheelagh Halsey.

Common Blue Damselfly (Enallagma cyathigerum)

Once again, Common Blue Damselfly was the commonest damselfly seen on the Reserve. There were 868 records in 2020 which represents an average showing (range 610 to 1320 from 2016-19). The species was recorded from 7th Jun until 28th Aug. The highest day count was 220+ on 24th Jun. The species was seen on all transects. It was seen mating in the Penny Croft area (T6) and ovipositing in Shaw Green Willows (T4) and along the edge of the mere in Dolls Meadow (T15).

Broad-bodied Chaser (Libellula depressa)

There was only one record of Broad-bodied Chaser in 2020. The species is only seen in low numbers on the Reserve with a range two to five from 2016-19. One was seen on 7th Jun in the Penny Croft area (T6).

Black-tailed Skimmer (Orthetrum cancellatum)

There were 16 records in 2020 which represents an average showing. The range was 13 to 23 from 2016-19. It was recorded from 9th Jun to 11th Aug. The highest count was four on 24th Jun. It was found near the Bittern Hide (T4) where it was seen mating and along the edge of the mere in Dolls Meadow (T15).

Common Darter (Sympetrum striolatum)

It was a very poor year for Common Darter. There were only 12 records in 2020 compared to range 20 to 77 from 2016-19. It was first seen on 7th Aug and last recorded on 28th Sep. Counts only ranged from 1 to 3. It was seen mating in Shaw Green Willows (T4) and along the edge of the mere in Dolls Meadow (T15).



Common Darter (female), © Sheelagh Halsey.

Brown Hawker (Aeshna grandis)

Last year Brown Hawker was the commonest dragonfly recorded at Rostherne with 62 records. However, it was pushed into second place in 2020 with 38 records. It was first seen on 24th Jun. The highest day count was nine on 7th Aug. It was last recorded on 20th Aug. It was recorded on all transects. It was seen ovipositing near the Boathouse (T1).

Southern Hawker (Aeshna cyanea)

There were only five records in 2020 which represents the poorest showing since 2016. It was first seen on 10th Jul and the last record was 18th Sep. Two were seen on 13th Sep. It was found on three transects, near the Boathouse (T1), Shaw Green Willows (T5) and Doll's Meadow Mere Edge (T15).



Southern Hawker (male), © Sheelagh Halsey.

Emperor Dragonfly (Anax imperator)

Britain's largest dragonfly has been spreading north in recent years and was first recorded at Rostherne in 2016. There were three records in 2016, nine in 2017, three in 2018, 11 in 2019 and six in 2020. All the records were of single dragonflies from 24th Jun to 11th Aug. It was seen in two areas, near the Boathouse (T1) and near the Bittern Hide (T4).

Migrant Hawker (Aeshna mixta)

Migrant Hawker was the commonest dragonfly recorded at Rostherne in 2020. There were 49 records which is the highest for the species since the survey began and one more than last year. Migrant Hawker is usually the last dragonfly to be recorded on the Reserve and was seen from 7th Aug until 11th Oct. The highest day count was 10 on 13th Sep. It was found in all areas surveyed except around Penny Croft (T6). It was seen mating in front of the Bittern Hide (T4).



Migrant Hawker (male) © Sheelagh Halsey.