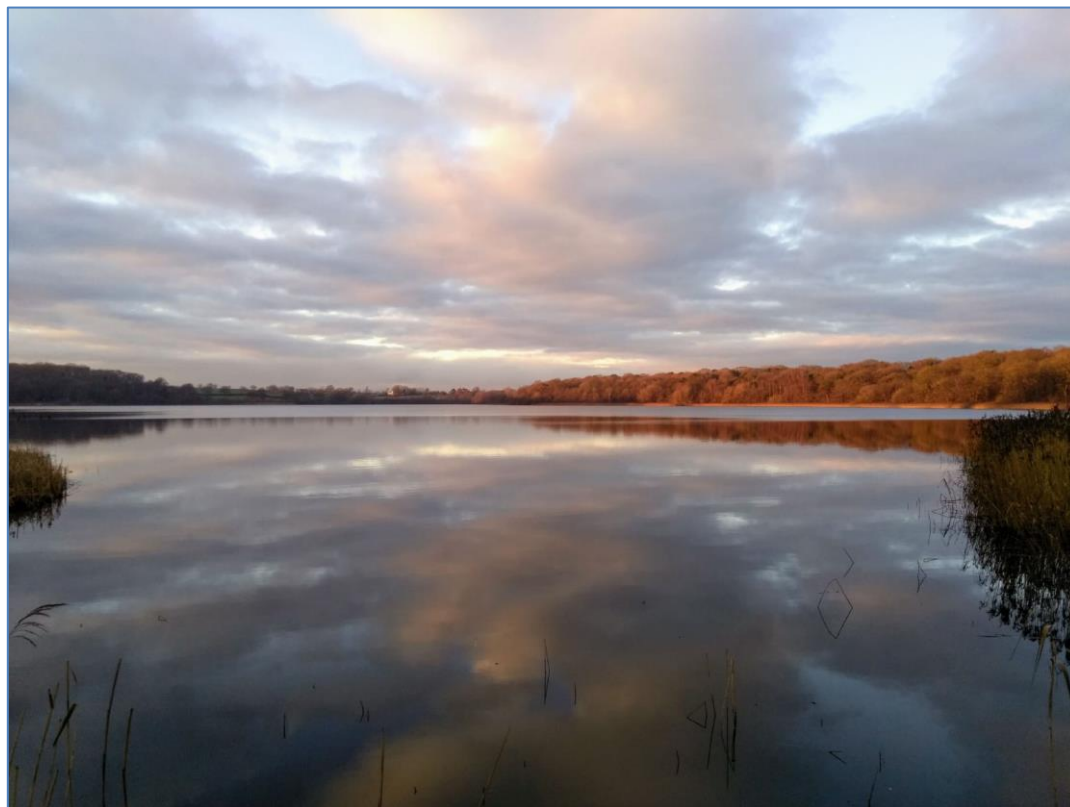


ROSTHERNE MERE NNR BIRD REPORT 2019



CONTENTS

Page 2	Introduction
Page 4	Summary of the Year
Page 9	Systematic List 2019
Page 59	Ringling Totals
Page 61	Common Birds Census
Page 67	Early and Late Dates at Rostherne
Page 68	The Butterfly Report 2019
Page 75	Dragonflies and Damselflies at Rostherne Mere NNR in 2019

Compiled by Dr Bill Bellamy

Introduction

Welcome to the Rostherne Mere NNR Bird Report 2019.

This report is dedicated to Rob Wang who very sadly passed away on 25th Apr 2020, a truly amazing photographer.

The report is the culmination of all the bird watching efforts of anyone who has visited the Boyd Observatory during 2019 and has kindly taken the time to make log book and tick-list entries. The history of bird recording at Rostherne stretches back just over 130 years and the records are as important as ever in the present, contributing to other publications and academic research.

I would especially like to thank Sheelagh Halsey for her detailed counting and recording of birds, butterflies, dragonflies and damselflies. Thanks to the CBC surveyors (Steve Collins, Phil Dell, Judith Halman, Sheelagh Halsey, Ted Lock and Tony Usher). Phil has also provided the wonderful photo on the cover of the report. Many thanks to Steve and Gill Barber for proofreading the report. Steve also analyses the Common Bird Census (CBC) data and produces the CBC Report each year. I would also like to thank Malcolm Calvert and the ringing team, namely, John Adshead and Jake Gregory for all their contributions. The photographs in the report are of a very high standard and a big thank you to everybody who has sent me copies. It's quite a difficult task choosing which ones to include. Finally, many thanks to the Natural England Reserve Manager, Rupert Randall for all his help.

I would encourage anybody willing to get involved in bird recording activities and other wildlife surveys at Rostherne to please get in contact with me at the following e-mail address bill.bellamy@outlook.com.

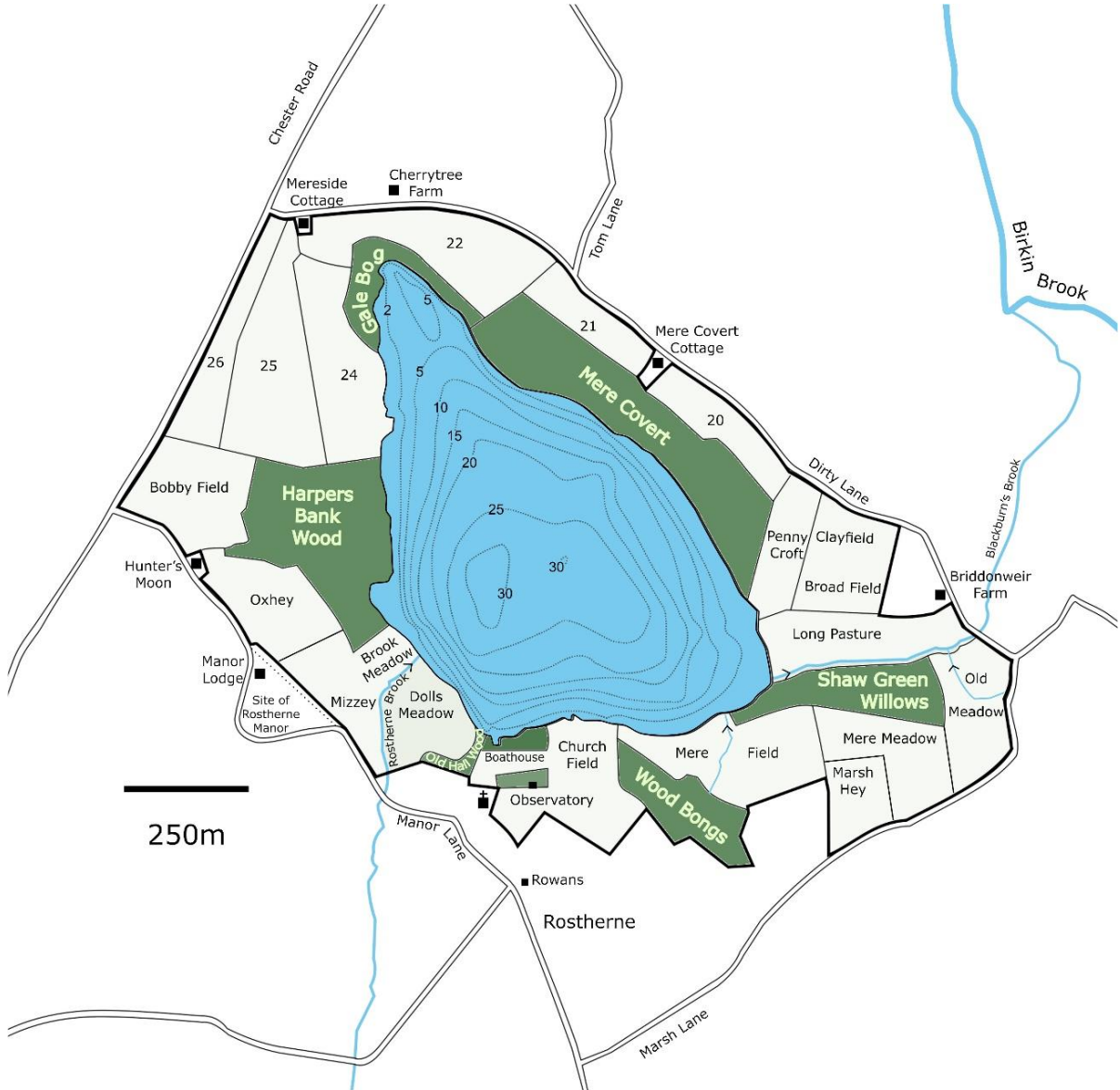
The Rostherne Butterfly Survey was undertaken in 2019 for the sixth consecutive year after an absence of 10 years. Rostherne Mere has been part of the United Kingdom Butterfly Monitoring Scheme (UKBMS) since 1976 and was surveyed by Bryan Roberts and Barry Shaw for many years until 2003. It was reinstated in 2014. The results from the survey are shown on page 68.

Sheelagh Halsey undertook a comprehensive Dragonfly and Damselfly Survey in 2019 for the fourth consecutive year. 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 (2017) which follows the International Ornithological Congress (IOC) World Bird List.

All records and comments in the text refer to birds seen on or over Rostherne Mere National Nature Reserve (NNR) unless stated. It is Wetland Bird Survey (WeBS) policy to include in counts only fledged independent young (i.e. capable of flight and at least $\frac{3}{4}$ adult size). Where possible, this practice has been followed here. Reference is frequently made to CBC-type work undertaken in most areas of the Reserve. For full details of the CBC-type work in 2019 see page 61. References to 'Snipe Marsh' refer to roughly the eastern third of Shaw Green Willows.

In recent years an increasing number of records are being entered directly onto BirdTrack without appearing in either the log book or tick-lists. The log book and tick-lists are therefore in danger of becoming more marginalised as the central reference points for Rostherne bird records. All BirdTrack records which are tagged with Rostherne Mere NNR as the location will be included in the scope of this report, but I would encourage observers to continue to use the log book and tick-lists as the primary recording points. In addition, records were once again posted on the Manchester Birding Forum website in 2019 which are also included in this report.



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 total number of recording days when a tick-list and/or log book entry was made during the year equalled 244 days or 67% of the days in the year, matching last year's rate.

A total of 123 different bird species were recorded.

Numbers of Canada Geese were the highest since 2008. They bred and two broods were recorded in Jun, 36 birds stayed to moult and numbers peaked at c500 in Sep. The monthly maxima of Greylag Geese were the highest since 2005, 45 birds moulted on the Reserve and numbers peaked at 120 in Jul. Disappointingly the resident pair of Mute Swans failed to breed after last year's success. Eight Whooper Swans landed on the Mere in Nov and there were 18 records of Egyptian Geese with up to five coming into roost during Sep and Oct evenings.

Mandarin Duck monthly highs were the highest on record. They peaked at 44 in Sep. The species bred just off the Reserve. It was a poor year for wintering wildfowl with numbers of Shoveler, Gadwall and Wigeon down. Both Mallard and Teal posted the lowest counts on record. Twenty Goldeneye were logged in Feb and Mar. Common Scoter was recorded on four days

The Goosander monthly maxima were the highest since 2013 with up to 15 birds flying into roost during the evenings. Three Grey Partridge were seen in Bobby Field, the first account since 2009. The Pheasant count peaked at 43 in Dec and there were a total of seven breeding territories equalling the highest ever recorded. Six Little Grebes were recorded in Dec. There were three broods of Great Crested Grebe and Black-necked Grebe was seen on six days with two seen in Jul. It was another poor year for Bittern records, only one in Oct. A Great White Egret was seen in Sep. It was the best ever showing for Little Egret, reports on 11 days which included a fascinating encounter with a Marsh Harrier in Sep. Fewer Cormorants roosted in the trees on the edge of Harpers Bank Wood outside the breeding season but a total of 176 nests set a new record high for the Reserve.

An Osprey was recorded on 1st Oct, the latest ever record for Rostherne. There were three records of Marsh Harrier and a Red Kite flew over in Feb. Twelve Buzzards were seen circling over in Sep and at least one pair successfully bred on the Reserve. Six Water Rails were heard calling from the reed beds in Jan and Dec. Interestingly, there was evidence of breeding when a young bird incapable of flight was seen in Brook Meadow in Jul. Two Moorhen chicks were seen in front of the Bittern Hide in Jul and Aug. Coot numbers were low peaking at 56 in Aug. However, five broods with a total of eight young were recorded.

Waders included Oystercatcher, Lapwing, Golden Plover, Curlew, Woodcock, Jack Snipe, Snipe, Common Sandpiper, Green Sandpiper, Redshank and Greenshank. Around 400 Lapwings were seen rising from the fields north of the Reserve in Jan. A Golden Plover was calling over the Churchyard during an Oct evening. Woodcock was seen in Penny Croft but only on two days. A Jack Snipe was flushed with 18 Snipe in Oct and there were two in Dec, the first records since 2009. Around 50 Snipe were recorded in Nov, the highest count since 2000! Disappointingly, there was only one record of Common Sandpiper and one of Green Sandpiper. However, the sandbar at the mouth of Rostherne Brook was often submerged restricting

wader habitat. Both Redshank and Greenshank were heard calling around the Reserve on single days in Sep and Aug respectively.

Around 3000 Black-headed Gulls were seen in the roost in Jan. There were two records of single Mediterranean Gulls. Common Gull numbers were low with only two double figure counts. Two Great Black-backed Gulls were seen in the roost on several days in Feb. The highest Herring Gull count was 31. It was a very good year for records of Caspian Gull. There were nine in total with two seen in the roost during Feb. There were 12 records of Yellow-legged Gull with up to three seen on three dates. Around 250 Lesser Black-backed Gulls were logged in Nov.

During the morning of 8th May around 30 'Commic Terns' including two Common Terns and eight Arctic Terns provided amazing views as they fed on emerging flies. This was the largest reported gathering since May 1974!

Pairs of Stock Doves bred in three of the Barn Owl boxes and three territories were plotted in Harpers Bank Wood. Around 300 Woodpigeons were seen roosting in Harpers Bank Wood in Oct.

Barn Owls were often seen hunting in the field near Marsh Lane. A pair bred again in the Mere Field box producing six chicks, unfortunately it is thought that only one survived. Tawny Owls were recorded on 24 days with two juveniles heard calling in Wood Bongs. Little Owl was recorded near Shaw Green farm on ten days with two seen on several dates from Feb to Mar.

Around 100 Swifts were seen feeding over the Mere in Jun. A Kingfisher was caught in Shaw Green Willows, the 12th to be ringed.

One of the highlights of the year was the confirmation of breeding Lesser Spotted Woodpeckers with both adults and a juvenile seen in May. However, only two Great Spotted Woodpecker territories were plotted, the lowest total since 2000. Furthermore, it was a poor year for Green Woodpeckers which were only seen on 17 days.

Once again, a pair of Kestrels bred in the dead Alder near the Boathouse and three juveniles fledged successfully. The activities of the parents providing the hungry juveniles with food was well documented from the Observatory. Hobby was recorded on an amazing 42 dates with two birds seen on 12 days. It was also encouraging to see a Peregrine over the mere on eight dates. It provided excitement in Dec as it flew across the Mere scattering numerous Teal from the margins.

Around 200 Jackdaws roosted in Harpers Bank Wood in Dec. Interestingly, a pair bred in the dead Alder after the Kestrels and there was some fascinating interaction between the two species as they defended possession of the site. It was a good year to see Ravens with 22 records and four birds seen on two dates.

There were around 300 Sand Martins feeding over the Mere in Apr. The highest Swallow flock was around 100 in a mixed flock with c50 House Martins.

The results from the CBC-type surveys showed that the number of breeding territories for Coal Tit, Long-tailed Tit, Nuthatch, Treecreeper and Dunnock were stable, while Wren, Robin, Chaffinch and Reed Bunting were up. Blue Tit, Great Tit and Song Thrush were slightly down but Blackbird showed a greater decline.

It was an amazing year for Cetti's Warbler with 76 records. It is thought that two separate broods fledged near the Bittern Hide and six juveniles were ringed during the year. It was a good year for Reed Warblers and Sedge Warblers. An estimated 57 pairs of Reed Warblers bred with 95 juveniles netted of which 59 were new birds.

While it was a poor year for Willow Warbler and Whitethroat breeding territories, there were record breaking highs for Chiffchaff (24 territories) and Blackcap (41 territories). A Grasshopper Warbler was heard in the Snipe Marsh in May, the only record.

A Firecrest was logged in front of the Observatory in Feb, the first record since 2012. Interestingly, nine Goldcrest were caught near the Bittern hide in Sep and there were a record breaking 12 territories plotted on the Reserve.

Around 50,000 Starlings roosted in the reed beds near Shaw Green Willows in early Nov. Once again, the Bittern Hide provided an excellent viewpoint to witness the spectacular evening murmurations.

Fieldfare were only seen on 11 days although around 100 were recorded in Oct. Around 100 Redwings were on Mere Meadow in Dec.

Spotted Flycatcher bred in Wood Bongs for the third consecutive year and family parties were seen on several dates in front of the Observatory.

There were several interesting passage migration records in Oct. A Stonechat was recorded in Bobby Field, the first record since 2012. Around 100 Pied Wagtails were seen on the Sprout Field while 12 Meadow Pipits and 58 Linnets were recorded in Bobby Field. Seven Bullfinch were recorded in Shaw Green Willows and Penny Croft. A Yellowhammer was logged near Cherry Tree Farm in Jul.

The photos below illustrate some of the events of the year. It was an enormous privilege to be one of the volunteers available to present the Dave Clarke Memorial Hide to Dave's family in Aug. Jul brought some very wet weather and the path to the Snipe Marsh became an extension of the outflow from the Mere. Finally, long servitude recognition was given to both Alec Moran and John Dawson in Dec. John first visited Rostherne Mere in 1960 when he was just 16!



The Dave Clarke Memorial Hide presented to Dave's family. Photo Bill Bellamy.



The flooded path to the Snipe Marsh in Jul. Photo Malcolm Calvert.



Alec Moran presented with Tom Wall's recent books on Rostherne Mere. Photo Malcolm Calvert.



John Dawson presented with a Natural England Longest Serving Volunteer Award. Photo Malcolm Calvert.

Systematic List 2019

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).

Canada Goose (*Branta canadensis*)

Regular visitor at all times

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	8/16	19/20	23/24	14/18	10/17	8/14	9/16	12/23	19/27	20/27	6/17	5/25
Monthly max	120	112	35	24	13	36	55	60	c500	c400	6	147

Monthly maxima were the highest since 2008. The Jan count of 120 was the highest since 2010 (266) and the Feb count of 112 the highest since 1996 (163). The Mar count of 35 was the highest since 1993 (55). There were two broods of two and five young which were first seen on 5th Jun. It is thought that at least two birds fledged and they were last recorded on 4th Aug. Thirty-six birds moulted on the Reserve in Jun and Jul which was an increase from 20 in 2018, 14 in 2017. The post-moult numbers started to slowly build up in late Jul with 55 recorded on 22nd and 60 on 8th Aug but this was the lowest Aug count since 2002 (16). However, they increased markedly throughout Sep with 65 on 1st rising to c500 on 23rd. The latter count was the annual maximum and the highest since 641 in Sep 2008. Numbers remained high throughout Oct with c400 recorded on 16th Oct. Numbers then started to decrease rapidly with only two recorded on 28th Oct. There was only one record in Nov when 6 were recorded on 4th Nov. There was a temporary influx in early Dec with 147 and 130 recorded on 4th and 5th, the first three figure counts for the month since 1995 (192), before numbers fell way with the last record of the year of just 17 on 15th.

The graph below shows how numbers of Canada Geese fell in the 1990s as a result of control measures before slightly recovering in the 2000s. Then there was a period of further decline 2014-16 which was reversed in 2017.

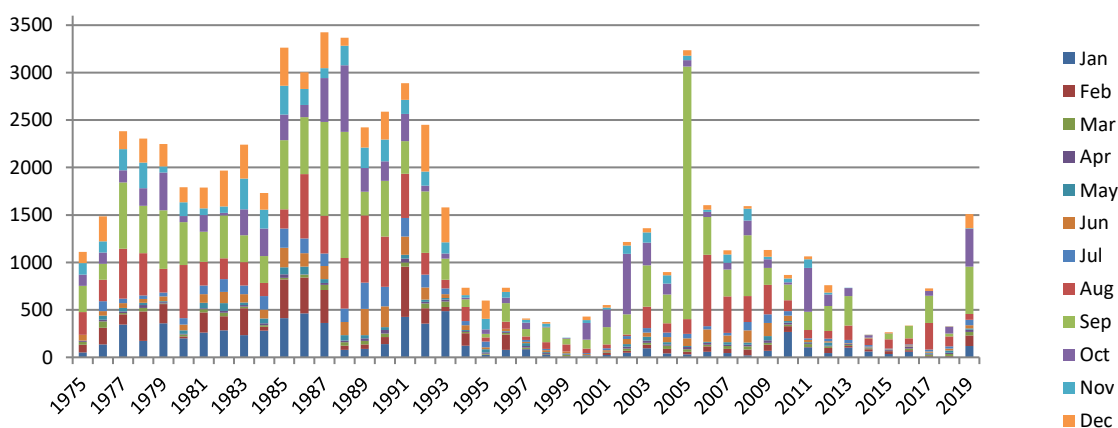


Figure 1 Annual totals of Canada Geese based on monthly maxima 1975-2019.

Greylag Goose (*Anser anser*)

Feral (some possibly wild), irregular visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	9/16	15/20	12/24	9/18	4/17	9/14	11/16	9/23	10/27	13/27	8/17	3/25
Monthly max	60	42	8	12	11	45	120	88	92	60	79	35

Monthly maxima were the highest since 2005. The Jan high of 60 recorded on 25th is the highest on record for the month, as was 42 on 2nd Feb. A leucistic bird was seen within the flock on 9th, 11th, 14th and 22nd Jan. Numbers gradually fell throughout Feb with only 8 recorded by 27th. Monthly maxima ranged from 8 to 12 from Mar to May. Numbers gradually rose throughout Jun and 45 birds moulted from Jun to Jul. More birds arrived in Jul with numbers peaking at 120 on 22nd, the highest number for the month since 260 were recorded in Jul 1992. Maxima remained high in Aug and Sep with 88 and 92 respectively. Sixty were logged on 22nd and 31st Oct, 79 on 6th Nov, the highest since 1995 (156) and 35 on 18th Dec. Although modest by comparison with other months, the Dec count was the highest for the month since 1996 (112).

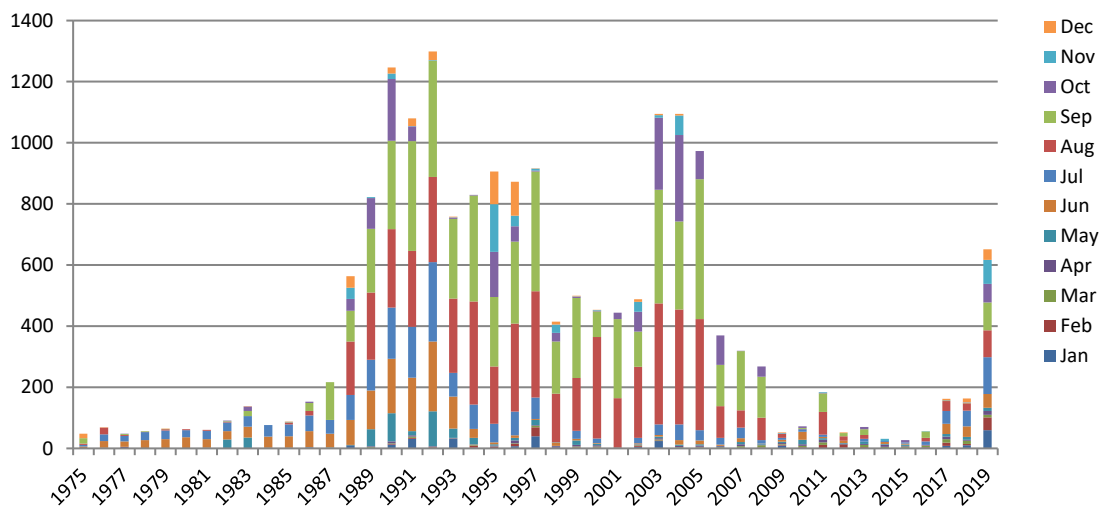


Figure 2 Annual totals of Greylag Geese based on monthly maxima 1975-2019.

Pink-footed Goose (*Anser brachyrhynchus*)

Irregular visitor, skeins Sep-Mar

There were only two records in 2019 (six in 2018, five in 2017 and eight in 2016). Approximately 100 birds were seen flying north on 1st Jan and two skeins of c200 and c300 flew over from north to south on 8th Nov.

Mute Swan (*Cygnus olor*)

Regular visitor at all times, bred in 2018

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	3/16	4/20	12/24	9/18	12/17	8/14	12/16	18/23	18/27	4/27	1/17	3/25

Max nos	3	4	2	3	2	2	3	2	2	2	1	5
---------	---	---	---	---	---	---	---	---	---	---	---	---

It was a disappointing year after the breeding success reported in 2018. A pair was resident for the majority of the year from Jan to Aug. Additional birds flew onto the Mere but didn't stay for long. Totals increased to three on 6th Jan, four on 24th Feb, three on 21st Apr and 10th Jul. The pair journeyed down Blackburn's Brook as far as Briddonweir Farm in Mar but no breeding activity was reported and offspring failed to materialise. One of the pair was left by itself from 12th Sep to 13th Oct. There were only six records made after this date until the end of the year. Three were recorded on 27th and five on 30th Dec.

Whooper Swan (*Cygnus cygnus*)

Uncommon visitor, Sep-May

There were four records in 2019. One visited the Mere on 22nd and 25th Jan. Sixteen flew in from the north and circled the Reserve on 15th Nov but they didn't land, flying off in a southerly direction. However, eight birds did land at 09.10 on 17th Nov. They only stayed for 10 minutes before continuing their southerly journey.

Egyptian Goose (*Alopochen aegyptiacus*)

Uncommon visitor. Presumed escaped or feral birds

The species was recorded on 18 days (32 days in 2018, seven days in 2017 and 15 days in 2016). All of the records were made in the period Sep to Dec. Five birds came into roost during the evenings of 9th and 10th Sep and 1st Oct. Four were recorded on 14th Oct. Two birds were seen in the vicinity of Dolls Meadow on 14 dates from 16th Oct until 23rd Dec.

It is thought that the birds visiting Rostherne are probably part of the breeding feral population which have been reported at Tatton Park.



Egyptian Geese. Photo Sheelagh Halsey.

Shelduck (*Tadorna tadorna*)

Irregular visitor

There were two records in 2019 (three in 2018, four records in 2017 and 10 in 2016). One was seen on 20th Jan and five (three m and two f) on 8th Mar.

Mandarin Duck (*Aix galericulata*)

Irregular visitor, origin unknown, bred in 2018

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	3/16	5/20	16/24	16/18	11/17	4/14	5/16	4/23	7/27	9/27	6/17	7/25
Max nos	10	6	12	6	20	35	31	4	44	25	40	26

The species was recorded on 93 days or 38% of recording days in 2019 (88 days or 36% in 2018, 110 days or 45% in 2017 and 123 days or 50% in 2016). Monthly maxima were the highest on record with five counts above 30, 35 on 3rd Jun, 31 on 10th Jul, 44 on 30th Sep and 40 on 8th and 18th Nov. The highest counts of 44 and 40 were recorded at dusk as birds came into roost near Gale Bog. The annual max of 44 is the joint second highest count on record and the highest since 54 were seen in Jan 2012.

Interestingly, many juvenile birds were seen within the count of 24 birds on 6th and 16th Jul. It is thought that the species bred in four small ponds in woods just off the Reserve beyond Marsh Lane. One was recorded in Shaw Green Willows during the CBC survey. This is only the second ever appearance of the species during the survey with the first being in Old Hall Wood in 2004.

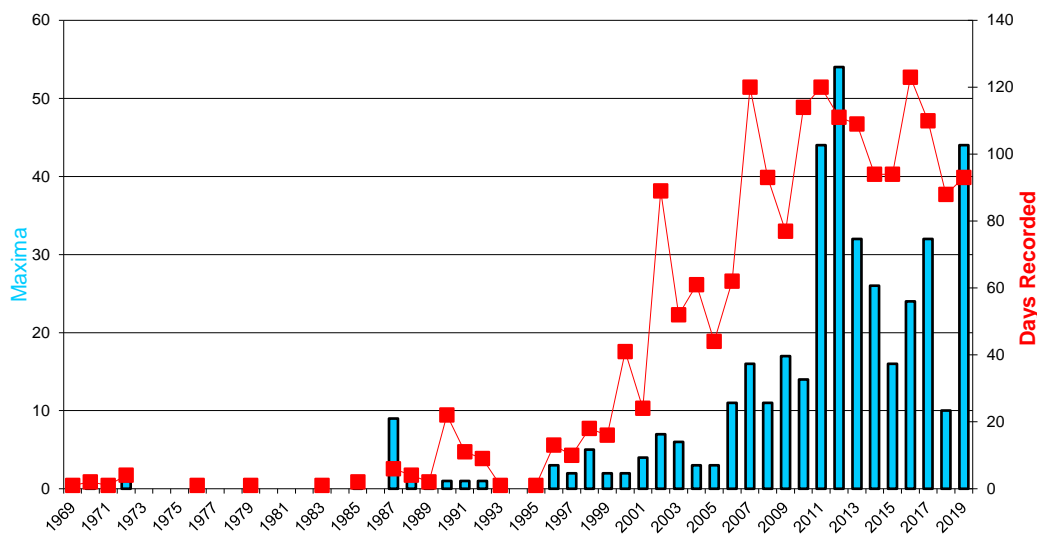


Figure 3 Annual maximum counts of Mandarin Duck 1969 to 2019.



Male and female Mandarin Ducks. Photo Rob Wang.

Shoveler (*Anas clypeata*)

Autumn & winter visitor, has bred

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	2	6		12					30	80	26	20
	2	1							22	29	60	
	3	3	12	4					90	16	17	
		13	11	2				6	48	42	6	22

The numbers of Shoveler decreased compared to 2018. There were only four records in Jan with the highest only 3 (two m and one f) on 20th. This represents the lowest Jan count since 2000 (3). There were five double figure counts in Feb and Mar with highs of 13 and 12 respectively. The count of 12 (9 m and 3 f) on 4th Apr was the highest for the month since 1996 (22). The last record of the 2018/19 winter was two on 25th Apr. The next occurrence of the species was on 26th Aug when six were seen. Numbers built through Sep peaking at 90 on 20th, the highest Sep count since 1999 (222). They remained at a similar level in early Oct with 80 on 2nd. In comparison the 2018 autumn peak count was 195 on 21st Oct. Around 60 were recorded on 15th Nov but numbers fell after this period with the Dec high of 22 on 28th.

Gadwall (*Anas strepera*)

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

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	3/16	1/20	6/24	3/18	0/17	0/14	1/16	0/23	4/27	2/27	0/17	0/25
Monthly max	3	2	3	4			1		1	3		

Gadwall were recorded on 20 days or 8% of total recording days (19 days or 8% in 2018, 30 days or 12% in 2017 and 30 days or 12% in 2016). Numbers remain at a very low ebb with monthly maxima the lowest since 1985. The last double figure count was in Oct 2013. There was only one record in Jan and Feb. Three were recorded on 8th Jan, 18th Mar and four (three m and one f) on 21st Apr. There were only seven records from Jul to Dec with the highest count of three seen on 18th Oct.

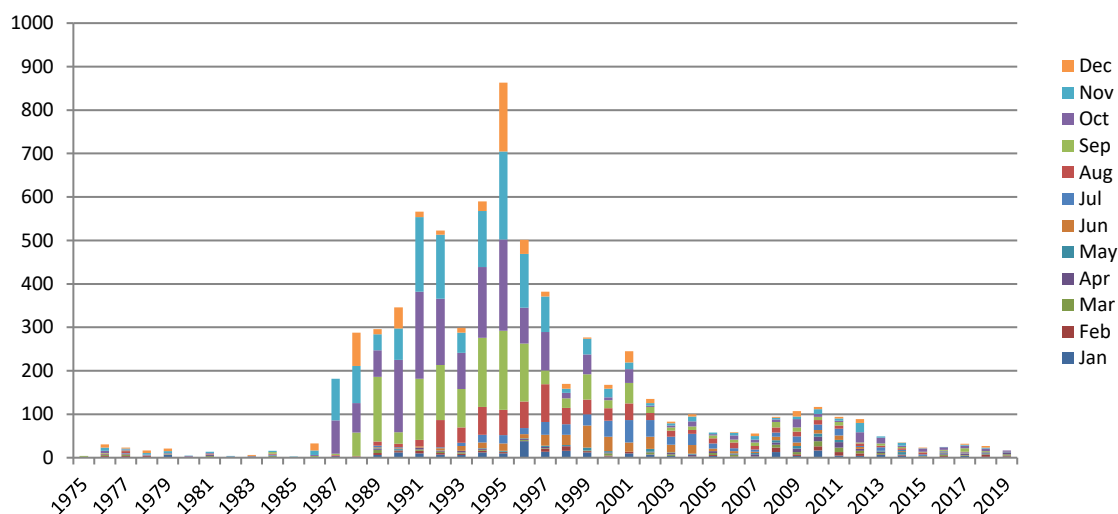


Figure 4 Annual totals of Gadwall based on monthly maxima 1975-2019.

Wigeon (*Anas penelope*)

Winter visitor, passage migrant

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12	82	74	2						10	10	32
56	105	51							3	39	52
70	104	24						5	8	12	54
191	67	15							4	2	33

Monthly maxima of Wigeon fell for the third consecutive year and were the lowest since 2012. The maximum count for the year was 191 recorded on 27th Jan. There were only 3 three figure counts in 2019, all occurring in the first winter period, including 105 on 9th Feb and 104 on 17th Feb. The Mar maximum was 74 on 8th. The last record in the first half of the year was two seen on 4th Apr. The first wintering birds returned in Sep when five were recorded on 20th. Numbers slowly built up through the autumn and into the winter. They peaked at 54 on 18th Dec.

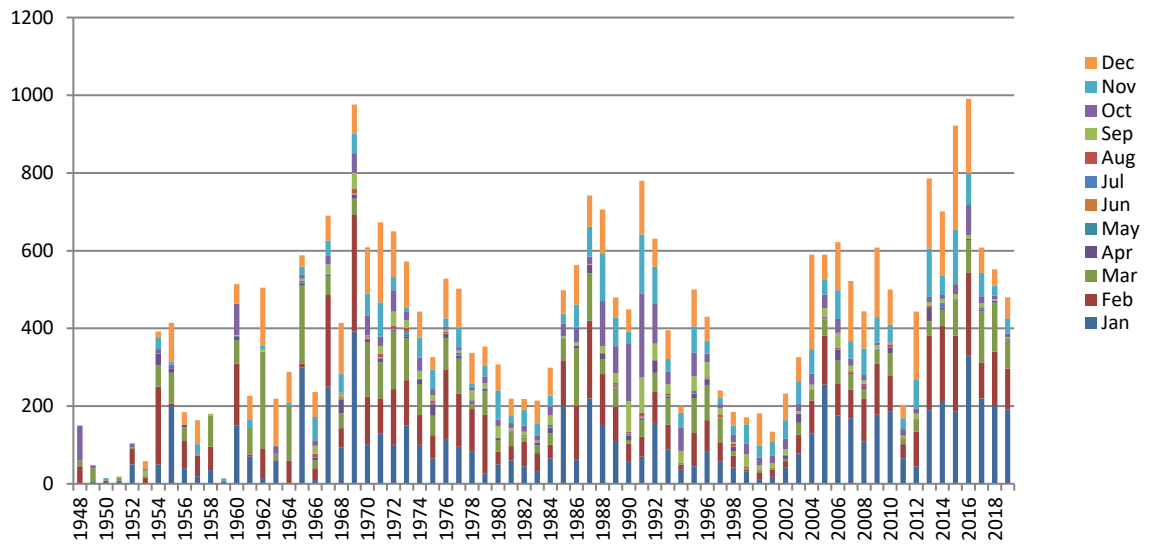


Figure 5 Annual totals of Wigeon based on monthly maxima 1948-2019.

Mallard (*Anas platyrhynchos*)

Resident, small breeding population

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
nc	24	4	24	nc	94	82	51	8	18	18	12
52	36	6	nc	nc	61	50	15	42	42	10	23
68	30	25	30	12	48	40	6	12	20	20	59
26	16	12	20	52	56	24	6	30	16	nc	30

Monthly maxima were the lowest on record. The maximum in the first winter period was 68 on 20th Jan. A f with four ducklings was recorded on 16th Jun but this was the only record of young. The annual max was 94 recorded on 5th Jun (187 in 2018). There were no three figure counts all year. Numbers were very low in the second winter period with highs of only 42, 20 and 59 for Oct, Nov and Dec respectively.

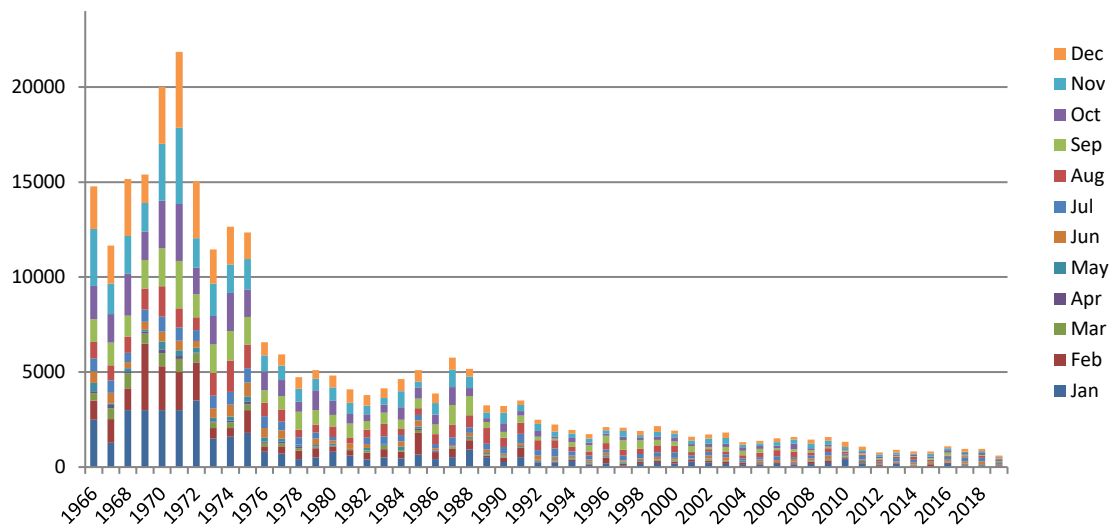


Figure 6 Annual totals of Mallard based on monthly maxima 1966-2019.

Pintail (*Anas acuta*)

Scarce, irregular winter visitor

There was one record when a m and two f were seen on 6th Jan.

Teal (*Anas crecca*)

Winter visitor, otherwise small numbers at any time

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	74	6	20						nc	nc	75
32	58	10	12					13	16	165	62
78	31	17	30	2			1		nc	15	73
36	20	36		1			11	11	nc	nc	30

Numbers continued to plummet with the lowest on record posted in 2019. There were no three figure counts in the first winter period with a high of only 78 recorded on 20th Jan (206 in 2018). There were three records in May with two on 19th and 21st and a single on 28th. Eleven seen on 26th Aug was the highest for the month since 11 were recorded in 2013. The only three figure count was 165 on 15th Nov. The highest Dec count was only 75 on 2nd Dec (160 in 2018).

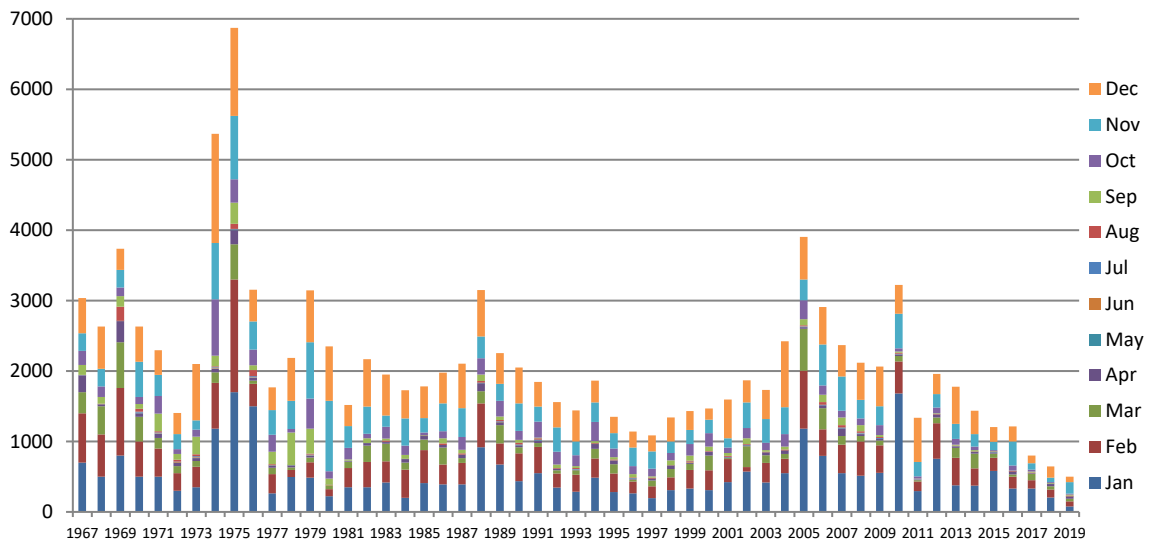


Figure 7 Annual totals of Teal based on monthly maxima 1967-2019.

Pochard (*Aythya ferina*)

Autumn & winter visitor, small numbers summer

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
4	6									9	6
2	2						2				
1	1								1	1	2
2		1				17	1	1	3	2	5

Monthly maxima were markedly lower than last year, which were the highest since 2011 as a result of an influx of birds visiting the Mere in Nov and Dec. The highest count in the first winter period was six (four m, two f). A m on 27th Mar was the only record for the month. The next record was not until Jul when 17 (11 m, six f) arrived after a period of heavy showers on 31st. This was the highest Jul count since 18 in 2015. Two were recorded on 14th and one on 26th Aug. There was only one record in Sep, a single m on 28th. There were 15 records from 24th Oct until the end of the year. Monthly maxima in Nov and Dec were nine (seven m, two f) and six (five m, one f) respectively.

Tufted Duck (*Aythya fuligula*)

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	23	15	2		1	86	154	65	12	22	22
14	20	10			8	96	148	19	15	15	6
6	7	6	3	1	10	168	64	30	24	15	5
1	15	6	4	3	26	166	76	10	20		8

Monthly maxima have been at a similar level since 2014. The Jan maximum of 14 on 9th was the lowest since 1965 (seven). The highest count in the first winter period was 23 on 6th Feb (20 in 2018). As in most years, there was a notable post-breeding build-up peaking at 168 on 23rd Jul. Numbers remained high until mid Aug after which birds began to disperse. The highest count in the second winter period was only 22 on 4th Nov and 4th Dec.

Common Scoter (*Melanitta nigra*)

Uncommon passage migrant; rare in winter

There were four records which appeared to refer to at least two different birds. A juvenile was seen during the evening of 21st Jul and then an adult male on 29th and 30th Jul. A juvenile was then recorded on 2nd Aug.

Goldeneye (*Bucephala clangula*)

Passage migrant & winter visitor, occasional in summer

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	20	20	10							12	11
8	11	9	1						2	11	14
9	18	9	9						7	7	6
12	15	12	1						10		12

Single figures were recorded through the majority of Jan until 12 were seen on 29th. The highest count in the first half of the year was 20 (eight m, 12 f) on 2nd Feb and 8th Mar. Numbers started to decrease after the first week in Mar. The last record of the first period of the year was a f on 30th Apr. The first returning birds were seen on 16th Oct when two were logged. The total monthly maxima from Oct to Dec were the largest since the same period in 2013. The Nov maximum was 12 (four m, eight f) recorded on 4th and 8th, the Dec maximum was 14 (two m, 12 f) on 15th.

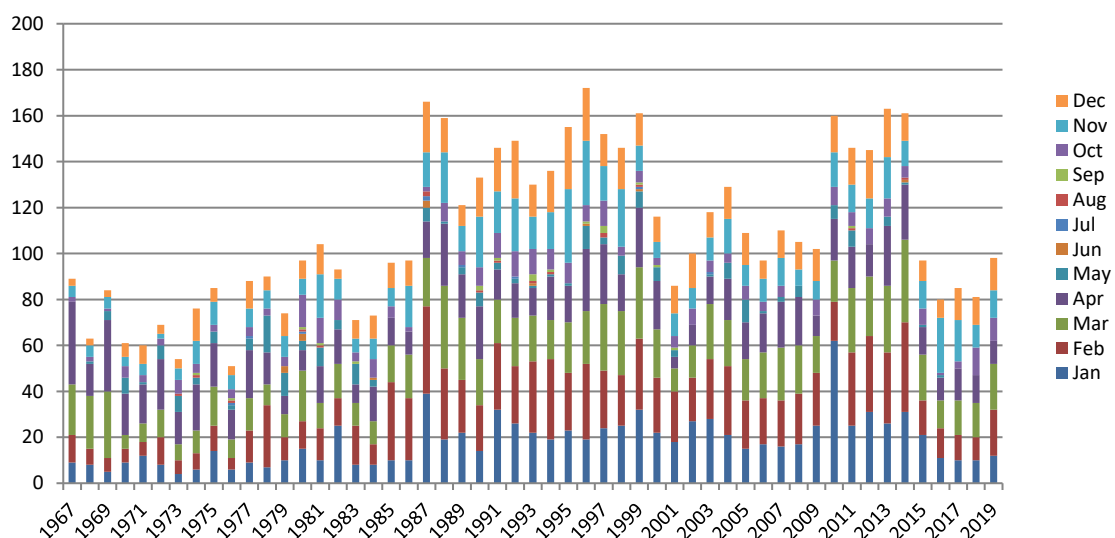


Figure 8 Annual totals of Goldeneye based on monthly maxima 1967-2019.

Goosander (*Mergus merganser*)

Irregular passage migrant & winter visitor

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

Goosander was recorded on 92 days or 38% of total recording days (82 days or 34% in 2018, 47 days or 19% in 2017 and 68 days or 28% in 2016). Figure 9 shows the dramatic increase in Goosander numbers since 2009. Monthly maxima during 2019 were the highest since 2013. Birds flew onto the Mere to roost overnight during Jan, Feb, Apr, Nov and Dec.

The species was recorded on 40 days from Jan to Mar. Thirteen birds roosted during the evening of 11th Jan and were still present on 12th (the highest Jan count since 2013 when 18 were recorded), 11 were recorded on 27th. Double figure counts in Feb included 10 (5 m, 5 r/h) on 10th, 13 (2 m, 11 r/h) on 17th, 14 on 22nd and 13 on 25th. These represent the highest Feb counts since 2012 (26). Eight (1 m, 7 r/h) were recorded on 12th and 13th Mar, the highest for the month since 2013 (15). Eleven were recorded roosting during the evening of 1st Apr, the first double count for the month. A r/h was seen on 9th May and 16th, 20th Jun. The only other Jun records were when a single juvenile bird was seen on two dates in 2014. There was only one record in Sep when four were seen on 28th. Monthly highs during Oct and Nov were four and 10 respectively. Double figure counts during Dec included 14 roosting on 1st, 15 on 21st and 10 (4 m, 6 r/h) on 28th. Fifteen on 21st Dec represented the annual maximum and was the highest for the month since 2010 (29).

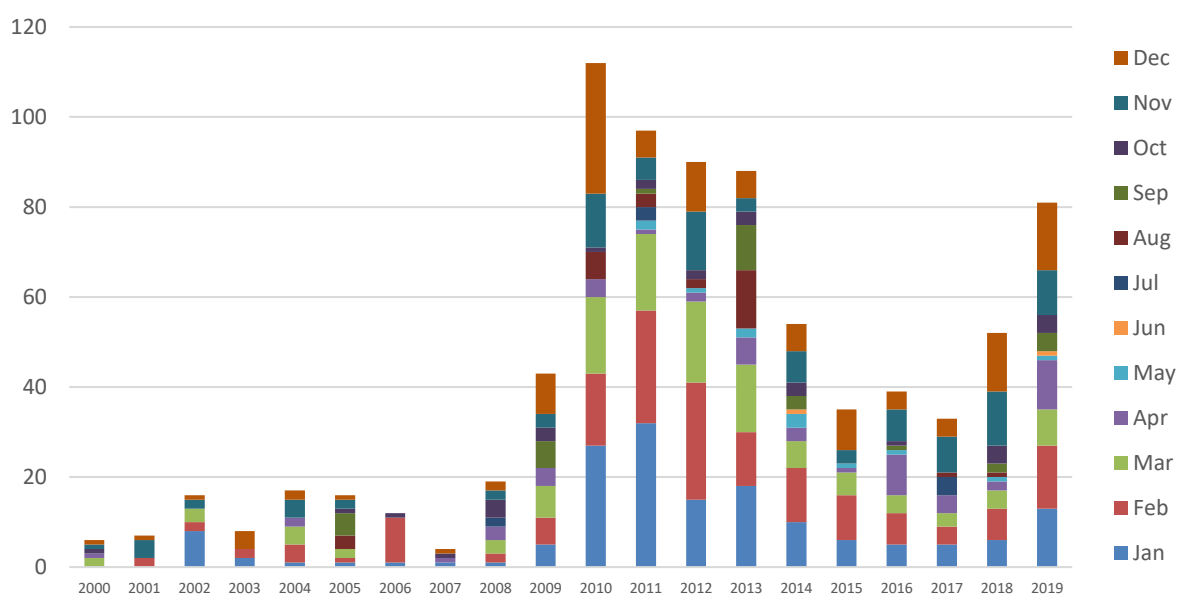


Figure 9 Annual totals of Goosander based on monthly maxima 2000-2019.

Grey Partridge (*Perdix perdix*)

Rare visitor (probably from local releases)

Three were seen in Bobby Field on 23rd Oct. This sighting might have been related to a release of birds from near Arley Hall. The previous record was in Feb 2009.

Pheasant (*Phasianus colchicus*)

Breeding resident supported by local releases

Pheasants are often seen on the Reserve throughout the year and there are regular releases by Tatton Estates onto land surrounding the site. In 2019, the species was recorded on 133 days or 55% of total recording days (167 days or 68% in 2018, 186 days or 77% in 2017 and 175 days or 71% in 2016). Double figure counts included 12 on 6th Feb, 10 on 14th Feb, 10 on 23rd Apr, 10 on 2nd, 9th and 15 on 26th Oct. There were 10 on 4th Nov and 15 on 3rd Dec. The maximum count was 43 seen on 6th Dec. This was the highest count since around 100 were seen in Mere Meadow, Old Meadow and Shaw Green Willows in Sep 2011. A total of seven territories were plotted following the CBC-type survey, which equals the highest ever total in the areas surveyed.

Little Grebe (*Tachybaptus ruficollis*)

Regular visitor at all times, irregular breeder

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	1/16	5/20	3/24	14/18	2/17	1/14	1/16	3/23	4/27	13/27	5/17	7/25
Max nos	3	4	2	4	1	1	2	3	2	6	3	4

Little Grebe was recorded on 59 days or 24% of total recording days (39 days or 16% in 2018, 10 days or 4% in 2017 and 19 days or 8% in 2016). There was only one record in Jan when three were seen on 17th. The next record was of four on 10th Feb. Trilling was recorded on 10 dates from 14th Feb until 14th May. Two birds were heard trilling and four seen in front of the Bittern Hide on 17th Apr. Four were also recorded and two were seen mating on 28th Apr. There were 11 records in Apr but then only two in May and single records of one and two in Jun and Jul respectively. Two birds with a juvenile were recorded on 27th Aug. Sep was a quiet month, but there were 13 records in Oct with four birds on three dates, five on 9th and six on 14th: the highest annual maximum since six were seen in 2011. It was also the highest count for Oct since 2000 (10). There was a total of 12 records during Nov and Dec with four on 4th Dec.

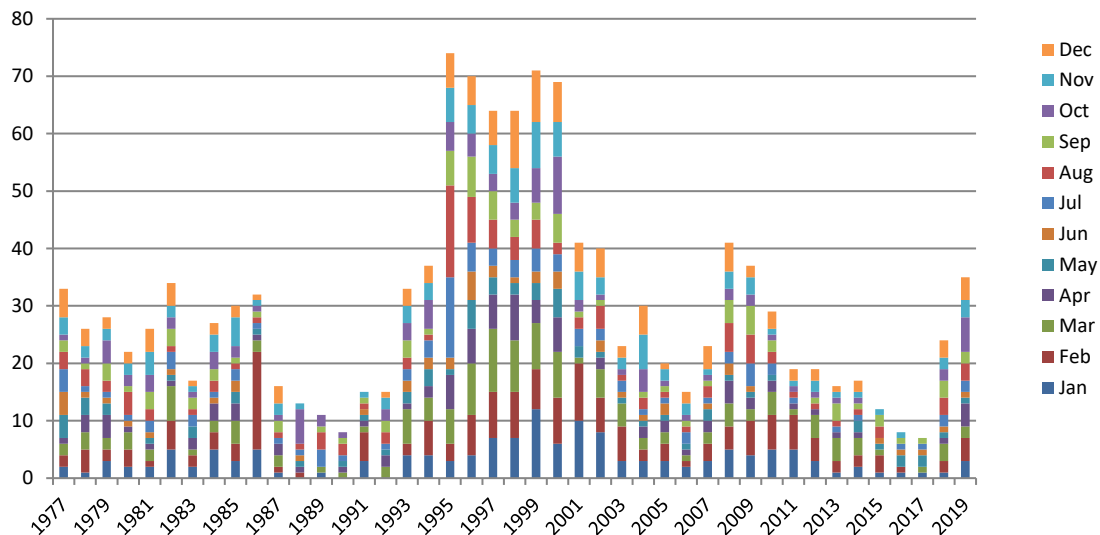


Figure 10 Annual totals of Little Grebe based on monthly maxima 1977 to 2019.

Great Crested Grebe (*Podiceps cristatus*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		28	21	14	10	14	12	12	10	6	12	8
	26	28	14			9	13	11	11	7	5	10
	21	26	15	20	12	6	17	10	4	7	8	8
	16	21	15	14	21	13	22	11	8	8		8

Numbers fell back to recent levels compared to last year's highs. However, 26 seen on 16th Jan was the highest count for the month since 2010 (44). The maximum in Feb was 28 on 6th and 10th Feb. Numbers were similar throughout the spring with 20 on 23rd Apr and 21 on 28th May the highest for those months since 2011 (22) and 2009 (25) respectively. Three young birds riding on the back of an adult were first seen on 16th Jun. Three broods of one, two and two were recorded on 7th Jul but only one bird was confirmed to fledge. It was last seen as a juvenile on 7th Sep. Nevertheless, this represents the first successful breeding since 2013 when six birds were thought to have fledged. There was a small increase in numbers from Jun to Jul, for the first year since 2012 but

there was no indication of any post-breeding influx. Monthly maxima were low from Aug to Dec range eight to 12. The Oct maximum of only eight on 28th was the lowest for the month since 1996 (eight)!

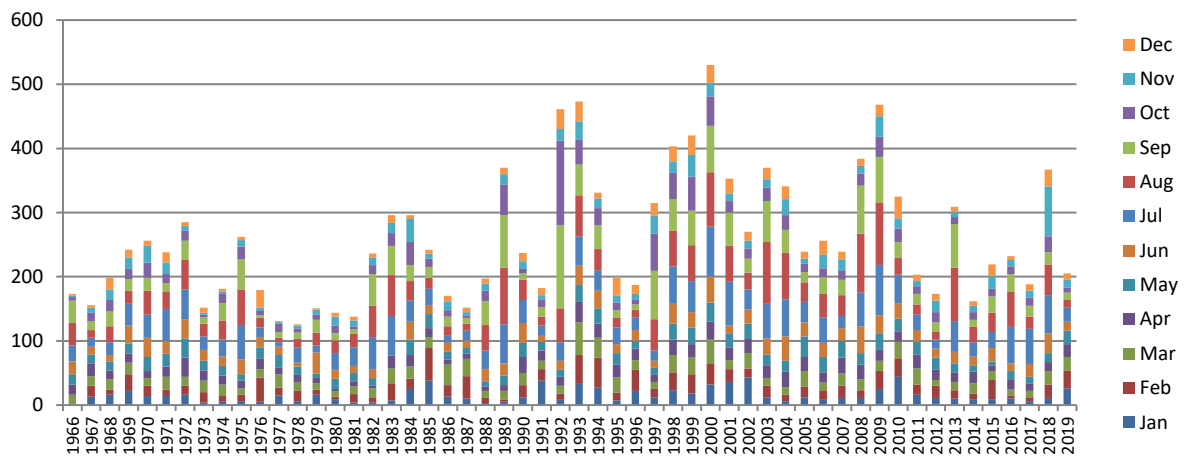


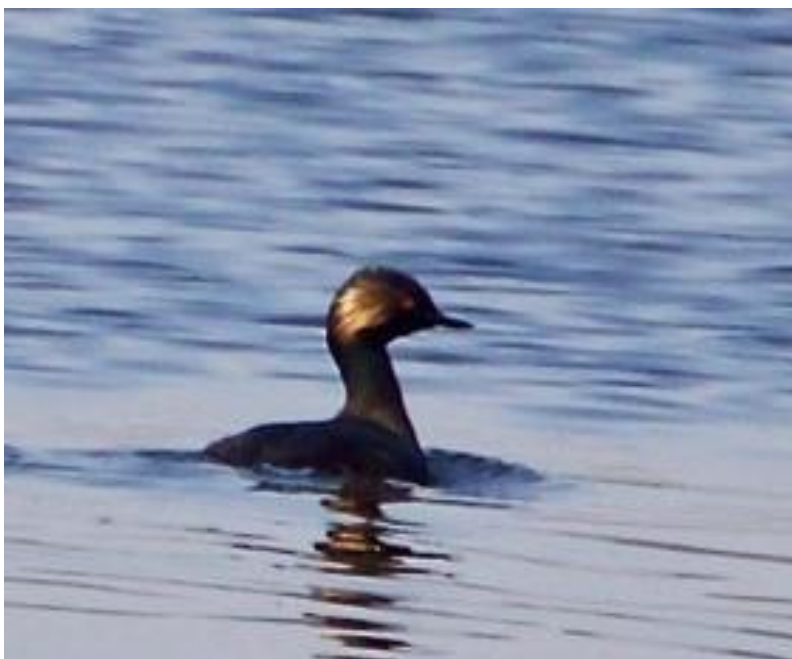
Figure 11 Annual totals of Great Crested Grebe based on monthly maxima 1966 to 2019.

Black-necked Grebe (*Podiceps nigricollis*)

Uncommon visitor, has bred

There were six records, the best showing since 2008 when the species was seen on 16 dates, otherwise the best showing in intervening years was five dates in 2016. A single was seen on 29th, 30th Mar and 1st Apr, presumably the same bird. Two were seen on 24th and one on 25th Jul. The last record was one on 4th Aug.

The frequency of sightings at Rostherne is thought to be related to the near proximity of the breeding colony at Woolston Eyes but the exact connection is unclear.



Black-necked Grebe. Photo John Hancock.

Bittern (*Botaurus stellaris*)

Uncommon visitor

It was another very poor year for Bittern sightings. There was only one record when a bird was seen at 07:00 on 27th Oct in front of the Bittern Hide (one day in 2018, 13 days in 2017 and six days in 2016).

Grey Heron (*Ardea cinerea*)

Regular visitor at all times

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	11/16	13/20	14/24	12/18	9/17	8/14	8/16	15/23	19/27	19/27	9/17	12/25
Max nos	4	3	3	3	5	4	3	3	6	3	3	2

Grey Heron was recorded on 149 days or 61% of total recording days (144 days or 59% in 2018, 164 days or 68% in 2017 and 188 days or 76% in 2016). Four were logged on 9th and 27th Jan. The monthly maximum was three from Feb to Apr. Five were recorded on 2nd May which was the highest count for the month since 2013 (six). Four were recorded on 20th Jun. There were 51 records from Aug to Oct with the highest count of six on 8th Sep. Four were recorded on 22nd Sep but all following records were below this number for the remainder of the year.

Great White Egret (*Ardea alba*)

Very rare vagrant

One flew into Gale Bog and stayed for several hours during the morning of 17th Sep. This represents the seventh record for the Reserve.

Little Egret (*Egretta garzetta*)

Rare vagrant

There were 11 records in 2019 which represents the best ever showing (four records in 2018, eight in 2017, three in 2016). All sightings were of single birds perched along the Harpers Bank shoreline near or below the Cormorant trees. Dates were as follows; 13th, 17th Jan, 1st Jun, 7th Jul, 12th Aug, 7th, 21st, 28th 29th Sep, 3rd Oct and 3rd Nov. An interesting encounter occurred on 29th Sep when a female Marsh Harrier pursued a Little Egret for about 30 minutes. The full details of the episode were expertly written up by Phil Dell on page 5 of CAWOS BIRD NEWS Number 112, Nov 2019 under the title 'A BATTLE ROYAL'.

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
90*	110*	116*	310*	330	220	240	152	32	92*	110*	75

*evening roost count

Monthly maxima were the highest since 2015, but markedly fewer birds are roosting at Rostherne outside of the breeding period compared to the 10-year period 2006 to 2015. The highest counts for the year were 310 on 30th Apr, 300 on 19th and 330 on 22nd May.

Nesting was first observed on 2nd Feb (1st Feb in 2018). There were 90 active nests by 26th Mar and then 120 by 17th Apr. The number of nests peaked at 176 by 22nd May which set a new record for the Reserve (172 on 16th May in 2018) The figure below shows the increase in nest building from 2004 to 2011 and then a subsequent levelling off. Interestingly, while the May count of 330 included many young birds it does not reflect the enormity of the colony as each nest contained an average of three chicks and several four per nest. Numbers decreased after this period with 152 the Aug maximum on 4th. Numbers were very low after this period with the highest

count for Sep only 32 on 15th. The maximum counts in the second winter period were 92 on 28th Oct and 110 on 8th Nov.

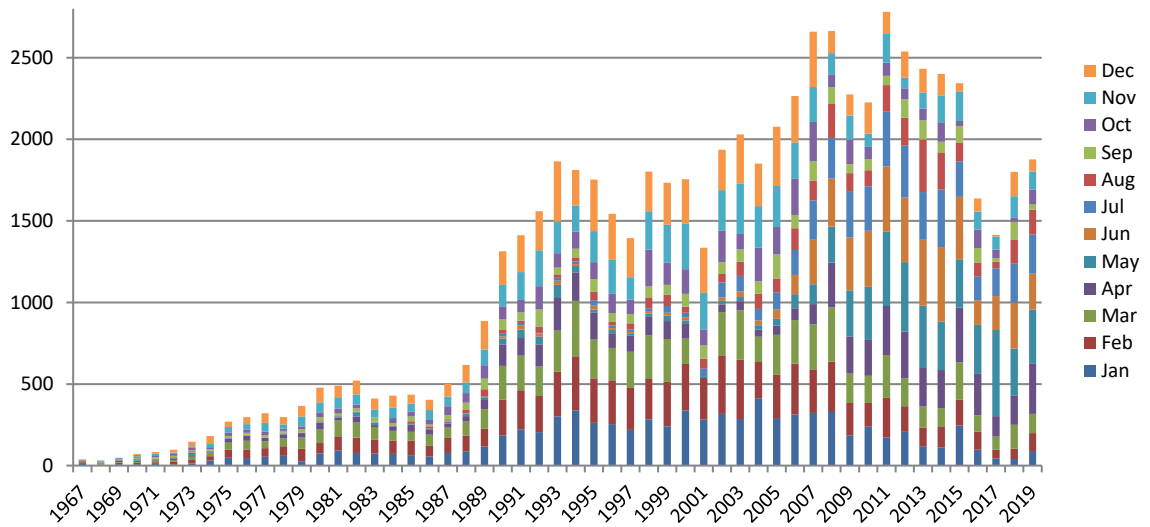


Figure 12 Annual totals of Cormorants based on monthly maxima 1967-2019.



Figure 13 Numbers of Nests at Rostherne Mere 2004 to 2019. The trend line represents a moving average.



Cormorant. Photo Rob Wang.

Osprey (*Pandion haliaetus*)

Rare on spring and autumn passage

One was seen flying over the mere and then over the Observatory and Cricket Pitch on 1st Oct. This is the latest ever record for Osprey at Rostherne with the previous latest on 20th Sep 2003.

Sparrowhawk (*Accipiter nisus*)

Breeding resident

Sparrowhawk was recorded on 56 days or 23% of total recording days (57 days or 23% in 2018, 42 days or 17% in 2017 and 41 days or 20% in 2016).

The majority of records were of single birds in flight but one was seen on the Bird Table in front of the Observatory on 13th Jan. Single females were recorded on 22nd Mar, 18th Sep and 21st Oct. Single males were seen on 16th May, 13th and 18th Nov. One was seen on the dead Silver Birch below the Observatory on 25th Aug. Two birds were recorded on 20th Sep, 17th Oct and 4th Nov. Three were flying over on 28th Oct and a male and female were seen displaying over the Mere on 23rd Dec.

Once again, there were fascinating views of birds hunting the Starling roost from the Bittern Hide. Two were hunting on 8th Nov and singles on 29th and 31st Dec.

Marsh Harrier (*Circus aeruginosus*)

Rare passage migrant

There were three records, the first since Oct 2014. One was seen at 06:24 on 23rd May. A female was recorded at 11:40 on 22nd Sep and another on 29th Sep which pursued a Little Egret around the Mere for about 30 minutes. The full account written by Phil Dell is on page 5 of CAWOS BIRD NEWS Number 112, Nov 2019 under the title 'A BATTLE ROYAL'.

Red Kite (*Milvus milvus*)

Very rare vagrant

One flew over the Mere from north to south on 17th Feb and another was seen over the A556, north of Gale Bog at 13:30 on 30th Oct. Red Kite has only been recorded in eight years this century and these are the first records since 2016.

Buzzard (*Buteo buteo*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	10/16	19/20	17/24	14/18	8/17	9/14	8/16	18/23	22/27	24/27	9/17	18/25
Max nos	3	8	5	4	5	5	4	4	12	7	5	3

The species was recorded on 176 or 72% of total recording days (151 days or 62% in 2018, 176 days or 73% in 2017 and 207 days or 84% in 2016).

Monthly maxima were the highest since 2014. Eight were seen circling over the Reserve on 14th Feb. Later in the year 11 were over on 23rd and 12 on 25th Sep. These are the first double figure counts since May 2015 (15) and the highest Sep counts since 2009 (16). Eight were recorded on 28th Sep and seven on 14th and 28th Oct.

Two pairs attempted to breed on the Reserve, one pair nesting in an Oak on the field boundary of Section 24 north of Harpers Bank Wood and another in a Scot's Pine in Mere Covert. The former pair produced one chick which fledged and was heard begging for food near Bobby Field on several occasions in Oct. In contrast, the pair in Mere Covert did not appear to be successful in producing any young.

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	8/16	13/20	8/24	1/18	0/17	0/14	1/16	3/23	10/27	17/27	10/17	15/25
1 bird	2	8	7	1			1	3	9	9	6	9
2 birds	1	4	1							5	1	5
3 birds	2								1	3		
4 birds	2	1									3	
6 birds	1											1

Water Rail was recorded on 86 days or 35% of total recording days which represents a good showing (68 days or 28% in 2018, 57 days or 24% in 2017 and 42 days or 17% in 2016).

The reed beds around Shaw Green Willows remain the most popular area to hear 'sharming' Water Rails with the Bittern Hide providing an ideal site to hear birds calling from several separate locations. Four were heard on 9th, 16th Jan, 6th Feb, 15th, 22nd and 24th Nov. Six were recorded on 11th Jan when four were heard around the Bittern Hide and two near the Boathouse. Six were also recorded on 8th Dec but no location details were supplied. The last record of the first half of the year was a tick-list only entry on 7th Apr. The most interesting record of the year was of a very young bird which was incapable of flight and seen in Brook Meadow on 16th Jul. This is strong evidence to confirm breeding on the Reserve. There were three records in Aug when single birds were heard near Blackburn's Brook on 26th, 27th and 29th.

Moorhen (*Gallinula chloropus*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	5/16	10/20	9/24	7/18	4/17	4/14	2/16	6/23	2/27	5/27	4/17	8/25
Max nos	1	3	2	1	1	2	3	3	2	2	2	2

Moorhen was recorded on 69 days or 28% of total recording days (73 days or 30% in 2018, 63 days or 26% in 2017 and 117 days or 48% in 2016). The highest count in the first half of the year was three, recorded on 17th Feb. An adult and two chicks were recorded in front of the Bittern Hide on 15th Jul. They were seen again on 8th Aug.

Coot (*Fulica atra*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		12	10	12		3	29	56	52	10	12	16
	12	20	12		7	12	44	24	37	16	15	12
	14	12	8	15	5	16	20	52	26	12	12	10
	9	12	6	15	12	14	32	26	14	12		10

Monthly maxima were lower than in 2018 and 2017. The highest count in the first winter period was only 20 on 11th Feb. A pair with six young were seen in front of the Bittern Hide on 14th and 16th May. Later in the year five broods of one, one, two, two and three chicks of all different ages were seen in front of the Bittern Hide on 7th Jul. Two broods of one small and one large chick were seen on 10th, 15th, 21st and 23rd Jul. Post-breeding numbers peaked at 56 on 4th Aug. Fifty-two were seen on 23rd Aug and 1st Sep. the highest count in the second winter period was 16 on 16th Oct and 5th Dec.

Oystercatcher (*Haematopus ostralegus*)

Passage migrant & summer visitor, has bred locally; Jan-Nov

Oystercatcher was only recorded on 7 days or 3% of total recording days (17 days or 7% in 2018 and 2017, 16 days or 7% in 2016). One was seen on the weather station on 25th Feb, one flying around the Mere on 22nd Mar and two over and one over on 21st and 23rd Apr respectively. Two were flying around the Mere on 2nd May. Interestingly, two were seen on the Cricket Pitch on 1st Jul and the last record was one over Mere Field on 7th Jul.

Lapwing (*Vanellus vanellus*)

Declining resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	5/16	9/20	5/24	2/18	2/17	1/14	3/16	0/23	4/27	9/27	6/17	10/25
Max nos	c400	c250	6	1	14	6	c50		c70	c200	c80	c250

Lapwing was recorded on 56 days or 23% of total recording days (60 days or 25% in 2018, 46 days or 19% in 2017 and 55 days or 22% in 2016). The majority of winter sightings refer to flocks flying up from farmland west of the A556 and north of Gale Bog. Around 200 were seen on 4th, c400 on 11th and c250 on 20th Jan. Highs in Feb were c250 on 11th and 18th Feb. A pair was seen displaying near Cherrytree Farm in a field just off the Reserve on 1st Mar and six in an adjacent field on 21st Mar. Singles were seen on Mere Field on 17th and 23rd Apr. There was a single on 2nd May and seven pairs were displaying over a field, just off the Reserve, near Cherrytree Farm on 5th May. There was only one record in Jun when six were recorded on 9th. Around 50 were recorded on 10th and 29th Jul. There were 29 records from Sep to Dec with highs of c200 on 21st Oct and c250 on 23rd Dec.

Golden Plover (*Pluvialis apricaria*)

Declining winter visitor & passage migrant; Aug - Apr

One was calling over the Churchyard during the evening of 16th Oct. It was last recorded in Feb 2016. The last record of birds on the Reserve was a party of eight on Brook Meadow in Sep 1993.

Curlew (*Numenius arquata*)

Passage migrant, summer & winter visitor, has bred

Curlew was only recorded on 6 days or 3% of total recording days (6 days or 3% in 2018, 9 days or 4% in 2017 and 12 days or 5% in 2016).

The majority of the records referred to birds seen flying over the Bittern Hide and near Marsh Lane and the surrounding fields just off the Reserve.

All records are listed below:

20 th Feb	1 flying over the Bittern Hide.
6 th Mar	1 flying over the Bittern Hide.
25 th Mar	1 circling the Bittern Hide.
8 th Aug	3 calling over Brook Meadow.
23 rd Aug	2 calling over Marsh Lane.
26 th Aug	1 calling over Marsh Lane.

Woodcock (*Scolopax rusticola*)

Winter visitor, former breeding resident

There were only two Woodcock records compared to 10 in 2018, one in 2017 and four in 2016. One was seen in Penny Croft on 11th and 12th Feb.

Jack Snipe (*Lymnocyptes minimus*)

Uncommon winter visitor; Oct-Apr

One was flushed with 18 Snipe from 'The Triangle' at the foot of Long Pasture on 22nd Oct and two were flushed from the same location with 6 Snipe on 3rd Dec. These are the first records since one was recorded in Nov 2009!

Snipe (*Gallinago gallinago*)

Winter visitor, former breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	4/16	2/20	7/24	2/18	0/17	0/14	0/16	0/23	0/27	5/27	4/17	7/25
Monthly max	2	7	17	2						20	50	24

Snipe was recorded on 31 days or 13% of total recording days (15 days or 6% in 2018, 18 days or 7% in 2017 and 23 days or 9% in 2016). Two flew into roost in the Snipe Marsh on 28th Jan. Seven flew out of 'The Triangle' at the foot of Long Pasture on 6th Feb. Seventeen were flushed from the Snipe Marsh on 6th, 17th Mar and 15 were recorded on 27th Mar, with 12 from the 'The Triangle' and three from the Snipe Marsh. The last record during the spring was of two seen in Snipe Marsh on 17th Apr. The first record in the autumn was when 20 were flushed from 'The Triangle' on 13th Oct. There were 12 and then 18 at the same location on 18th and 22nd Oct respectively. Numbers increased in this area in late Nov with 43 flushed on 22nd and c50 on 24th. These are the highest counts since Jan 2000 (51). There were seven records in Dec with highs of 20 and 24 recorded from 'The Triangle' on 28th and 29th Dec.



Snipe in flight. Photo Steve Collins.

Common Sandpiper (*Actitis hypoleucos*)

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

There was only one record in 2019, as in 2018 (four records in 2017 and nine in 2016). Two were seen on the sandbar at the mouth of Rostherne Brook on 17th Apr. Fewer Common Sandpipers are visiting the Reserve, which might be a reflection of the limited habitat available to them. Generally, water levels were high throughout 2019 submerging the sandbar for the majority of the year.

Green Sandpiper (*Tringa ochropus*)

Uncommon visitor

There was only one record (12 in 2018, 11 in 2017 and 21 in 2016). One was seen in Brook Meadow on 17th Feb. A very poor year which was probably a reflection on the limited wader habitat available, see Common Sandpiper.

Redshank (*Tringa totanus*)

Passage migrant & winter visitor

One was circling the Mere looking for somewhere to land on 8th Sep. The first record since Mar 2015.

Greenshank (*Tringa nebularia*)

Irregular autumn passage migrant, very rare spring

One was recorded flying low over the Mere calling on 25th Aug. The first sighting since Aug 2013.

Black-headed Gull (*Chroicocephalus ridibundus*)

Regular visitor at all times

There were eight roost counts which are listed in the Gull Roost table below. The highest counts were in Jan when c3000 were seen on 1st and c2000 on 16th. Other four figure counts included c1000 on 9th Jan, 28th Oct, 8th and 15th Nov. A leucistic bird was seen on 10th Feb. Around 150 were seen feeding on flies emerging from the Mere on 28th Mar.

Mediterranean Gull (*Ichthyaetus melanocephalus*)

Rare visitor

There were two records. An adult was seen on 25th Feb and a third winter bird on 24th Dec.

Common Gull (*Larus canus*)

Passage migrant & winter visitor

Common Gull was recorded on 26 days or 11% of total recording days (29 days or 12% in 2018, 29 days or 12% in 2017, 43 days or 17% in 2016). Numbers were low in 2019. There were only two double figure counts. Ten were seen in the roost on 16th Jan and 20 were seen on 31st Mar.

Great Black-backed Gull (*Larus marinus*)

Winter visitor

There were only 10 records (eight records in 2018, 17 records in 2017 and 19 records in 2016). There were none recorded in the roost counts but two were seen on 13th, 15th and 25th Feb. All other records were either singles or tick-list entries.

Herring Gull (*Larus argentatus*)

Winter visitor

There were 44 records (39 records in 2018, 32 in 2017 and 17 in 2016). Counts were low with 31 on 25th Feb and 22 in the roost on 15th Nov the highest. Other double figure counts included 10 on 14th Feb, 4th and 8th Nov. A possible Herring Gull/Lesser Black-backed Gull hybrid was seen in the roost on 28th Dec.

[Caspian Gull (*Larus cachinnans*)]

Very Scarce visitor

The Cheshire and Wirral Bird Report 2017 says 'Caspian Gull remains a rare bird in Cheshire and Wirral, which is frequently misidentified. Descriptions are essential. Pending the adjudication of the CAWOS Rarity Team regarding the 2018 records, at present, there are no accepted records.'

There were nine records of birds recorded in the gull roosts, all made by Mike Duckham.

The first record was an adult was seen on 13th Jan. In Feb an adult was recorded on 10th and 11th Feb. Two were seen on 15th Feb, described as 'an adult and a subadult (probably fourth winter).' Interestingly, Mike thought that both birds were different to the one seen on 10th and 11th which was thought to be the same bird.

The species was seen again in Oct when an adult was logged on 16th Oct. It was described as having a 'dark eye, wing pattern not seen'. What was thought to be the same bird was seen on 21st Oct. It was described as:

'Same bird as Wed 16th. Small dark eye set forward in face. Small head. Bill thinnish and peg like. Four apica primary tips beyond tertials on folded wing. Underside of p10 seen when preening, large /long white tongue.'

The next record was on 8th Nov described as 'Probably Caspian adult, head and bill shape but not enough light to be sure.'

Another sighting was made on 30th Nov. It was described as:

‘One adult, small dark piggy eye, small slim head, thin parallel-sided bill, dark mantle. Spread wing seen – large mirrors on outermost primaries.’

The last record of the year was of an adult on 1st Dec, thought to be the same bird as described above.

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 12 records in 2019 (21 records in 2018, five records in 2017 and two records in 2016). All the sightings were made during the evening gull roost by Mike Duckham and are listed below:

13 th Jan	2	
25 th Feb	1	adult.
19 th Oct	3	one 2CY, one 3CY, 1 adult.
20 th Oct	1	adult bathing.
21 st Oct	3	adults, one on buoy.
8 th Nov	1	1 st winter, large stout blobby, all dark bill, mostly blackish tertials with paler tips, pale head with small dark eye patch.
29 th Nov	3	two adults, one 2 nd winter.
19 th Dec	1	adult at 2.30pm, large, blocky head with prominent ridge above eye and broad or wide head.
21 st Dec	1	adult, same as above.
23 rd Dec	1	adult, same as above.
27 th Dec	2	adult and 3 rd winter.
28 th Dec	2	adult and 3 rd winter.

Lesser Black-backed Gull (*Larus fuscus*)

Passage migrant & winter visitor

The species was recorded on 161 days or 66% in 2019 (170 days or 70% in 2018, 165 days or 68% in 2017 and 169 days or 69% in 2016).

The highest Jan count was 150 in the roost on 16th. There were two further three figure counts in the first half of the year with 151 on 25th Feb and 130 on 23rd Apr. Numbers ranged from two to 17 from May to Jul. In Aug, 60 were recorded on 8th, 70 on 23rd and 50 on 27th. The highest count during Sep was 50 on 25th. There were 70 on 4th and 180 in the roost on 28th Oct. The highest numbers were recorded during Nov with 220 on 4th, 250 on 8th and 250 on 15th. Numbers were lower during Dec with 80 the highest in the roost on 28th.

Mike Duckham recorded two gulls of the subspecies *Larus fuscus intermedius* on 10th Feb and one on 20th Oct.

Gull Roost

The following table shows all the gull roost counts made in 2018.

Black-headed Gull	Common Gull	Herring Gull	Lesser Black-backed Gull
--------------------------	--------------------	---------------------	---------------------------------

Date

01 Jan	3000			
09 Jan	1000	1		10
16 Jan	2000	10	5	150
14 Feb	500		10	60
28 Oct	1000	3	2	180
08 Nov	1000		10	250
15 Nov	1000	5	22	250
28 Dec	600		1	80

Common Tern (*Sterna hirundo*)

Annual passage migrant, Apr-Oct

There were only two records in 2019 (nine records in 2018, 10 in 2017 and four in 2016). Two were identified within 30 Commic terns feeding on midges emerging from the Mere on 8th May. Later in the year three were seen on 28th Sep. There are only four later records at Rostherne.

Arctic Tern (*Sterna paradisaea*)

Rare passage migrant, Apr-Nov

There were four records in 2019, a single record in 2018. One was seen on 28th Apr, eight were identified within 30 Commic terns seen feeding on midges emerging from the Mere on 8th May. Five were recorded the following day on 9th and a single, the last record of the year, on 12th May.

Commic Tern (*Sterna spp.*)

Thirty terns provided an amazing view as they fed on emerging midges on 8th May. At least two Common and eight Arctic Terns were picked out among the flock while the balance will have to go down as 'Comemics'. This represents the highest 'Commic' Tern count since 'flocks of up to 30 birds appeared 4th and 11th May 1974, with both species present' was documented in 'The Birds of Rostherne Mere' by Harrison and Rogers, 1977.

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. There were only two records, with one over the Reserve on 6th Mar and four on 28th Apr.

Stock Dove (*Columba oenas*)

Breeding resident

Stock Dove was recorded on 114 days or 47% of total recording days (112 days or 46% in 2018, 114 days or 47% in 2017 and 135 days or 55% in 2016). Three birds were recorded on 11th Feb including two mating in Harpers Bank Wood. Two nested in the Barn Owl box in Brook Meadow and were first seen on 16th Jun. Furthermore, two chicks were seen in the Mere Meadow box and two in the Penny Croft box during an inspection on 30th Jun. Six birds were seen on 29th Jul and four on 24th Jul, 12th Aug, 5th and 9th Sep. Interestingly, three were seen displaying on 13th Nov. There were three territories plotted in Harpers Bank Wood, which equalled the highest ever total recorded in the four main survey areas.



Stock Doves squabs in the Mere Meadow Barn Owl box. Photo Darren Mayer.

Woodpigeon (*Columba palumbus*)

Breeding resident

Woodpigeon was recorded on 166 days or 68% of total recording days (175 days or 72% in 2018, 177 days or 73% in 2017 and 202 days or 82% in 2016). Counts above 25 included 30 on 12th Jul, 30 on 12th Aug and 40 on 9th Sep. Larger numbers were seen roosting in Harpers Bank Wood during Sep with c50 on 12th, c100 on 14th and c250 on 16th. Around 300 roosted on 4th Oct and c40 were logged on 6th Dec. A territory was plotted in Harpers Bank Wood. Woodpigeon is not well covered by the CBC survey and there were probably many more breeding territories on the Reserve.

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. It was recorded on 43 days. Thirty were seen from the Natural England Car Park on the Sprout Field on 12th Jan with nine on 14th Feb. In addition, 32 were sitting on wires over the Sprout Field on 13 Oct. The Sprout Field is the field adjacent to the path leading in a north easterly direction from the car park.

Cuckoo (*Cuculus canorus*)

Summer visitor, Apr-Sep, has bred; decreasing

There was only one record of a bird calling near the Snipe Marsh on 14th May. The species was not recorded in 2018, but there were 10 records in 2017.

Barn Owl (*Tyto alba*)

Rare visitor, bred 2017, 2018, 2019

It was another good year for Barn Owl records with 37 in total (54 in 2018, 40 in 2017 compared with only one in 2016). In addition, a pair bred in the Mere Field box for the third consecutive year. Six chicks and one egg were

found in the box on 30th Jun. Unfortunately, only one chick had survived by 21st Jul when the box was inspected by Darren Meyer from the Mid-Cheshire Barn Owl Group. It is thought that a spell of very wet weather during Jul may have affected the survival rate of the chicks

One was seen in the Mere Field box and another in the Mere Meadow box on 13th Feb. Two were seen in the Mere Meadow box on 19th and 25th Mar. Two were logged on 11th Apr when a bird was seen in the Mere Meadow box while another flew across Marsh Lane. Two were recorded from the Mere Field box on 2nd, 17th, 22nd, 29th and 30th Jun. Three were seen flying near Shaw Green Farm on 16th Sep. Two were in the Mere Meadow box and then flying near Marsh Lane on 7th Oct.

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

Mere Field Box

Feb, 13th 22nd
Mar 4th, 7th, 11th, 13th, 27th, 28th
Apr 8th, 17th
May 26th
Jun 2nd (2), 17th (2), 22nd (2), 29th (2). 30th (2 with 6 chicks and 1 egg)
Jul 16th, 21st (1 chick)
Dec 6th, 8th, 17th, 27th

Mere Meadow Box

Jan 14th, 15th, 28th
Feb 11th, 13th, 14th, 15th, 17th
Mar 19th (2), 25th (2)
Apr 7th, 11th
Oct 7th (2), 21st

New Barn Owl boxes which incorporate an exercise platform have been put up in Dolls Meadow, Penny Croft and on the edge of Mere Covert near Penny Croft. The older boxes will be replaced in turn when they become too dilapidated to be used.



Female Barn Owl. Photo Rob Wang



Young Barn Owl chick. Photo Rob Wang.

Tawny Owl (*Strix aluco*)

Breeding resident

Tawny Owl was recorded on 24 days or 10% of total recording days (19 days or 8% in 2018, 6 days or 3% in 2017, and 10 days or 4% in 2016).

There were only seven records from Jan to Jul. One was flushed from the Brook Meadow Barn Owl box during a routine inspection on 13th Feb. Singles were heard calling on 25th Feb, 11th Apr and 3rd Jun. Two juveniles were seen and heard calling from a tree in Wood Bongs on 26th Mar and then again on 16th Jul.

The majority of records were from Aug to Sep (17 in total). These were in four locations, namely below Manor Wood and around Brook Meadow, the Split Limes, Wood Bongs and around Mere Meadow and Shaw Green Farm. Two were heard calling near Manor Wood on 9th Sep and four around Mere Meadow on 8th Oct. Two were heard in Wood Bongs on 26th Oct. Three birds were heard calling, one in each of Brook Meadow, the Split Limes and Wood Bongs during the evening on 29th Nov. Single birds were seen and heard calling from the Split Limes during evening visits on 16th, 19th Oct, 15th Nov, 18th, 23rd and 28th Dec.

Little Owl (*Athene noctua*)

Previous breeding resident now scarce

There were ten records in 2019 (eight in 2018 but none in 2017). All of the sightings were in the vicinity of Marsh Lane and Shaw Green Farm with birds occasionally flying onto the corner of Old Meadow. The majority were made during the evening whilst Ian McCulloch was waiting to observe Barn Owls feeding over the Snipe Marsh and adjacent fields. Single birds were recorded on 15th and 28th Jan. There was a series of sightings from 11th to 15th Feb, with two sitting on the Telegraph Pole near Shaw Green Farm on 11th and 13th Feb. Singles were seen in the same location on 14th and 15th Feb. Two were seen again near Shaw Green Farm on 11th Mar. There was one on 3rd Jun and then two on 16th Jul and 16th Sep.

Swift (*Apus apus*)

Passage migrant & summer visitor, Apr-Oct

Swift was recorded on only 26 days in 2019 (37 days in 2018, 23 days in 2017 and 41 days in 2016). The first record of the year was three on 5th May (25th Apr in 2018). There were 11 records in May, with 10 feeding on 7th, 40 feeding over Mere Covert on 8th and 12 on 31st. The highest count was of around 100 over the Mere on 5th

Jun. Around 20 were seen on 12th and 14th Jun. The last double figure count of the year was 10 on 10th Jul. There were two records in Aug, with six over Mere Covert the last report on 13th Aug (15th Aug in 2018 and 2017).

Kingfisher (*Alcedo atthis*)

Irregular visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1 bird			2	2		1	5	7	1	3		1
2 birds							1					

Kingfisher was only recorded on 23 days in 2019 which represents a poor showing (45 days in 2018, 49 days in 2017 and 52 days in 2016).

Kingfishers were seen irregularly around the Mere in two main areas. These were the mouth of Rostherne Brook and along the Dolls Meadow shoreline and in front of the Bittern Hide. There were six records in the Rostherne Brook area with two seen on 16th Jul. There were six records from the Bittern Hide area, all of single birds. Thirteen records made during Jul and Aug suggested a post-breeding increase.

A bird was ringed in Shaw Green Willows area on 29th Aug. This represents the 12th Kingfisher to be ringed at Rostherne since 1972.



Kingfisher. Photo Sheelagh Halsey.

Lesser Spotted Woodpecker (*Dendrocopos minor*)

Scarce resident

Lesser Spotted Woodpecker was recorded on 19 days (six days in 2018, eight days in 2017 and four days in 2016). This represents the best showing since 2009. Fourteen of the records were of singles but a pair bred in Mere Covert and two were recorded on 26th Mar, 24th Apr and 15th May. The nest site was located and the male and female were seen feeding a juvenile on 23rd May. A male was then seen feeding the juvenile after it had left the nest on 28th May. This represents the first territory since 2009 and registrations in Long Pasture and Shaw Green are thought to refer to the Mere Covert birds.

A full list of the records is shown below:

14 th Jan	1 Flew down the road in Rostherne village.
13 th Feb	1 Drumming in Wood Bongs.
16 th Feb	Tick-list only.
24 th Feb	1 Drumming in Harpers Bank Wood.
28 th Feb	1 Wood Bongs
11 th Mar	1 Drumming in Harpers Bank Wood.
18 th Mar	1 No location given.
26 th Mar	2 flew across Marsh Lane towards Mere Covert.
28 th Mar	1 Mere Covert.
7 th Apr	1 Harpers Bank Wood.
11 th Apr	1 Harpers Bank Wood.
24 th Apr	2 m and f in Mere Covert.
15 th May	2 Mere Covert.
22 nd May	1 Mere Covert.
23 rd May	3 m and f feeding juvenile in the nest hole, Mere Covert.
24 th May	1 Mere Covert.
28 th May	2 m feeding juvenile outside the nest hole.
18 th Oct	1 Flew down the road in Rostherne village.
12 th Nov	1 in Manor Wood.

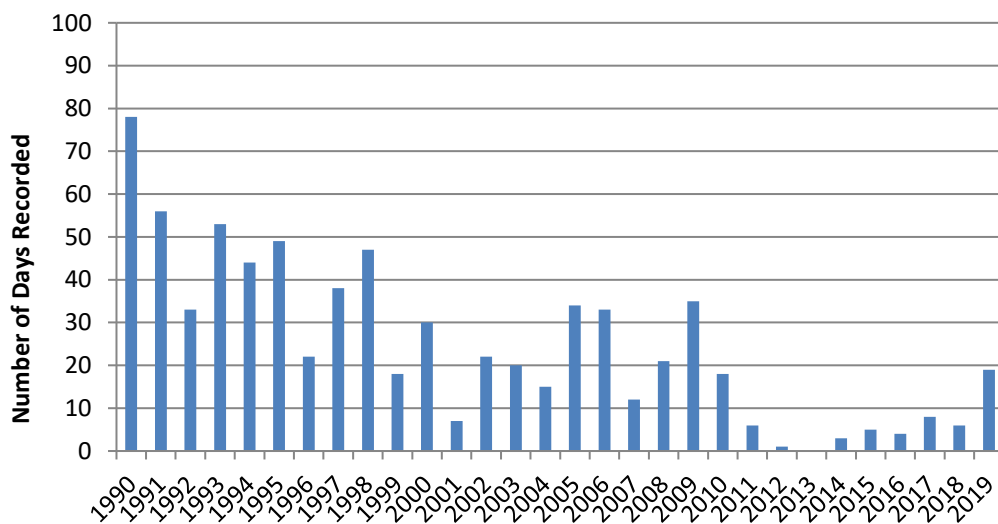
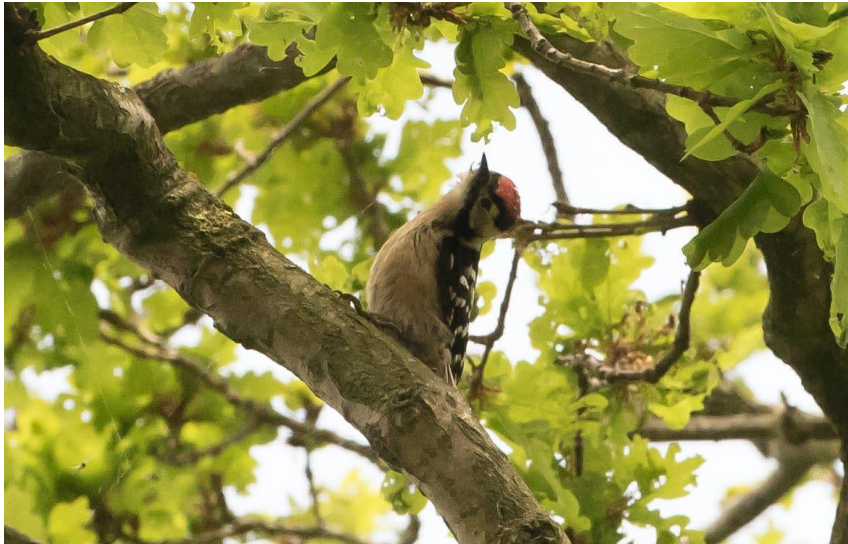


Figure 17 The number of days Lesser Spotted Woodpecker was recorded from 1990 to 2019.



Male Lesser Spotted Woodpecker. Photo Steve Collins.

Great Spotted Woodpecker (*Dendrocopos major*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	3/16	8/20	12/24	10/18	6/17	2/14	7/16	9/23	8/27	9/27	3/17	10/25

The species was recorded on 87 days, 36% of total recording days (140 days or 57% in 2018, 119 days or 49% in 2017 and 98 days or 40% in 2016). There were 10 records of two birds. Drumming was recorded on 16th, 17th Feb and 28th Mar. A m and f were logged at a nest hole in Wood Bongs on 14th May. A juvenile was recorded on 7th Jul. There were only two territories plotted, one in Harpers Bank Wood and one in Wood Bongs: the lowest total since 2000.

Green Woodpecker (*Picus viridis*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	0/16	0/20	1/24	0/18	1/17	0/14	6/16	8/23	1/27	0/27	0/17	0/25

It was a very poor year for Green Woodpecker records. The species was only recorded on 17 days or 7% of total recording days (96 days or 67% in 2018, 44 days or 18% in 2017 and 28 days or 11% in 2016).

The first record for the year was a bird heard ‘yaffling’ in Wood Bongs on 28th Mar. There was one record in May but the species was not seen again until a series of sightings in Jul and Aug. Singles were seen near Marsh Lane and in Mere Meadow on 13th and 15th Jul respectively. Off the Reserve, one was seen in the Churchyard on 16th Jul and near Rostherne House on 24th Jul. Two were recorded on 4th Aug with no location given. One was seen in Old Hall Wood on 18th Aug and one in Wood Bongs on 26th Aug. The last record of the year was one seen near the Boathouse on 7th Sep. The species was not recorded during CBC survey work in 2019

Kestrel (*Falco tinnunculus*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	0/16	1/20	15/24	11/18	10/17	13/14	11/16	11/23	22/27	22/27	8/17	18/25
Max nos		1	2	2	2	3	5	4	3	2	2	3

Kestrel was recorded on 142 days or 58% of total recording days (83 days or 34% in 2018, 13 days or 5% in 2017 and 50 days or 20% in 2016). A pair bred in a dead Alder near to the Boathouse for the second consecutive year producing three young. The location of the nest site provided wonderful views of both adults and juveniles from the Observatory.

There were no sightings in Jan and the f was seen on only one date in Feb (24th). However, there were 15 records in March with the m and f seen around the nest site on 10 dates. They were seen chasing a pair of Stock Doves away from the dead Alder on 28th Mar. There were 21 records during Apr and May. The f appeared to be sitting on the nest from early Apr. The m was seen to bring a vole to the f on 22nd Apr and 28th May. Two juveniles were first seen on 9th Jun. The adults were seen to feed a juvenile at the nest site on 12th Jun. Juveniles was seen on 16th, 20th, 24th, 27th and 30th. Five birds including the two adults and three juveniles were recorded on 7th and 10th Jul. On the latter date, five voles were brought to the hungry juveniles in 90 minutes. Juveniles were seen again on 15th, 22nd, 23rd, 24th, 25th and 29th Jul. Four birds including the two adults and two juveniles were seen on 5th Aug. Juveniles were recorded on 10 further dates. They were last seen on 13th Oct.

Away from the nest site, single adults were seen hunting in Bobby Field on 18th Oct and near Wood Bongs on 20th Oct. There were only eight records in Nov but 18 records in Dec with m and f seen on eight dates near the dead Alder in Dec. They were seen mating on 28th Dec!



Juvenile Kestrel. Photo Rob Wang.

Hobby (*Falco subbuteo*)

Scarce passage migrant & summer visitor, Apr-Oct

It was a good year for Hobby records as they are thought to have bred nearby. There were 42 records in 2019 (10 in 2018, 15 in 2017 and five in 2016).

The first record of the year was of a single which flew over the Mere on 9th Jun (25th Jul in 2018). There were four additional records of singles in Jun on 12th, 16th, 19th and 20th. Interestingly, there were only two records in Jul when a bird flew over from the direction of Ashley on 15th Jul and another was seen on 31st. There were six records in Aug with a single feeding on dragonflies on 15th. There were an amazing 26 records in Sep when a family party visited the Mere almost daily. Four were seen on 3rd and 6th and three on 11th. Two birds (often an adult and juvenile) were observed on 12 dates. Often birds were hunting dragonflies. Birds lingered into Oct with an adult and juvenile seen on 1st and a single bird on 5th and 11th, the last record (23rd Sep in 2018).



Hobby eating a dragonfly on the wing. Photo Steve Collins.

Peregrine (*Falco peregrinus*)

Irregular visitor at all times, primarily in autumn and winter

Peregrine was recorded on eight dates or 3% of total recording days (four days or 2% in 2018, seven days or 3% in 2017 and 2016).

All the records were of single birds. There were three records in Feb with sightings from the Observatory on 18th, 25th and 29th. Another flew past the Observatory on 30th Apr. There were records on 9th May, 4th and 8th Sep. The species was not seen again until 16th Dec when one was seen flying up and down along Mere Covert chasing Teal.

Jay (*Garrulus glandarius*)

Resident, probably breeding regularly

Jay was recorded throughout the year. Three birds were recorded on 30th Apr and 5th Sep. Four were logged on 2nd Oct.



Jay, Photo John Adshead.

Magpie (*Pica pica*)

Breeding resident

Magpie was often seen on the fields surrounding the Mere. The highest count was five seen on 6th Feb. Four were recorded on 11th, 17th Feb, 17th Apr, 28th May and 25th Sep. Two were seen chasing a Hobby on 4th Sep.

Jackdaw (*Corvus monedula*)

Breeding resident

Jackdaws are often seen 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 over 20 included c30 on 20th Jan, c30 around Rostherne village on 13th Aug. It is thought a pair bred in the dead Alder near the Boathouse after the Kestrel chicks had fledged. They defended the nest site aggressively as the Kestrel pair returned to the tree. Furthermore, four were seen chasing a Hobby away from the area on 4th Sep. Around 30 were seen in Church Field on 20th Sep. Around 200 were seen roosting in Harpers Bank Wood during the evening of 28th Dec.



Jackdaw harassing Kestrel on the dead Alder, Photo Rob Wang.

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 2019, with tick-list only entries on 15th Feb, 27th, 28th Dec. Two juveniles were seen feeding on the Cricket Pitch on 28th Oct.

Carrion Crow (*Corvus corone*)

Breeding resident

Carrion Crow was recorded throughout the year. High counts included 12 on 31st Mar, 10 on 5th Jun and a flock of around 30 flying over on 25th Sep. Only one nest was found in Wood Bongs which represents the poorest showing since 2015.

Raven (*Corvus corax*)

Scarce visitor, has bred

Raven was recorded on 22 days or 9% of total recording days matching last year (21 days or 9% in 2017 and 16 days or 7% in 2016).

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:

11 th Feb	1
14 th Feb	2
5 th May	1 feeding in Mere Meadow
3 rd Jun	4 flying over the Snipe Marsh
5 th Jun	1
16 th Jun	1
22 nd Jun	1

7 th Jul	1
23 rd Jul	3
29 th Jul	2
27 th Aug	1
7 th Sep	1
8 th Sep	1
20 th Sep	1
23 rd Sep	2 in Mere Covert
2 nd Oct	1
8 th Oct	4
16 th Oct	1
17 th Oct	2
21 st Oct	2
23 rd Oct	1
6 th Nov	1

Coal Tit (*Periparus ater*)

Breeding resident

Four birds were logged on 11th Feb and 7th Apr. Two territories were plotted with one in Mere Covert and Wood Bongs. The breeding population on the Reserve is at a low level with the ten-year averages to 2019 and 2009 at 2.8 and 4.4 respectively.



Coal Tit. Photo Jules Hill.

Blue Tit (*Cyanistes caeruleus*)

Breeding resident

Double figure counts in the first half of the year included 10 on 16th Jan, 10th Feb and 7th Apr. The highest count during this period was 12 on 14th Feb. In the second half of the year 10 were recorded on seven dates. The highest counts were 14 on 27th Aug, 12 on 15th Aug, 22nd Sep and 17th Nov. There were 17 recorded on 28th Dec. A total of 26 territories were plotted in the four areas surveyed, down from 27 in both 2017 and 2018. The average taken over the survey period 1977 to 2019 is 27.69 territories.

Family parties seen in Aug included seven on 2nd and six on 4th and 8th.

Reported Movements of Blue Tits

Ring no.	Ring code/sex	Date	Place	Movement
AHF1478 R	3J	18-08-19 18-09-19	Knutsford Moor Rostherne Mere	5 km N
AZB7754 R	3	05-09-19 09-10-19	Rostherne Mere Woolston Eyes, Warrington	11 km WNW

3 – bird of the year

3J – bird of the year in juvenile plumage

Great Tit (*Parus major*)

Breeding resident

Notable counts included 14 on 14th and 10 on 10th and 17th Feb. The number of territories in the main survey areas was 13 matching last year's total, but there was also an additional territory recorded in Long Pasture. The breakdown in the main areas was Mere Covert (5), Harpers Bank Wood (3), Wood Bongs (4) and Shaw Green Willows (1).

Skylark (*Alauda arvensis*)

Autumn passage migrant, irregular visitor, may breed occasionally

Skylark was recorded on seven days (10 days in 2018, 11 days in 2017 and six days in 2016). The majority of sightings were in Apr. The records are listed below:

11 th Apr	1 singing over Penny Croft
17 th Apr	1 singing over Car Park
21 st Apr	1 singing over Penny Croft
29 th Apr	2 singing over Bobby Field
30 th Apr	1 singing over Church Field
21 st Oct	1 over
22 nd Oct	2 in Bobby Field

Sand Martin (*Riparia riparia*)

Passage migrant, Feb-Oct

There were 24 records matching last year's total (31 records in 2017, 42 in 2016 and 38 in 2015). The first arrival was a single seen over the Mere on 8th Mar, which was markedly earlier than last year (27th Mar). There were 10 records in Mar with 30 on 24th and 50 on 31st. The highest counts were in Apr with c300 on 4th and 5th and c100 on 7th and 9th. There were two records of singles in each of May and Jun. Two were seen on 13th Aug with the last record a single on 31st Aug (29th Aug in 2018).

Swallow (*Hirundo rustica*)

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

Swallow was only recorded on 49 days (76 days in 2018, 60 days in 2017 and 77 days in 2016). The first arrival was a single seen on 30th Mar which was earlier than last year and 2017 (4th Apr). The highest count was a mixed flock of c100 with approximately 50 House Martins on 8th May. Double figure counts included 20 on 12th Jun, 12 on 15th Jul, 10 on 21st and 23rd Jun, 10 on 13th, 12 on 20th and 10 on 27th Aug, 30 on 5th and 20 on 13th Sep. The last record was six on 30th Sep (23rd Sep in 2018).

House Martin (*Delichon urbicum*)

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

The species was recorded on 22 days (21 days in 2018, 18 days in 2017 and 33 days in 2016). The first arrival was a single seen on 2nd May, about a month later than last year (4th Apr in 2018). Double figure counts included 15 on 7th and around 50 in a mixed flock with Swallows on 8th May. There were 20 on 5th Jun, 10 on 29th Jul, 30 on 12th and 20 on 13th Aug. An adult f ringed near Penny Croft on 12th Aug was the first since Jun 2001! Two juveniles were caught on the path through Long Pasture on 29th Aug. The last record was eight on 1st Oct (23rd Sep 2018).



Female House Martin. Photo by Malcolm Calvert.

Cetti's Warbler (*Cettia cetti*)

Rare vagrant

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	1/16	1/20	7/24	13/18	9/17	3/14	2/16	5/23	8/27	14/27	6/17	7/25
Max nos	1	1	1	1	1	1	1	2	2	3	3	3

It was a very good year for records of Cetti's Warbler at Rostherne. The species was logged on 76 days or 31% of total recording days.

The first record of the year was a bird singing from the Boathouse on 1st Jan. There wasn't another report until one was heard singing near the Bittern Hide on 22nd Feb. There were seven records in Mar. A male was heard singing near Penny Croft on 27th and it was ringed by Jake Gregory on 28th. It was heard singing throughout Apr and May on a total of 22 days. There were only three records in Jun with a juvenile caught by Malcolm on 26th. A second juvenile was ringed on 15th and a third on 25th Jul. A total of five juveniles were ringed by 26th Aug, thought to be from two broods. Birds were heard calling from the Boathouse and Blackburn's Bridge on 29th Aug. Another juvenile was ringed on 18th Sep bringing the total to six. There were 14 records in Oct, six in Nov and seven in Dec. Three were heard singing in separate locations on 28th Oct, 22nd, 24th Nov and 17th Dec. The last record of the year was of a bird singing near the Bittern Hide on 28th Dec. A total of eight birds were ringed in 2019.

Details of Birds Caught over the Years

No.	Ring	Date	Age	Wing	Wgt	Time	Site	Initials	Photo	Comments
1	X107162	14/12/09	2M	63	15.8	1055	BRDA	MC	Y	Song, Tape Song, Tape
		06/03/10	4M	62	16.6	1010	RP	MC	Y	
		26/04/10	4M	62	16.7	1230	BBA	MC	Y	
		28/04/10	4M	62	16.1	920	RDB	MC		
2	V297914	20/05/10	4F	55	14.2	840	PCG	MC	Y	BP, Col ring
		(Ringed 18/07/09	3JF	Upton Warren, Droitwich, Worcestershire)						
3	X655872	02/07/10	3F	55	12.2	840	RP	MC		
		30/08/10	3F	57	12.9	1145	RP	MC	Y	
		03/09/10	3F	57	12.9	1100	RP	MC		
4	D937879	26/09/15	3F	54	12.4	1100	RH	MC	Y	
5	S706959	17/10/18	2F	54	12	1200	MHA	MC	Y	
6	AZB7666	28/03/19	4M	63	14.8	1425	PCG	JTG	Y	Song, Tape CP Song, Tape
		07/05/19	4M	63	16.9	900	OBRC	MC		
		30/06/19	4M	63	16.8	1130	RE	MC		
		14/09/19	4M	67	15.4	830	RE	JDA	Y	
7	AZB7709	26/06/19	3J	57	12	1320	MHA	MC	Y	Pink legs
8	AZB7719	15/07/19	3J	54	12.8	1055	EREB	MC	Y	Pale legs
9	AZB7720	25/07/19	3J	57	13.6	1100	OBRC	MC	Y	Pink legs
10	ALD3521	24/08/19	3J.	59	12.5	815	MHA	JDA	Y	
11	AZB7744	26/08/19	3J	55	12.9	1135	RE	MC	Y	Pale legs
12	AZB7774	18/09/19	3F	56	11.4	925	RE	MC	Y	Pale legs Song,
13	AZB7783	17/10/19	2M	62	15.7	1135	RHE	MC	Y	Tape, P. I.



Juvenile Cetti's Warbler. Photo Malcolm Calvert.

A Short History of Cetti's Warbler at Rostherne by Malcolm Calvert

A Cetti's Warbler was first noted on the Reserve at Shaw Green Willows on 8 & 9 May 1989 - the second record for Cheshire.

A full 20 years elapsed before any further evidence of the species, a singing bird near the Boathouse heard from the Observatory on 25 Oct 2009. The bird persisted, being frequently heard through the winter and mist-netted and ringed at Shaw Green Willows (SGW) on 14 Dec 2009. Further captures of this individual occurred on 6 Mar and 26 & 28 Apr 2010 at SGW. Soon after this the bird fell silent and we feared it had moved on, having failed to find a mate.

A f, bedecked in colour rings and a BTO ring, was netted at Penny Croft on 20 May 2010; she had a full brood patch and was ringed as a juvenile on 18 Jul 2009 at Upton Warren, Droitwich, Worcestershire. Suddenly, breeding of the species on the Reserve became a probability but in the absence of a nest or a young juvenile we would be tantalisingly short of evidence!

Patience was the key and on 2 July a juvenile f appeared in the 'reeds path' net alongside Blackburn's Brook bridge; the same net again presented the bird on 30 Aug and 3 Sep. We had proven Rostherne breeding, the second Cheshire record beaten only by Professor David Norman's birds at Oxmoor Wood, near Runcorn in 2009.

Disappointingly, we had no Rostherne evidence of Cetti's Warbler in the years, 2011-2014. A young f was caught on 26 Sep 2015 by the Whitley Hide (now called Bittern Hide) followed by another f of indeterminable age on 17 Oct 2018.

A singing m was noted in early 2019 and was attracted by tape to a net at Penny Croft on 28 Mar; it was subsequently captured in the Old Boathouse (Wood Bongs) reed bed on 7 May and below Long Pasture on 30 Jun and 14 Sep. (Note the different locations. I understand the species is often polygamous and a male may have concurrent nests, each near a song post). Six birds of the year were caught between 26 Jun and 18 Sep - 2 at SGW, 3 at Long Pasture and one at old Boathouse reeds - plus an unaged m near the Bittern Hide on 17 Oct. Some of the juveniles had bright pink legs, others were dull pink suggesting at least two broods were involved. Cetti's Warblers are dimorphic, the m having slightly longer primaries than f; measurements suggest that perhaps most of the young birds were f. There were 20 records of Cetti's calling from 17 Oct to the end of the year with three birds calling on 28th Oct, 22nd and 24th Nov, one was calling near the Boathouse below the Observatory, one near the Bittern Hide and another near Blackburn's Bridge.

Long-tailed Tit (*Aegithalos caudatus*)

Breeding resident

The species was recorded on 114 days or 47% of total recording days (117 days or 48% in 2018, 136 days or 56% in 2017 and 140 days or 57% in 2016). During the first winter period eight birds were seen on 16th Jan, 10th Feb and 23rd Mar. Family parties of eight and ten were seen in Shaw Green Willows on 22nd May and 10th Jun respectively. A large flock of 35 birds flew over the Bittern Hide on 27th Jul. Additional double figure counts included 16 on 23rd, 18 on 27th Aug, 10 on Church Field on 2nd Oct, 10 on Bobby Field on 18th Oct and 18 and 20 in Shaw Green Willows on 4th and 8th Nov respectively. There was a total of five breeding territories. The breakdown was Harpers Bank (2), Wood Bongs (1), Shaw Green Willows (1) with an extra one at the foot of Long Pasture. A total catch of 32 birds by the ringing team suggested a good breeding season as many of them were juveniles.

Willow Warbler (*Phylloscopus trochilus*)

Breeding summer visitor, Mar-Nov; declining

It was a poor year for Willow Warbler records. The species was recorded on only 28 days or 11% of total recording days (42 days or 17% in 2018, 27 days or 11% in 2017 and 47 days or 19% in 2016). The first record of the year was a single on 7th Apr (5th Apr in 2018). Two birds were heard singing on 17th Apr. Three juveniles were seen in front of the Observatory on 6th and 8th Aug. Two were recorded on 13th, 21st and 23rd Aug with the last report a tick-list only entry on 27th Aug (20th Aug in 2018). There were three Willow Warbler territories with one in each of Mere Covert, Harpers Bank Wood and Shaw Green Willows. There was no territory at the foot of Long Pasture where there has been one in most years from 2013.

Chiffchaff (*Phylloscopus collybita*)

Breeding summer visitor, rare in winter

Chiffchaff was recorded on 89 days or 36% of total recording days (105 days or 43% in 2018, 98 days or 40% in 2017 and 109 days or 44% in 2016). The first record for the year was one in front of the Observatory on 28th Feb (24th Mar in 2018). There were reports of presumably the same bird on 8th and 9th Mar. The species was then seen almost daily from 20th Mar to 25th Sep. Counts of birds singing at different locations around the Reserve included 8 on 26th and 7 on 31st Mar. Fourteen were heard singing on 30th Apr. Later in the year, a family party of four was seen in Wood Bongs on 22nd Jul and six on 8th Aug. An amazing 29 were counted around the Reserve on 15th Aug. Two families of six birds in each family were recorded in Shaw Green Willows on 13th Aug. Eight were recorded on 23rd with 10 on 27th Aug. Eight were seen on 13th and 14th Sep. There were three records in Oct with the last record a single on 16th Oct (25th Oct 2018). A record 107 Chiffchaff were ringed during the season (51 in 2018, 66 in 2017). Most of these birds were juveniles, suggesting a successful breeding season for the species. Additionally, five were caught having been ringed on the Reserve in earlier seasons.

There were 23 breeding territories plotted, plus one on Long Pasture which set a new record total. The number of territories increased in each of the four main areas. The breakdown of territories was Mere Covert (9), Harpers Bank (7), Wood Bongs (4), Shaw Green Willows (3), plus one at the foot of Long Pasture.

Sedge Warbler (*Acrocephalus schoenobaenus*)

Breeding summer visitor, Apr-Sep

The species was recorded on 23 days after a run of 27 days for three years. The first record of the year was of two in Shaw Green Willows on 23rd Apr (29th Apr in 2018). There was a scattering of records from the end of Apr until early Sep with the highest counts of four on 24th and 30th Apr. The last record was two ringed by Malcolm on 5th Sep. There was a marked increase in Sedge Warbler territories with five plotted in Shaw Green Willows and an extra one at the foot of Long Pasture.

Additional Notes by Malcolm Calvert

Of 10 adults caught, six were new, one was ringed in 2016 and three in 2018. A total of 10 juveniles were ringed. An incredibly heavy adult f, presumably putting on weight as fuel for migration, was captured in Long Pasture on 12 Aug weighing 19.8 grams. The other nine adults had weights between 11.2 g and 12.3 g, as expected. I corresponded with Professor David Norman about the exceptional bird, he had only once discovered greater weight, a young bird at Woolston Eyes on 13 Sep 1981 scaled in at 20.5 grams. The previous known Rostherne heaviest Sedge Warbler was a young bird which I caught on 4 Sep 1979 at 17.8 grams.

Reported movements of Sedge Warbler

Ring no.	Ring code/sex	Date	Place	Movement
S706886	3J	04-07-18	Rostherne Mere	
R		14-07-19	Knutsford Moor	5 km S
AHH2694	3J	04-08-19	Pickmere	
R		12-08-19	Rostherne Mere	10 km NE

3J – bird of the year in juvenile plumage



Sedge Warbler. Photo Malcolm Calvert.

Reed Warbler (*Acrocephalus scirpaceus*)

Breeding summer visitor, Apr-Oct

The first arrival was a single heard near the reed bed below Wood Bongs on 12th Apr (6th Apr 2018). The last record was of one ringed by Malcolm on 18th Sep (5th Sep 2018).

There were an estimated 57 pairs on territory around the Reserve (45 pairs in 2018). A total of 117 adults were caught with 59 new and 52 retrapped from earlier seasons; six ringed elsewhere. A total of 95 juveniles were netted between 18th Jun and mid Sep. The oldest retrap was of a male ringed as a juvenile in Jul 2010 (also caught in 2012 and 2018). A total of 23 nestlings from six broods was ringed in nests in the Mere Covert reed bed in mid Jul.

Reported movements of Reed Warblers:

Ring no.	Ring code/sex	Date	Place	Movement
S875524 R	4M	13-08-17 07-05-19	Knustford Moor Rostherne Mere (& 11-05-19, 14-05-19)	5 km N
AXC0687 R	3J	24-07-18 14-05-19	Woolston Eyes, Warrington, Cheshire Rostherne Mere	11 km ESE
ACD8029 R R	4F	04-08-18 14-05-19 26-06-19	Stanford Res., Northamptonshire Rostherne Mere Rostherne Mere	135 km NW
Z881004 R R	4 F	03-06-16 03-06-18 09-06-19	Portland Bill B. O., Dorset Rostherne Mere Rostherne Mere	315 km N
S706630 R R	3J	16-08-17 13-07-18 12-07-19	Rostherne Mere Woolston Eyes (& 24-07-18) Woolston Eyes	11 km WNW
AXC4503 R	3J F	03-09-18 26-06-19	Woolston Eyes, Warrington, Cheshire Rostherne Mere	11 km ESE
AZB7482 R	3J F	05-08-18 12-08-19	Knustford Moor Rostherne Mere	5 km N
ATD3906 R	4F	04-08-19 12-08-19	Shotton, Flintshire, Wales Rostherne Mere	47 km ENE

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 nest. Photo Malcolm Calvert.

Grasshopper Warbler (*Locustella naevia*) Rare passage migrant and summer visitor, probably bred

There was just one record when a bird was heard reeling in the Snipe Marsh on 13th May. The species was last recorded in 2017 when there were five records.

Blackcap (*Sylvia atricapilla*) Breeding summer visitor, occasional in winter, no Feb records

Blackcap was recorded on 80 days or 33% of total recording days (98 days or 40% in 2018, 86 days or 36% in 2017 and 77 days or 31% in 2016). The first record of the year was of a male singing in Mere Covert on 27th Mar (6th Apr in 2018). Six were singing in various locations around the Reserve on 7th, eight on 17th and 12 on 30th Apr. A bit later in the year seven were recorded on 28th May and six on 27th Jun. The last record of the year was a single on 22nd Sep (19th Sep in 2018 and 2017). There was an amazing total of 40 breeding territories, plus one on Long Pasture. This is by far the best ever showing for the areas surveyed. The ten year average to 2019 is 22.4. The spread of territories was Mere Covert (18), Harpers Bank (10), Wood Bongs (9), Shaw Green Willows (3), plus one at the foot of Long Pasture; see CBC Report for further details.

Whitethroat (*Sylvia communis*) Passage migrant, breeds irregularly; Apr-Sep

Whitethroat was recorded on 23 days (20 days in 2018, 11 days in 2017 and 34 days in 2016). The first arrivals were two seen and heard on 23rd Apr, much earlier than in 2018 (1st May) and 2017 (2nd May). Three were logged on 30th Apr, two on 14th May and two on 27th Jun. The last record of the year was of a juvenile recorded on 24th Jul (17th Aug in 2018). An adult male was ringed by Malcolm on 23rd May. There were two breeding territories plotted, both in Shaw Green Willows.

[Firecrest (*Regulus ignicapilla*)] Very rare winter visitor and migrant

One was reported from the Observatory on 24th Feb but no further details were provided. This is the first record since Feb 2012 and then Mar 1994! This is a very rare species at Rostherne and any report should be accompanied by a description.

Goldcrest (*Regulus regulus*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	4/16	1/20	4/24	7/18	4/17	1/14	0/16	10/23	4/27	7/27	5/17	6/25

Goldcrest was recorded on 53 days or 22% of total recording days (50 days or 20% in 2018, 61 days or 25% in 2017 and 42 days or 17% in 2016). The species was seen in every month throughout the year. Four birds were seen on 30th Apr, three on 27th Aug and 13th Oct. Interestingly, nine were caught by John Adshead as he witnessed a movement of Goldcrests past the Bittern Hide on the morning of 14th Sep. A total of 11 were caught and ringed between 7th and 18th Sep.

There was a record breaking 12 breeding territories plotted, with five in Mere Covert and Harpers Bank Wood and two in Wood Bongs. The total was markedly higher than the previous high of nine in 2008 and four times the figure of three in 2018; see CBC Report for further details.

Wren (*Troglodytes troglodytes*)

Breeding resident

The highest counts of birds heard singing around the Reserve included 14 on 31st Mar and 22 on 30th Apr. There was a total of 66 territories following the CBC-type survey, plus one on Long Pasture. The breakdown of territories was Mere Covert (26), Harpers Bank Wood (12), Wood Bongs (18) and Shaw Green Willows (10) plus one on Long Pasture.

Nuthatch (*Sitta europaea*)

Breeding resident

A family party of six was seen in Wood Bongs on 8th Aug. There was a total of six territories plotted after the CBC-type survey, the same total found in six of the last ten years. The breakdown of territories was Mere Covert (1), Harpers Bank Wood (2) and Wood Bongs (3).

Treecreeper (*Certhia familiaris*)

Breeding resident

Three pairs were seen in Harpers Bank Wood on 28th Apr. Four Treecreeper territories were plotted in 2019 which was a slight decrease since 2018. The breakdown of territories was Harpers Bank Wood (2), Wood Bongs (1) and Shaw Green Willows (1).

Starling (*Sturnus vulgaris*)

Breeding resident

Starling was recorded on 47 days or 19% of total recording days (48 days or 20% in 2018, 38 days or 16% in 2017 and 14 days or 6% in 2016). The first record of the year was of c30 seen on 1st Jan. Around 50 were recorded on 11th Jan. There was a small murmuration of c150 on 15th Mar. Around 500 roosted in the Shaw Green Willows reed bed on 16th and c1000 on 26th Jul. There were no further reports of roosting until Sep when c200 and c250 were logged on 3rd and 14th Sep respectively. Numbers started to increase during late Oct with c1000 on 23rd, c7000 on 26th and c10,000 on 28th. Numbers peaked in early Nov with c50,000 on 3rd and c30,000 on 4th, 8th and 10th. They had fallen to c10,000 by 22nd and then down to c5,000 by 31st Dec.

Blackbird (*Turdus merula*)

Breeding resident

There was only one double figure count of 12 on 30th Apr. A family of five were seen in front of the Observatory on 7th Jul. The number of Blackbird territories fell for the third consecutive year with 21 plotted plus one on Long Pasture. The averages for the ten-year periods to 1988, 1998, 2009 and 2019 are 16.9, 21, 16.7 and 22.8.

Fieldfare (*Turdus pilaris*)

Winter visitor & passage migrant

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	4/16	0/20	1/24	0/18	0/17	0/14	0/16	0/23	0/27	4/27	0/17	2/25
Max nos	c60		12							c100		1

Fieldfare was recorded on only 11 days or 5% of total recording days (19 days or 8% in 2018, 12 days or 5% in 2017 and nine days or 4% in 2016). There were only five records in the first winter period with four in Jan. Around 60 were seen on 25th Jan. The species wasn't seen again until late Mar when 12 were in Wood Bongs on 24th. This was the last record of the first winter period. The first record in the second half of the year was a tick-list entry on 12th Oct. The highest count of the year was c100 on 28th Oct. Twenty-five were recorded on 31st Oct. There were no further records until singles were recorded on 3rd and 6th Dec.

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	8/16	5/20	2/24	0/18	0/17	0/14	0/16	0/23	0/27	16/27	13/17	14/25
Max nos	c20	4	1							c80	c50	c100

Redwing was recorded on 58 days or 24% of total recording days (42 days or 17% in 2018 and 2017 and 40 days or 16% in 2016). There were 15 records in the first winter period with around 20 birds recorded on 4th Jan. The last record of the first winter period was a tick list entry on 29th Mar. There were 43 records in the second winter period. Around 50 was the first record on 6th Oct. The highest count in Oct was c80 on 21st. Around 50 on the 24th Nov was the maximum for the month. The highest count of the year was c100 on Mere Meadow on 29th Dec.

Song Thrush (*Turdus philomelos*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	10/16	14/20	14/24	9/18	11/17	6/14	5/16	2/23	1/27	6/27	1/17	8/25

Song Thrush was recorded on 87 days or 36% of total recording days (96 days or 39% in 2018, 67 days or 28% in 2017 and 94 days or 38% in 2016). Five birds were recorded singing around the Reserve on 5th Jun. Four birds were logged on 21st Jan, 11th, 13th Feb, 17th Apr, 28th May, 10th, 13th and 14th Oct. The number of Song Thrush territories was nine. The split was Mere Covert (3), Harpers Bank Wood (2), Wood Bongs (2) and Shaw Green Willows (2).

Mistle Thrush (*Turdus viscivorus*)

Scarce breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	6/16	13/20	3/24	10/18	4/17	3/14	0/16	1/23	6/27	18/27	6/17	11/25

The species was recorded on 81 days or 33% of total recording days which represents a good showing (70 days or 29%, 63 days or 26% in 2017 and 50 days or 20% in 2016). In the first half of the year three (two on the Sprout Field and one on the Cricket Pitch) were recorded on 8th Feb. Five were seen on the Cricket Pitch on 14th Jun.

There was only one sighting of the species from this date until six were seen mobbing a Kestrel in Church Field on 20th Sep. There was a good series of sightings during Oct with 16 on the Sprout Field on 3rd, 12 in front of the Observatory on 19th and 10 on Church Field on 19th. Mainly singles were recorded in Nov and Dec. There was a Mistle Thrush registration in Wood Bongs but insufficient records to plot a territory.

Spotted Flycatcher (*Muscicapa striata*)

Scarce, breeding summer visitor, Apr-Oct

It was another very good year for Spotted Flycatcher sightings. There were 28 records (31 in 2018, 16 in 2017 and five in 2016). A single in Wood Bongs on 16th May was the first record in the year. Once again, there was a series of records of a nesting pair in Wood Bongs from 20th May to 27th Jun. A family party of three was recorded in Wood Bongs on 13th and 22nd Jul. A family party of four was seen in front of the Observatory on 20th, 21st and 25th Aug. Three were seen in the trees down by the Boathouse on 1st and 3rd Sep. The last record of the year was of a bird seen in Wood Bongs on 8th Sep. A territory was plotted in Wood Bongs for the third year running. It is thought that the family sightings near the Observatory later in the year were of the birds which had bred in Wood Bongs.

Robin (*Erithacus rubecula*)

Breeding resident

High counts of birds seen around the Reserve included 18 on 30th Apr and nine on 14th Feb, 31st Mar, 13th Sep and 16th Oct. There were 41 territories plotted, plus one on Long Pasture. The ten-year averages to 1988, 1998, 2009 and 2019 are 18.5, 30.8, 46.1 and 31.1.

Stonechat (*Saxicola rubicola*)

Breeding resident

One was seen perched on the wire fence bordering Bobby Field on 11th Oct, the first record since Apr 2012.



Stonechat. Photo Steve Collins.

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 35 records in 2019 with the majority of sightings in Rostherne village. Six were recorded on 14th Feb and five on 4th Nov. Six were seen in the Sprout Field on 13th Oct. A House Sparrow sang at

the southern edge of Wood Bongs on May 9th during the CBC-type survey. This a very rare event and it is presumed the bird had wandered from the village.

Duncock (*Prunella modularis*)

Breeding resident

Five were heard singing on a walk around the Reserve on 17th Apr. Three were recorded on 28th Dec. There were only three Duncock territories plotted, one in Wood Bongs and two in Shaw Green Willows. The ten-year averages to 1988, 1998, 2009 and 2019 are 11.3, 18, 9.1 and 2.9; see CBC Report for further details

Grey Wagtail (*Motacilla cinerea*)

Irregular visitor, had bred

There were 11 records in 2019 (nine in 2018, two in 2017, none in 2016). The majority of records were of single birds. One was seen in Dolls Meadow on 27th Jun and one on Brook Meadow on 16th Jul. One was on the shoreline of Harpers Bank Wood on 30th Aug. One was seen near the Bittern Hide on 24th Oct and two were logged on 31st Oct.

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

Breeding resident

There were 51 records in 2019 (44 in 2018, 33 in 2017 and 16 in 2016). There were 24 records from Feb to Jul. The majority of sightings were on the Cricket Pitch. Three were recorded on 9th Feb, 17th, 19th Apr with 4 on 12th Apr and 15th Jul. There were no sightings in Aug but there were 27 records from 25th Sep until 28th Dec but often no location details were provided. There were 14 records in Oct. Around 100 were seen on the Sprout Field on 9th, c30 on 10th and 12 on 16th. Six were seen on the Cricket Pitch on 8th Nov.

Meadow Pipit (*Anthus pratensis*)

Passage migrant & scarce winter visitor; no known June records

There were 16 records in 2019 (20 in 2018, 17 in 2017 and five in 2016). Two single birds were seen in Mar with one seen near Shaw Green Willows on 28th. There were 12 records in Oct. Four were seen in the Sprout Field on 9th and five on 16th. Eight were recorded on Bobby Field on 11th and 12 on 18th. There were singles seen on 15th Nov and 28th Dec with one sitting on a molehill on Church Field.



Meadow Pipit. Photo Steve Collins.

Chaffinch (*Fringilla coelebs*)

Breeding resident

The highest count was only seven on 10th Feb and 30th Apr. There were 18 territories plotted on the Reserve with an extra one in Long Pasture, which represents a marked increase on 14 from last year. The ten-year averages to 1988, 1998, 2009 and 2019 are 25.2, 36.3, 28 and 15.5 respectively. The breakdown of territories was Mere Covert (6), Harpers Bank Wood (3), Wood Bongs (8) and Shaw Green Willows (1) plus an extra one at the foot of Long Pasture.

Brambling (*Fringilla montifringilla*)

Passage migrant & winter visitor, Oct-May

There were five records from 21st Mar to 7th Apr. One was seen on wires just off the Reserve on 21st Mar. A female was seen in front of the Observatory on 27th and again on 28th Mar, the same date a male was recorded in Mere Covert. A female was seen again in front of the Observatory on 5th Apr. One was seen in Mere Covert on 7th Apr but no details were given regarding the sex of the bird.

Bullfinch (*Pyrrhula pyrrhula*)

Breeding resident

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	10/16	10/20	7/24	2/18	0/17	1/14	0/16	10/23	5/27	5/27	4/17	18/25
Max nos	4	2	2	1		1		5	6	7	3	6

Bullfinch was recorded on only 72 days or 30% of total recording days which represents a much lower recording rate compared to recent years (164 days or 67% in 2018, 145 days or 60% in 2017 and 111 days or 45% in 2016).

As in most years, the majority of records were of birds visiting the Bird Table in front of the Observatory. As would be expected visits increased in the winter months with the species recorded on 10 days in Jan, Feb and 18 days in Dec. The maximum in the first winter period was four (two males and two females) on 1st and 9th Jan. There were only three sightings from the end of Mar until early Aug. Family parties included five on 23rd Aug and six in Shaw Green Willows on 8th Sep. The maximum count for the year was seven (six in Penny Croft, one in Shaw Green Willows) on 22nd Oct. Six were recorded on 15th and 28th Dec. There were registrations during the CBC-type survey in Wood Bongs and Shaw Green Willows. The last territory plotted in one of the present survey areas was in Mere Covert in 1995. Three Bullfinch were ringed in 2019. Three juveniles were caught in Shaw Green Willows between 24 Aug and 18 Sep.

Greenfinch (*Carduelis chloris*)

Resident, breeds nearby

Greenfinches are common in the gardens of properties surrounding Rostherne Mere. However, they are infrequently recorded on the Reserve. There were 23 records in 2019, higher than the 11 in 2018 and 2017. The majority of records were of single birds seen near the Natural England car park. One was seen in the Sprout Field on 23rd Apr. Two were seen on 20th, 27th Jun and 24th Jul. The species was recorded during CBC survey work for the first time in these areas since 2011, although this was just a single registration in Mere Covert on Apr 6th.

Linnet (*Carduelis cannabina*)

Irregular visitor, has bred

There were nine records in 2019 (four records in 2018 matching 2017). All the records were in Oct. A full list of the records was:

Oct
 9th 15 Sprout Field
 10th 12 Sprout Field
 11th 2 Bobby Field
 13th 8 Sprout Field
 16th 5 Sprout Field
 18th 20 Bobby Field
 24th 58 on the wires in Bobby Field
 26th tick-list only entry
 31st 16 Bobby Field

Lesser Redpoll (*Carduelis cabaret*)

Irregular visitor, has bred

Lesser Redpoll was seen on only three days or 1% of total recording days (4 days or 2% in 2018, 11 days or 5% in 2017 and 18 days or 7% in 2016). Six were seen in front of the Observatory with one on the Bird Table on 13th Feb. One was seen on the hedge near the Cricket Pitch on 13th Mar. One was seen near the Cricket Pitch on 28th Mar.

Goldfinch (*Carduelis carduelis*)

Resident, breeds nearby

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	11/16	15/20	10/24	10/18	3/17	7/14	6/16	10/23	14/27	18/27	11/17	13/25
Max nos	c20	21	6	8	6	6	4	2	c60	33	c20	46

Goldfinch was recorded on 128 days or 52% of total recording days (112 days or 46% in 2018, 106 days or 43% in 2017 and 98 days or 40% in 2016). In the first winter period around 20 birds were recorded on 13th Jan, 9th, 10th and 27th Feb. Monthly maxima included 60 on 22nd Sep, 33 on 3rd Oct, c20 in the Split Limes on 17th Nov and 46 below the Observatory on 11th Dec. A Goldfinch territory was plotted at the foot of Long Pasture, otherwise, as last year, birds were recorded in Wood Bongs and Shaw Green Willows, but it was not possible to plot any territories there. The last territory plotted in one of the present main survey areas was in Wood Bongs in 2008.



Goldfinch. Photo Rob Wang.

Siskin (*Carduelis spinus*)

Passage migrant & winter visitor

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No of Days Recorded	3/16	6/20	1/24	0/18	0/17	0/14	0/16	0/23	0/27	3/27	5/17	5/25
Max nos	30	20	1							12	6	6

Siskin was recorded on only 23 days or 9% of total recording days (25 days or 10% in 2018, 41 days or 17% in 2017 and 55 days or 22% in 2016). There were ten records in the first winter period from 11th Jan to 8th Mar. The highest count was c30 on 16th Jan. There were c20 on 10th Feb. There were 13 records from 14th Oct to 19th Dec. Around 12 were seen in the Alders in front of the Observatory on 24th Oct. The remaining records were of single figure counts.

Yellowhammer (*Emberiza citrinella*)

Irregular visitor, may breed nearby

One was seen in the hedgerow adjacent to Compartment 22 near Cherry Tree Farm on 7th Jul. This was the third record since May 2014.

Reed Bunting (*Emberiza schoeniclus*)

Breeding resident

Reed Bunting was seen throughout the year. The highest count from Jan to Mar was eight logged around the Reserve on 31st Mar. Eight were recorded on 7th, 23rd, 30th Apr, 22nd, 28th May and 27th Jun. Ten were seen on 5th Jun. Nine breeding territories were plotted plus an extra two at the foot of Long Pasture. This represents the best showing since ten were plotted in 2013. The breakdown of territories was Mere Covert (1), Shaw Green Willows (8) and the foot of Long Pasture (2). A total of 45 birds was caught, 40 were new with three retraps from earlier seasons and two were ringed elsewhere.

Reported movements of Reed Buntings:

Ring no.	Ring code/sex	Date	Place	Movement
ALD3042	3M	02-12-18	Woodford, Poynton, Cheshire	
R		31-01-19	Woodford, Poynton, Cheshire	
R		11-05-19	Rostherne Mere	16 km W
ALD2384	3M	20-10-18	Knutsford Moor	
R		12-08-19	Rostherne Mere	5 km N
3M – bird of the year, male				

	RINGING TOTALS						total
	2019 pullus (p)	2019 full-grown (fg)	1972-2018 p fg		Grand Total 1972-2019 p fg		
Barn Owl	1	1	8	2	9	3	12
Kingfisher		1		11		12	12
House Martin		3	90	5	93	5	98
Wren		18		434		452	452
Dunnoek		2	2	187	2	189	191
Robin		7	60	335	60	342	402
Blackbird		2	25	231	25	233	258
Song Thrush		2	9	74	9	76	85
Cetti's Warbler		8		4		12	12
Sedge Warbler		16	5	609	5	625	630
Reed Warbler	23	154	4656	3458	4679	3612	8291
Whitethroat		1		127		128	128
Blackcap		11		641		652	652
Chiffchaff		107		835		942	942
Willow Warbler		3	33	752	33	755	788
Goldcrest		11		25		36	36
Long-tailed Tit		32		593		625	625
Blue Tit		47	340	1578	340	1625	1965
Great Tit		8	341	630	341	638	979
Nuthatch		1	11	17	11	18	29
Treecreeper		8	6	141	6	149	155
Jay		1		24		25	25
Carrion Crow		1		1		1	2
Chaffinch		3	28	221	28	224	252
Bullfinch		3	3	138	3	141	144
Reed Bunting		40	77	810	77	850	927

	pullus	full-grown	
2019 TOTALS	24	491	
1972 – 2018 TOTALS	5994	13337	
GRAND TOTAL OF ALL SPECIES RINGED	6018	13828	19846

COMMON BIRDS CENSUS AT ROSTHERNE MERE NNR 2019

Following the mini-reshuffle in surveyors and areas surveyed between 2017 and 2018, 2019 was a settled year. Generally speaking the same surveyors surveyed the same areas except that Martin Steele joined the team and helped in seven visits to Mere Covert. Full details of who did what can be found in 'Census Visit Data 2019' below.

Excepting 2001, when Foot & Mouth disease access restrictions applied, Harpers Bank Wood, Mere Covert and Wood Bongs have been surveyed in every year since 1976 while the run of surveys in Shaw Green Willows began in 1977. The mere end of Long Pasture has been surveyed each year from 2013.

Figures given in the Results table for 1976-2018 refer to Harpers, Mere Covert, Shaw Green (not including Long Pasture) and Wood Bongs. Throughout this CBC Report, unless stated, information and comparisons relate solely to the areas surveyed in 2019. The ten-year averages usually (2010-2019 & 1999-2009), where given, relate to all the areas surveyed in 2019 but do not include results from the foot of Long Pasture.

The 2019 results of the survey are based on a total of 39 visits, 10 from each plot except Harpers (nine). The number of visits to each survey area has scarcely varied over at least the last ten years. Details of weather conditions were noted for each of the visits. Conditions were predominantly bright, clear or sunny on 12 visits and on a further six visits there were at least some sunny periods (totals 15 & 10 in 2018, 12 & 11 in 2017, 17 & 8 in 2016, 17 & 6 in 2015, 11 & 8 in 2014). Generally cloudy conditions prevailed on 21 visits and rain fell on eight of these (totals 14 including 3 in 2018, 17 incl. 6 in 2017, 15 incl. 6 in 2016, 17 incl. 9 in 2015, 21 incl. 9 in 2014). Happily, foggy conditions were again not encountered. Windy conditions were noted on six of the 39 visits (4 in 2018, 7 in 2017, 4 in 2016, 5 in 2015, 4 in 2014) and just one visit was made in what were described, or indicated by thermometer readings (5 degrees C or less), as cold conditions (3 in 2018 and 2017, 5 in 2016 & 2015, 6 in 2014).

The continuing use of broken or unbroken lines to indicate the registration of a different or the same singing bird remains of primary importance in CBC-type survey fieldwork. It may help fieldworkers if, each time they record a singing bird, they listen for a bird of the same species singing nearby and, if so, record a broken line between the two birds concerned.

2019 Results - Summary

From 2014 to 2017 this summary has included a number of references to the annual Preliminary Report of results of the BTO Constant Effort Survey to give some national context to the Rostherne CBC-type survey. That Report wasn't available at the time of preparing the Rostherne 2018 Report so the results of the national Breeding Bird Survey (BBS) for 2018 were used for comparison instead. However, the Preliminary CES 2019 Report is available at the time of writing <https://www.bto.org/our-science/projects/ringing-scheme/ringing-surveys/constant-effort-sites/ces-results/preliminary-0> and I have referred to it below. The CES Report measures changes in adult abundance compared to the 2014-2018 average. CES sites had another generally mild winter, but with periods of frost and snowfall in late Jan and early Feb. Overall, spring was generally warmer than average. The CES covers 24 woodland, scrub and reedbed species.

Waterbirds are not targeted by this survey but the *Mandarin* recorded in Shaw Green is worthy of mention as only the second ever appearance of the species – the first being in Old Hall Wood in 2004.

Pheasants were again recorded in all four areas, the total of seven territories plotted equals the highest ever total in the areas surveyed.

As in 2018 *Sparrowhawk* was not recorded during survey work. *Buzzard* however was recorded in or over all four areas but no nests were found or territories plotted.

Three *Stock Dove* territories were plotted in Harpers and there were registrations in Mere Covert, Shaw Green and Long Pasture. Three territories actually equals the highest total recorded in all four main areas.

Woodpigeon is generally not well covered by the survey but birds were nevertheless noted in all four areas and a territory was plotted in Harpers.

Cuckoo territories were held on the Reserve annually until 1997 and in most years until 2008 but since then the only registration was in Wood Bongs in 2017.

The only *Tawny Owl* was noted in Mere Covert on just one date. The status of this species on the Reserve appears to be not well known.

Not only was the first *Lesser Spotted Woodpecker* territory plotted since 2009, but the Mere Covert nest successfully fledged young. 2019 was only the fifth year since 2009 with any registrations of the species. Registrations in Long Pasture and Shaw Green are thought to refer to the Mere Covert birds.

After a record-equalling year in 2018 the number of *Great Spotted Woodpecker* territories slumped to just two – one each in Harpers and Wood Bongs, but with not enough registrations to plot territories in the other two areas. This is the lowest total since 2000. Given the known competition for nest sites between this and the previous species and predation by Great on Lesser it is tempting to speculate that the apparent relative lack of Greats this year may have played a part in the successful breeding of Lesser. The number of Great territories from 2009 (the last year a Lesser territory was plotted) to 2018 varied from four to six.

Green Woodpecker was not recorded during survey work in 2019, Wood Bongs hosted a territory in 2018 and is the only area of the Reserve to hold a territory this century – albeit less than annually.

As in 2018 *Kestrel* was not recorded during survey work.

Jays, apparently roaming birds, were recorded in all four areas, *Magpies* were recorded in all areas except Mere Covert and *Jackdaws* in Mere Covert and Shaw Green, but no territories were plotted.

Carrion Crow was recorded in only Harpers and in Wood Bongs where a nest was found. This is the poorest showing since 2015.

Two *Coal Tit* territories were plotted, one in both Mere Covert and Wood Bongs, there were insufficient registrations to plot territories in the other two areas. Two territories were plotted in 2018. The population on the Reserve remains at a low ebb, the ten-year averages to 2019 and 2009 are 2.8 and 4.4 respectively.

26 *Blue Tit* territories were plotted in the four areas surveyed, down from 27 in both 2017 and 2018. Numbers in Wood Bongs and Shaw Green were, respectively, the same or similar to last year. However, numbers in Mere Covert rose by three territories while Harpers declined by the same number. The ten-year averages to 1988, 1998, 2009 and 2019 stand at 18, 35.4, 30.7 and 28.6 respectively, thus showing considerable variability. The average taken over the whole period of the Survey however stands at 27.69 territories. On the CES Blue tit adult numbers showed a significant 12.9 % increase in abundance not reflected on our survey.

As in 2018 the number of *Great Tit* territories total is 13 – with 2012, the lowest in the areas surveyed since 1994; an additional territory was plotted in Long Pasture. The number of territories in each area were the same or very similar to 2018. The ten-year averages to 2019 and 2009 are 17.2 and 24.4 while the average over the whole survey period is 17.24. On the CES Great Tit adult numbers showed a significant 14.5% increase which, like the CES Blue Tit increase, is not reflected on our survey.

Cetti's Warbler made its more than welcome debut on the survey with a territory plotted in Long Pasture and two registrations in Shaw Green. Cetti's has of course already bred on the Reserve.

As in 2018 four *Long-tailed Tit* territories were plotted, plus one at the foot of Long Pasture. These results maintain the stable population indicated in the years from 2015 when four or five territories were plotted annually. The average from 1999-2019 is 3.25, whereas the average for the ten years to 1998 is 7.2. On the CES Long-tailed Tit adult numbers showed a significant 25.7% increase which is certainly not reflected on our survey.

Three *Willow Warbler* territories were plotted in the four main areas as in each year from 2016, but no territory was held at the foot of Long Pasture where there has been one in most years from 2013. The ten-year average to 2019 is 1.8. Four birds sang in Harpers on Apr 15th but only single birds sang on later survey visits there. The CES reported a not significant 1.2% decrease suggesting the status quo, a finding mirrored at Rostherne.

After two years of record high numbers for *Chiffchaff* in 2016 and 2017 (21 and 22 respectively) numbers fell back to 17 last year. This year a new record total of 23 was set, plus one on Long Pasture. The number of territories increased in each of the four main areas. The ten-year averages to 2019 and 2009 are 15.8 and 10.5 respectively while the average over the whole survey period is 11.83. The CES reported that Chiffchaff was one of two short-distance migrants “encountered in particularly high numbers relative to the five-year mean” and it registered a significant 10.4% increase. It is worth noting that the Rostherne five-year mean is 17 territories.

The number of *Sedge Warbler* territories was at a very low ebb in 2017 and 2018 with three and two respectively – two being the equal lowest since 1998. The 2019 survey showed a marked increase to five, all in Shaw Green, but still below the ten-year average to 2019 of 6.1. A further territory was plotted at the foot of Long Pasture. The CES showed a significant 15.4% decrease in adult numbers, not reflected in the Rostherne CBC-type survey result. Perhaps the number present on the Reserve has more to do with the amount of available habitat.

2019 was another blank year for *Grasshopper Warbler* following a territory being held in Shaw Green in 2017. Gropper only rarely appears on the CBC-type survey. Other than in 2017 birds were recorded in Shaw Green in 2004, when a territory was plotted, and in 2010 when there were insufficient registrations; a bird was in Long Pasture in 2015 but no territory could be plotted.

Blackcap had such an exceptional year on the Rostherne survey that I re-checked all the territories I had plotted. 40 territories in the four main areas compares with the previous highest total of 28 in 1993 and 2018. A further territory was plotted in Long Pasture. Territory numbers increased in all four main areas with particularly large increases in Harpers and Mere Covert. The ten-year average to 2019 is 22.4 while the ‘all years’ average is 17.95. The CES reported that Blackcap was the other short-distance migrant “encountered in particularly high numbers relative to the five-year mean” and it registered a significant 44.9% increase. The number of adults encountered was the highest since CES monitoring began in 1983. The CES Report states “Survival rates were also the highest on record suggesting that conditions were good on their wintering grounds over the 2018/19 winter”. It is worth noting that the Rostherne five-year mean is 22.6 territories. It is satisfying to note the co-relation between national and Rostherne results.

As in 2018 there were no *Garden Warbler* registrations in 2019. A brief review of the fortunes of the species on the Reserve and nationally was included in the 2018 CBC-type Survey Report.

There were no *Lesser Whitethroat* registrations again this year. A territory was last plotted on the Reserve in 2014 in Mere Meadow, an area not surveyed since then.

The only 2018 *Whitethroat* territory was plotted in Long Pasture. There were no registrations there this year but two territories were plotted in Shaw Green. This was the best showing since 2014 when Shaw Green held three territories. This species has been of unpredictable presence on the Reserve over the years with a maximum of three territories in the areas presently surveyed. Whitethroat was the only long-distance migrant singled out by the CES Report as returning in particularly high numbers relative to the five-year mean. Numbers showed a significant 16.6% increase. Given that the Rostherne sample is so small it is difficult to say with confidence that our result mirrors the national one but at least both results are in the same direction!

Goldcrest was the second species I re-checked having been so surprised by the number of registrations. The

12 territories plotted set a new record, easily surpassing the previous best of nine in 2008 and far in excess of the three in 2018. It was notable that the five territories in Mere Covert and Harpers were fairly widespread through both areas. The ten-year averages to 2019 and 2009 are 3.3 and 6.1 respectively; the all-time average is 3.3. Unfortunately Goldcrest is not covered by the CES survey but it might be instructive to check how it fared when the 2019 BBS Report is published.

Wren territories made a partial recovery increasing to 66 from 62 in 2018; there were 71 in 2017. Long Pasture had one territory in all three years. Compared to 2018 there were increases particularly in Mere Covert and Wood Bongs, but the decrease noted in Harpers in 2018 continued and the 12 territories plotted there is the lowest since 2008, also 12. The ten-year averages to 2019 and 2009 are 69 and 66 respectively; the all-time average is 57.95. In the CES Report *Wren* showed a non-significant decrease of 4.1%.

Although distributed rather differently between the three main areas of woodland, the six *Nuthatch* territories was the same total found in six of the last ten years. The increasing, then stabilising, ten-year averages to 1988, 1998, 2009 and 2019 - 1.6, 2.7, 7 and 6.4 respectively are interesting. Perhaps they suggest that the range expansion in North Cheshire, described in 'Birds in Cheshire and Wirral' (Norman D, 2008) has peaked on the Reserve. *Nuthatch* is not covered by the CES Report.

The total *Treecreeper* territories was down to four from five in 2018. Although birds were recorded in Mere Covert, as in 2018, there were insufficient registrations to plot a territory there. The ten-year averages to 2019 and 2009 are 5.3 and 7.5 respectively. *Treecreeper* showed a significant increase in abundance on the CES, possibly benefitting from the mild winter, but this was not reflected in the Rostherne survey.

Just a note in memoriam of *Starling*, 30 years ago there were nine territories in Mere Covert and six in Wood Bongs. There were two territories in Mere Covert in 2002 but none on the Reserve since.

Since reaching a high point of 34 in 2016, the number of *Blackbird* territories fell for the third year, down to 21; Long Pasture held a territory as it did each year from 2016. Both Mere Covert and Harpers lost three territories while Wood Bongs gained three. The ten-year averages to 1988, 1998, 2009 and 2019 are 16.9, 21, 16.7 and 22.8 and put the 2018 results into perspective. *Blackbird* showed a significant 18.8% decrease in the CES Report where it is pointed out that the species also shows a long-term trend of decline. Fewer *Blackbirds* were recorded than in any year since CES began.

Song Thrush territories have declined a little since their record high of 12 in 2016 and reduced to nine in 2019. There were no registrations on Long Pasture following the first territory plotted there last year. Ten-year averages to 2019 and 2009 are 7.6 and 4.8 respectively. The 2019 total of nine territories is only surpassed in five years since 1976. The CES Report shows a not significant decrease of 7.8%.

Always an uncommon breeding bird on the Reserve, *Mistle Thrush* made a particularly poor showing in 2019 with registrations only in Wood Bongs but insufficient to qualify for a territory.

A *Spotted Flycatcher* territory was plotted in Wood Bongs for the third year running – this after a gap since 1989 with no territories plotted. Away from Wood Bongs the last registrations were in 2015 in Mere Covert. *Spotted Flycatcher* is not covered by CES.

Increases in *Robin* territories, mainly small, in all four main areas resulted in 41 territories being plotted. This reversed the decline of the previous two years and is the highest total since 53 in 2009. In addition, Long Pasture has hosted a territory in each year from 2016. The ten-year averages to 1988, 1998, 2009 and 2019 are 18.5, 30.8, 46.1 and 31.1. *Robin* showed a significant decrease on the CES of 15% - not reflected at Rostherne.

A *House Sparrow* sang at the southern edge of Wood Bongs on May 9th, a very rare event on the Reserve - presumably a bird wandering from the village.

With just three territories plotted compared with two in 2018, *Dunnock* remains at a very low ebb on the Reserve. For the second year running there were no registrations in Mere Covert and Harpers and none on Long Pasture where a territory was held in 2017 and 2018. The most positive thing that can be said is that the three territories plotted keeps the numbers very slightly ahead of the ten-year average to 2019 which is 2.9. Ten-year averages to 1988, 1998 and 2009 are 11.3, 18 and 9.1. *Dunnock* showed a significant 22.6% decline on the CES and this decline is reported to be long-term. Against that background prospects for an increasing population at Rostherne may be slim.

The small increase in the number of *Chaffinch* territories noted last year was improved on this year and the total of 18 is the highest since 2016 when 20 were plotted. Long Pasture held an additional territory. The result is better than the ten-year average to 2019 which is 15.5. Ten-year averages to 1988, 1998 and 2009 are 25.2, 36.3 and 28. There was a significant 40.8% decline on CES with fewer birds being recorded than in any previous year.

Bullfinch was recorded during survey work in two areas – Shaw Green Willows and Wood Bongs. There were insufficient registrations to plot a territory in either. The last territory plotted in one of the present survey areas was in Mere Covert in 1995.

Greenfinch was recorded during survey work for the first time in these areas since 2011, although this was just a single registration in Mere Covert on Apr 6th.

A *Goldfinch* territory was plotted at the foot of Long Pasture, otherwise, as last year, birds were recorded in Wood Bongs and Shaw Green, but it was not possible to plot any territories there. The last territory plotted in one of the present main survey areas was in Wood Bongs in 2008.

The total of nine *Reed Bunting* territories improved slightly on last year's eight, which was itself the best since ten were plotted in 2013; two more were plotted at the foot of Long Pasture as last year. Eight territories were in Shaw Green and is the largest number there since eight in 2012. The other territory was in Mere Covert. Ten-year averages to 2019 and 2009 in all the areas surveyed throughout those periods are 7.9 and 8.9 respectively. The CES showed a significant 15.8% decline and the species shows a long-term decline as numbers fell to the second lowest on record in 2019. **Steve Barber April 2020**

COMMON BIRDS CENSUS AT ROSTHERNE MERE NNR 2019

RESULTS

The tables which follow present the results of CBC-type survey fieldwork in 2019. It will be noted that for several species figures appear in parentheses in the column of results from Shaw Green Willows. These relate to the additional number of territories plotted in the most westerly part of Long Pasture. These results also appear in parentheses in the 'Year Total' column. The purpose of the parentheses is to allow for like-by-like comparisons of results with past years. The report "Common Birds Census at Rostherne Mere NNR 1976-1983" (Sellwood and Wall, 1984) should be referred to for background information and that report highlights the limits of this census method. The results for 2019 have been arrived at in the way outlined in that report.

Survey work in 2019 was carried out by Steve Collins, Phil Dell, Judith Halman, Sheelagh Halsey, Ted Lock, Martin Steele and Tony Usher, while Bill Bellamy stood in for Sheelagh on three visits to Shaw Green. The initials of all the recorders appear in the Census Visit Data Tables which follow. The species map analyst, Steve Barber, would like to thank Bill, Steve and Phil for producing the sets of species maps from the original visit maps.

In the table of results the following symbols are used:

r = species recorded but probably not holding territory

nc = no count: species probably holding territory but no proper assessment was possible from the registrations made

n = adjacent to the assessed number, indicates the figure was based entirely on a count of active nests

a blank = this species not recorded during census visits

Aquatic species have been included in the results table but see the systematic list for full breeding season details. Coverage of Pheasant, Stock Dove and Woodpigeon appears to have been uneven but registrations have been analysed and results appear in the tables below. Reed Warbler continues to be studied separately.

In the results table for species with a total of ten or more territories in any year from 1990 the range of territories from 1976-2018 is also given.

CENSUS VISIT DATA 2019

	Mere Covert	Harpers Bank Wood	Wood Bongs	Shaw Green Willows
No of visits	10	9	10	10
Duration	20 hrs	19 hrs 25 mins	20 hrs 35 mins	17 hrs 20 mins
First visit	1 Apr	1 Apr	5 Apr	31 Mar
Last visit	6 Jun	27 May	5 Jun	5 Jun
Recorder	PD & MS (5) PD, MS & TL (2) PD (2) PD & TL (1)	JH & ACU (8) ACU (1)	SC (10)	SH (7) BB (3)
Species map preparation	PD	BB	SC	BB
Species map analysis	SB	SB	SB	SB

RESULTS 2019

	Mere Covert	Harpers Bank Wood	Wood Bongs	Shaw Green Willows	Year Total	Range 1976-2018
Canada Goose				r	r	
Mandarin				r	r	
Mallard		r		r	r	
Pheasant	r	4	3	nc	7	
Buzzard	r	r	r	r	r	
Moorhen		r			r	
Stock Dove	r	3		r	3	
Woodpigeon	r	1	r	r	1	
Tawny Owl	r				r	
Lesser Spotted Woodpecker	1			r (r)	1	
Great Spotted Woodpecker	r	1	1	r	2	
Jay	r	r	r	r	r	
Magpie		r	r	r	r	
Jackdaw	r			r	r	
Carrion Crow		r	1n	r	1n	
Coal Tit	1	nc	1	r	2	
Blue Tit	9	6	8	3 (1)	26 (1)	13-41
Great Tit	5	3	4	1 (1)	13 (1)	7-31
Cetti's Warbler				nc (1)	1	
Long-tailed Tit	nc	2	1	1 (1)	4 (1)	0-11
Willow Warbler	1	1	r	1	3	0-41
Chiffchaff	9	7	4	3 (1)	23 (1)	4-22
Sedge Warbler				5 (1)	5 (1)	0-9
Blackcap	18	10	9	3 (1)	40 (1)	6-28
Whitethroat				2	2	
Goldcrest	5	5	2		12	0-9
Wren	26	12	18	10 (1)	66 (1)	24-84
Nuthatch	1	2	3		6	0-10
Treecreeper	r	2	1	1	4	1-11
Blackbird	5	5	9	2 (1)	21 (1)	9-38
Song Thrush	3	2	2	2	9	0-12
Mistle Thrush			r		r	
Spotted Flycatcher			1		1	

	Mere Covert	Harpers Bank Wood	Wood Bongs	Shaw Green Willows	Year Total	Range 1976-2018
Robin	10	11	17	3 (1)	41 (1)	10-56
House Sparrow			r		r	
Dunnock			1	2	3	1-24
Chaffinch	6	3	8	1 (1)	18 (1)	6-41
Bullfinch			r	r (r)	r	
Greenfinch	r				r	
Goldfinch			r	r (1)	(1)	
Reed Bunting	1		r	8 (2)	9 (2)	2-18

Early and Late Dates at Rostherne

The species are divided into sections based mainly on their status in Cheshire. Because each of Common Sandpiper, Blackcap and Chiffchaff over-winter in tiny numbers in Cheshire, no latest dates have been given. Furthermore, Bittern has been removed from the Winter Visitors list as occasional birds do turn up in summer months.

	Earliest Date	Latest Date
Winter Visitors		
Bewick's Swan	21 st October 1977 & 1990	21 st April 1922
Whooper Swan	23 rd September 2012	27 th May 2018
Smew	2 nd November 1994	6 th June 1979
Fieldfare	29 th September 2008	12 th May 1986
Redwing	17 th September 2000	20 th May 2001
Brambling	9 th October 1980	6 th May 1980
Summer Visitors		
Hobby	27 th March 2010	9 th October 2004
Cuckoo	4 th April 1993	18 th September 1976
Swift	14 th April 1996	15 th October 1978
Sand Martin	23 rd February 2008	15 th October 2011
Swallow	21 st March 2009	11 th November 1962
House Martin	20 th March 2009	27 th October 1963 & 1995
Yellow Wagtail	11 th April 1970 & 1977	11 th October 1981
Redstart	12 th April 1997	27 th September 1997
Wheatear	20 th March 1994	10 th November 1968
Sedge Warbler	13 th April 2015	24 th September 2003
Reed Warbler	4 th April 2006	18 th October 2003
Lesser Whitethroat	18 th April 2009	26 th September 1990
Whitethroat	14 th April 1995	18 th September 2005
Garden Warbler	19 th April 2008	25 th September 1988
Willow Warbler	26 th March 1989 & 2005	22 nd November 1986
Spotted Flycatcher	29 th April 1977	16 th October 1967
Pied Flycatcher	11 th April 1993	2 nd September 1980

Dates for the earliest singing Blackcap on the reserve are 24th March 2009 and for singing Chiffchaff 4th March 2014.

Passage Migrants

Garganey	19 th February 1956	20 th October 1963
Long-tailed Duck	17 th October 1991	16 th May 1990 & 1992
Osprey	31 st March 2012	1 st October 2019
Common Tern	10 th April 2011	12 th October 1978
Arctic Tern	9 th April 2012	20 th September 1999
Black Tern	20 th April 1911, 1987 & 1996	9 th November 2001

So far as can be ascertained the dates above refer to birds on or over the Reserve. Earlier or later dates very nearby are:

Wheatear	19 th March 1977	near Briddonweir
Redwing	16 th September 1990	in the churchyard
Willow Warbler	25 th March 1990	in Manor Wood.

2019 Butterfly Records: Rostherne Mere National Nature Reserve

This report details the results of butterfly surveys undertaken during 2019 at Rostherne Mere NNR. The Rostherne Mere Butterfly Survey is the oldest in Cheshire and started in 1976. Rostherne Mere is a national recording site and part of the United Kingdom Butterfly Monitoring Scheme (UKBMS). This survey represents the sixth survey after a 10-year gap and the results are compared with results from 2014 to 2018. Many thanks to Sheelagh Halsey for her considerable help during the survey in 2019.

Species	2019 Records	2014-18 Range	2019 (max/day)	2014-18 Range (max/day)
Small Skipper +	7	2-27	5	1-6
Large Skipper +	17	8-15	5	3-8
Brimstone +	5	1-6	2	1-2
Large White -	11	8-31	7	2-14
Small White -	68	7-132	23	2-39
Green-veined White -	378	322-454	73	65-79
Orange-tip ++	134	32-47	42	9-15
Purple Hairstreak -	4	1-6	2	1-4
Small Copper +	6	1-4	2	1
Common Blue +	9	5-34	3	2-5
Holly Blue =	5	1-5	2	1-5
Red Admiral +	30	15-75	7	4-22
Painted Lady ++	37	1-5	13	1
Small Tortoiseshell +	30	5-70	11	1-12
Peacock +	46	15-124	13	3-20
Comma +	28	4-48	16	1-9
Speckled Wood +	222	186-375	25	22-52
Gatekeeper ++	251	88-131	124	27-47
Meadow Brown ++	1098	535-915	301	188-242

Butterflies were surveyed for 26 weeks from 7th Apr to 25th Sep. There was a total of 2386 butterfly records made during this period an average of 92 per week. The results represent an increase in numbers after a consecutive decrease in the years 2014-17 and the highest since the survey was resumed. The number of records increased for the majority of species with the notable exception being in the three White species i.e. Large White, Small White and Green-veined White which had a poor year.

A total of 19 species were recorded, matching last year as Holly Blue continues to maintain a presence on the Reserve. The commonest butterfly in 2019 was once again Meadow Brown with 1098 records (535 in 2018). It was a good year for Gatekeeper and Orange-tip which were 3rd and 5th on the list respectively

The 5 commonest butterflies for years 2019, 2018 and 2017 are shown below.

	2019	2018	2017
1st	Meadow Brown	Meadow Brown	Meadow Brown
2nd	Green-veined White	Green-veined White	Green-veined White
3rd	Gatekeeper	Speckled Wood	Speckled Wood
4th	Speckled Wood	Small White	Gatekeeper
5th	Orange-tip	Gatekeeper	Red Admiral

Year	Weeks	Butterfly Total	Butterfly Average/Week
2014	24	2112	88

2015	26	2023	78
2016	26	1629	63
2017	26	1500	58
2018	24	1572	66
2019	26	2386	92

Date	Highest Count	Date	Lowest Count
15/07/2019	390	07/04/2019	2

Details of the species recorded in 2019 follow. The account of each species begins with a statement of its Cheshire status, as compiled by Barry Shaw in 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 seven records during the year, three more than last year. The first record was a single seen on T3 (across Mere Field) on 4th Jul. Three were recorded on T1 (Church Field) and two on T12 (grassland around Gale Bog) on 25th Jul. The last record was one on T3 on 29th Jul.

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 17 records in 2019 (12 in 2018 and 14 in 2017). The first record was one seen in T6 (Penny Croft) on 20th Jun. Five were seen on 27th Jun and 4th Jul. It is encouraging that Large Skipper was found in five different transects namely T3 (across Mere Field), T4 (along the hedge in Shaw Green Willows), T5 (path near Blackburn's Bridge), T6 (Penny Croft) and T15 (in Brook and Dolls Meadow).



Large Skipper. Photo Sheelagh Halsey

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 five records (one in 2018). One was seen on T8 (in Mere Covert) on 9th Apr, one on T1 (Church Field) and one on T3 (across Mere Field) on 17th Apr. There was one on T4 (along the hedge in Shaw Green Willows) on 23rd Apr. The last record was one on T1 (Church Field) on 14th May.

Large White (*Pieris brassicae*)

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

There were only 11 records of Large White. The range from 2014-18 is 8 to 31. The first record was a single seen on T3 (across Mere Field) on 4th Jul. Seven were seen on 25th Jul. The last record was a single on T15 (in Brook and Dolls Meadow) on 20th Sep. Large Whites were seen in six of the 15 transects.

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 68 records of Small White (132 in 2018). The range from 2014-18 was only 7-132. The species was recorded from 7th May to 25th Sep. The largest day count was 23 on 27th Aug. Transect 1 (Church Field) provided the most favourable habitat throughout the survey. The maximum number of records was an amazing 395 in 1976.

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 the “white” butterfly most commonly seen at Rostherne Mere. Once again, it was the second commonest butterfly with a total of 378 records in 2019. The range from 2014-18 was 322-454. The highest day count was 73 on 25th Jul.

Orange-tip (*Anthocharis cardamines*)

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

It was an excellent year for Orange-tip. There were an amazing 134 records which is an order of magnitude higher than the 2014-18 range 32-47. The species was the 5th commonest on the Reserve. It was first recorded during the second week survey on 9th Apr. The highest day count was 42 on 23rd Apr. There were 25, 18 and 24 recorded on 30th Apr, 7th May and 14th May respectively. The last records were on 28th May. It was seen in nine of the 15 transects. The most favourable areas were along T15 (in Brook and Dolls 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 2019 which represents the normal frequency of sightings. The range from 2014-18 was one to six. They were only recorded on one survey on 15th Jul when two were seen in the Oak near the Observatory (T1) and two in the canopy of an Oak on the Shaw Green boardwalk (T4).

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 six records in 2019 and the range from 2014-18 was only 1-4. One was seen on T12 (grassland around Gale Bog) on 14th May. The next record was one on T1 (Church Field) on 25th Jul, 29th Jul, 23rd Aug and 27th Aug. One was also seen on T6 (Penny Croft) on 23rd Aug.

Common Blue (*Polyommatus icarus*)

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

Common Blue disappeared from the Reserve in 2000 and was considered to be temporarily extinct at the site, as it had been in decline for several years. There were only four records in 2002 but then a recovery with 23 records in 2003. Interestingly, some 11 years later, 22 records were posted in 2014. There were 34 records in 2015, but the number of records dropped to 14 in 2016, with a maximum day count of only three on 19th June. There were only five records in 2017 and 2018. There was a slight increase in records in 2019 with nine in total.

In 2017 all of the records were from the steep grassy banks on Transect 12 where Bird's-foot Trefoil grows, a favoured foodplant of Common Blue. In 2018 it was encouraging to see that the species was more widespread throughout the Reserve albeit at low numbers.

The first record in 2019 was a single seen on T1 (Church Field) on 14th May. The highest day count was three when singles were seen in T1, T12 (grasslands around Gale Bog) and T15 (in Brook and Dolls Meadow). Common Blue was seen in four out of the 15 transects surveyed.

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 five records of Holly Blue in 2019. One was seen on T13 (Harpers Bank Wood) on 30th Apr and 7th May. One was also seen on T1 (Church Field) on 7th May and again on 14th May and 21st May.

Red Admiral (*Vanessa atalanta*)

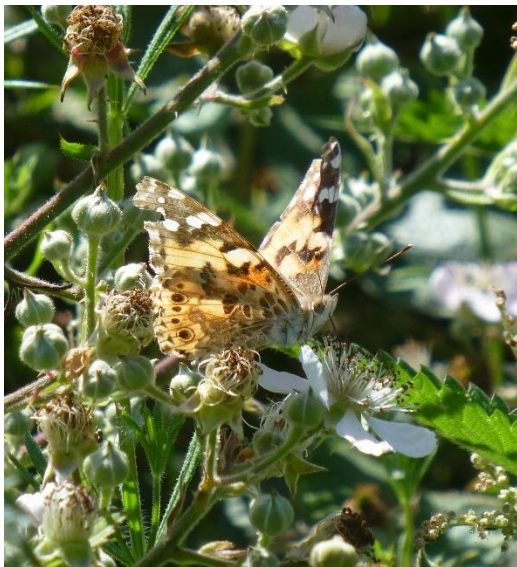
Cheshire status: An annual immigrant of varying abundance, generally common and widespread with a scattering of sightings in even the poorest years. Negligible, though increasing, numbers have hibernated successfully in the county over the last few years. Breeds in a range of habitats with largest numbers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

It was a better year for Red Admiral records with 30 compared with 2018 (15). The species was recorded from 27th Jun to 20th Sep. The highest day count was seven on 27th Aug. the species was seen in eight of the 15 transects.

Painted Lady (*Vanessa cardui*)

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

There was a big contrast in the number of records in 2019 compared with 2018 which reflected an influx of the species from Continental Europe. Whereas there was only a single record in 2018, 37 were recorded in 2019. The range from 2014-18 was only 1 to 5. The first record was on 20th Jun and the last on 5th Sep. The highest day count was 13 on 23rd Aug when seven were seen on T12 (grassland around Gale Bog).



Painted Lady. Photo Sheelagh Halsey.

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 30 records in 2019. The range was 5-70 from 2014-18. The first was on 27th Jun and the last on 13th Sep. The highest day count was 11 on 23rd Aug when 10 were seen on T12 (grassland around Gale Bog).

Peacock (*Inachis io*)

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

There were 46 records of Peacock. One was seen on the first survey on T4 (path along the hedgerow in Shaw Green Willows) on 7th Apr. The last record was one at the same location on 8th Aug. The highest day count was 13 on 25th Jul. It was recorded in six of the 15 transects.

Comma (*Polytonia 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 28 Comma records, two more than last year. It was recorded from 30th Apr to 20th Sep. The highest day count was an amazing 16 on 13th Sep when five were seen on T6 (Penny Croft) and T12 (grassland around Gale Bog). Comma was also recorded from T1 (Church Field), T4 (path along the hedgerow in Shaw Green Willows), T5 (path along Blackburn's Brook in Shaw Green Willows), T13 (Harpers Bank Wood), T14 (Harpers Bank Wood) and T15 (in Brook and Dolls Meadows).



Comma. Photo Sheelagh Halsey.

Speckled Wood (*Pararge 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 fourth commonest species recorded. There were 222 records which represented a good showing and the highest since 254 in 2016. Speckled Wood is seen throughout the Reserve and was often the only butterfly seen in the shaded transects in Wood Bongs, Mere Covert and Harpers Bank Wood. The first record was on the first survey when one was seen in Mere Covert (T7) on 7th Apr. The last records were on the last day of the survey on 25th Sep when eight were recorded, mainly in Mere Covert. The highest day count was 25 on 25th Jul.

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.

It was a really good year for Gatekeeper with 251 records. The range from 2014-18 was 88 to 131. The species was first seen on 4th Jul (27th Jun in 2018). It was last seen on 13th Aug (6th Aug in 2018). The maximum day count was an amazing 124 on 29th Jul. The highest count in a single transect was 56 on T12 (grassland around Gale Bog).



Gatekeeper. Photo Sheelagh Halsey.

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 in 2019. It remained at the top of the list by some margin with 1098 records. The range was 535 to 915 from 2014-18. The grass meadows in transects 1, 3, 6 and 12 provide good habitat for the species. The species was first seen on 20th Jun and last spotted on 23rd Aug. T12 (grassland around Gale Bog) posted the highest numbers with 150 recorded on 15th Jul. The highest individual day count for the whole site was 301 on the same date.

Dragonflies and Damselflies Survey 2019

2019 represented the fourth year of the Dragonflies and Damselflies Survey undertaken by Sheelagh Halsey. Sheelagh recorded species, abundance and location during 21 visits from 30th Apr to 23rd 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 Boat House), 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). Unfortunately, the survey was compromised due to flooding on the Reserve. T5 (path along Shaw Green Willows pond) was impassable or partially impassable due to flooding on seven survey dates. The results are shown in the tables below:

Visit Number	Date	Start Time	Duration (hrs)	Weather
1	30/04	10:30	3	16°C, 2/8 cloud, light breeze
2	28/05	10:45	2	14°C, 6/8 cloud, light breeze
3	05/06	12:15	2	14°C, 8/8 cloud, moderate breeze
4	16/06	12:45	1	18°C, 7/8 cloud, moderate breeze, some rain
5	20/06	13:30	2	17°C, 6/8 cloud, moderate breeze
6	27/06	11:00	2.5	21°C, 0/8 cloud, light breeze
7	07/07	11:45	2.5	21°C, 4/8 cloud, moderate breeze
8	15/07	13:30	2.5	26°C, 4/8 cloud, light breeze
9	23/07	11:00	3	26°C, 2/8 cloud, moderate breeze
10	29/07	13:30	3	24°C, 4/8 cloud, light breeze. T5 Impassable
11	08/08	13:40	2.5	24°C, 4/8 cloud, light breeze. T5 Impassable
12	13/08	12:10	2	18°C, 4/8 cloud, moderate breeze. T5 Impassable
13	23/08	12:30	2	22°C, 7/8 cloud, light breeze. T5 partially Impassable
14	27/08	10:45	2	24°C, 2/8 cloud, no breeze. T5 partially Impassable
15	05/09	13:45	2	15°C, 5/8 cloud, no breeze. T5 partially Impassable
16	13/09	11:00	2.5	18°C, 3/8 cloud, no breeze. T5 partially Impassable
17	20/09	11:15	1.5	19°C, 0/8 cloud, light breeze. Strimming SGW
18	25/09	11:45	1.5	17°C, 8/8 cloud, no breeze
19	04/10	14:30	1	17°C, 4/8 cloud, light breeze, partial survey
20	16/10	13:15	1.5	12°C, 4/8 cloud, moderate breeze
21	23/10	11:30	1	12°C, 6/8 cloud, moderate breeze, survey Bill Bellamy

Table 1 Visit Details.

Species	Years	2016	2017	2018	2019
Azure Damselfly		383	1243	190	65
Blue-tailed Damselfly		544	299	249	218
Large Red Damselfly		7	16	31	7
Banded Demoiselle		44	22	23	6
Common Blue Damselfly		610	635	712	1320
Broad-bodied Chaser		2	5	3	2
Four-spotted Chaser		1	1	1	0
Black-tailed Skimmer		13	21	18	23
Common Darter		77	20	49	20
Brown Hawker		54	75	39	62
Southern Hawker		14	12	19	7
Emperor		3	9	3	11
Migrant Hawker		35	44	38	48
Ruddy Darter				1	15
Total No. of Species		13	13	14	13

Table 2 Collated Counts 2016-19.

Species	Visits	1	2	3	4	5	6	7	8	9	10
Azure Damselfly			6	10+	20+	5+	20+	2		2	
Blue-tailed Damselfly			12	30+	10+	40+	50+	30+	6	2	13
Large Red Damselfly		1	2		3	1					
Banded Demoiselle			1				1	1	1		1
Common Blue Damselfly			60+	40+	20+	150+	260+	120+	170+	140+	190+
Broad-bodied Chaser			1				1				
Black-tailed Skimmer						2		6	6	3	4
Common Darter											2
Brown Hawker								4	7	8	11
Southern Hawker										2	1
Emperor							3	4	1	1	1
Migrant Hawker											
Ruddy Darter										2	1

Table 2 Species Counts.

Species	Visits	11	12	13	14	15	16	17	18	19	20
Azure Damselfly											
Blue-tailed Damselfly		12+	6	3	4						
Large Red Damselfly											
Banded Demoiselle		1									
Common Blue Damselfly		50+	50+	40+	20+	1	8				1
Broad-bodied Chaser											
Black-tailed Skimmer		1	1								
Common Darter		1	1	1	7		1	2			3
Brown Hawker		12	6	6	5	1		1		1	
Southern Hawker		2		2							
Emperor		1									
Migrant Hawker		1	3	3	5	5	11	8	5	3	3
Ruddy Darter		6	3	2	1						

Table 2 Species Counts (continued).

Species	Visits	21	Transect
Azure Damselfly			5
Blue-tailed Damselfly			1, 3, 4, 5, 6, 15
Large Red Damselfly			5, 6, 15
Banded Demoiselle			4, 5, 6
Common Blue Damselfly			1, 3, 4, 6, 15
Broad-bodied Chaser			3, 4
Black-tailed Skimmer			4, 15
Common Darter	2		1, 5, 6, 15
Brown Hawker			1, 3, 4, 5, 6, 15
Southern Hawker			2, 3, 4
Emperor			1, 4, 15
Migrant Hawker	1		1, 3, 4, 5, 15
Ruddy Darter			4, 5, 6, 15

Table 2 Species Counts (continued).

Visits	Total no. species per visit
1	1
2	6
3	3
4	4
5	5
6	6
7	7
8	6
9	8
10	9
11	10
12	7
13	7
14	6
15	3
16	3
17	3
18	1
19	2
20	3
21	2

Table 3 Total no. of Species Per Visit

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

Table 4 Observations on reproduction.

There was a total of 13 species recorded during the survey which was one less than last year. Four-spotted Chaser was not recorded in 2019, but Ruddy Darter was seen for the second year running since it was last recorded on 27th Jul 2001.

Azure Damselfly (*Coenagrion puella*)

The Azure Damselfly was seen on seven visits from 28th May until 23rd Jul. The highest counts for the year were only 20+ on 16th and 27th Jun which were lower than last year (70+) and markedly lower than 2017 (600+ and 400+). All sightings were from T5 in Shaw Green Willows where it was seen ovipositing. It should be noted that T5 was impassable or partially impassable due to flooding on seven survey dates.

Blue-tailed Damselfly (*Ischnura elegans*)

A total of 218 was recorded in 2019 which represents the lowest count since the survey began in 2016. The species was seen on 13 visits from 28th May until 27th Aug. The highest count was 50+ on 27th Jun (120+ in 2018). It is a common species recorded from all of the transects surveyed. It was seen mating on T5 (Shaw Green Willows), T6 (Penny Croft) and T15 (Dolls Meadow Mere Edge).

Large Red Damselfly (*Pyrrhosoma nymphula*)

The Large Red Damselfly is usually the first damselfly to be seen flying. It was recorded from 30th Apr until 20th Jun. It was only recorded in low numbers with the highest count of three on 16th Jun. It was seen in Shaw Green Willows, Penny Croft and Dolls Meadow Mere Edge.

Banded Demoiselle (*Calopteryx splendens*)

It was a poor year for Banded Demoiselle. There were only six records in 2019 compared to 23 in 2018, 22 in 2017 and 44 in 2016. Only singles were recorded. It was seen from 28th May until 8th Aug. The species was recorded from Shaw Green Willows and Penny Croft.

Common Blue Damselfly (*Enallagma cyathigerum*)

This was the commonest damselfly seen on the Reserve. There were 1320 records in 2019 which is the highest since the survey began. Common Blue Damselfly was recorded from 28th May until 16th Oct. The highest day counts were 260+ on 27th Jun and 190+ on 29th Jul. The species was seen on all transects except for T5 (Shaw Green Willows) but this may reflect the difficulty in surveying this area due to flooding. It was seen mating on T6 (Penny Croft) and ovipositing on T1 (near the Boathouse), T4 (near the Bittern Hide) and T15 (Dolls Meadow Mere Edge).

Broad-bodied Chaser (*Libellula depressa*)

There were only two records of Broad-bodied Chaser in 2019. The species is only seen in low numbers on the Reserve, range 2 to 5 from 2016 to 2019. One was seen on 28th May and another on 27th Jun. They were seen on T3 (across Mere Field) and T4 (near the Bittern Hide).

Black-tailed Skimmer (*Orthetrum cancellatum*)

The species is doing well on the Reserve. There were 23 records which is the highest since the survey began. It was seen from 20th Jun to 13th Aug. The highest count was six on 7th and 15th Jul. It was seen on T4 (near the Bittern Hide) and T15 (Dolls Meadow Mere Edge) where it was seen ovipositing.



Male Black-tailed Skimmer. Photo Sheelagh Halsey.

Common Darter (*Sympetrum striolatum*)

Common Darter was recorded from 29th Jul until 23th Oct. Counts ranged from 1 to 7 (27th Aug). It was seen mating on T5 near the pond in Shaw Green Willows.

Brown Hawker (*Aeshna grandis*)

Brown Hawker was the commonest dragonfly recorded at Rostherne. There were 62 records in 2019. It was first seen on 7th Jul. The highest day count was 12 on 8th Aug. It was last recorded on 4th Oct. It was recorded on all the transects surveyed. It was seen ovipositing on the flooded boardwalk on T5.



Brown Hawker ovipositing on the flooded boardwalk in Shaw Green Willows. Photo Sheelagh Halsey.

Southern Hawker (*Aeshna cyanea*)

There were only seven records in 2019 which represents a poor showing. It was first seen on 23rd Jul. It was seen ovipositing on the flooded boardwalk in T5.



Southern Hawker. Photo 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 and 11 in 2019. Three were recorded on 27th Jun and four on 7th Jul. The last record of the year was one on 8th Aug. It was seen near the Boathouse, on the edge of the Mere in Dolls Meadow and in front of the Bittern Hide.

Migrant Hawker (*Aeshna mixta*)

Migrant Hawker is usually the last dragonfly to arrive on the Reserve. It was seen from 8th Aug until 23rd Oct. There were 48 records which represents the highest recorded. The highest day count was 11 on 13th Sep.

Ruddy Darter (*Sympetrum sanguineum*)

Last year the species was recorded for the first time since the survey commenced in 2016. Prior to this it was last logged on 27th Jul 2001. 2019 was a very good year for the species with an amazing 15 records. Two were seen on 23rd Jul and there was a series of records until 27th Aug. The highest day count was six on 8th Aug. Ruddy Darter was recorded on four transects around the Reserve including around Shaw Green Willows, Penny Croft and the Dolls Meadow Mere Edge. It was also seen mating on the boardwalk in Shaw Green Willows.



Ruddy Darter copulation. Photo Sheelagh Halsey.