

Rutland Water Nature Reserve

Annual Wildlife Report 2021



love every drop
anglianwater 



**Leicestershire
& Rutland**
Wildlife Trust

24 species of
butterfly
recorded

30

Avocet
chicks
fledged



5,880
birds, of 51
species, were
processed by
the ringing
group



**Willow Emerald
Damselflies** were
confirmed breeding

109,292

Birds counted
during WeBS



2021 highlights

32 species
of bee
recorded

41

Largest
count of
**Great
White
Egret**
ever



443

species of moth
recorded over 30
trapping sessions



1,648
Sand Martin
chicks ringed



19 Osprey
chicks
fledged

Introduction

The start of 2021 was challenging, with COVID-19 restrictions stopping all but essential work being carried out at Rutland Water – this included much of the surveying and monitoring work (with the exception of WeBS). By March we were delighted to be able to welcome volunteers back to the VTC once again and could resume our programme of wildlife recording.

2021 saw the appointment of Tim Sexton as Species and Recording Officer and Luke Nelson, originally employed on a six-month contract as Contract Ringer and later extended to become Assistant Species and Recording Officer. We also introduced the Survey and Monitoring Volunteer Group, who met on a fortnightly basis through the summer and monthly during the winter to carry out surveying and monitoring activities, in a similar way to the Conservation Work Party Volunteers.

Through the work of all the survey volunteers who support the staff at Rutland Water we were able to carry out a number of studies covering birds, aquatic invertebrates, aquatic vegetation, moth trapping sessions, hoverflies, bees, butterflies and even overwintering beetles in *Juncus* and *Deschampsia* tufts.

Acknowledgments

As we always say, we cannot do what we do without the fantastic LRWT volunteers and dedicated staff.

We are indebted to the time, effort and skills of the many volunteers who help to collect and analyse data for the many surveys that are carried out at Rutland Water.

Joe Davis (Conservation Team Leader)

Images in the report supplied by Steve Waddingham, Tim Sexton, Linda Schlemmer, Chris Butterfield, Luke Nelson, Malcolm Heaven, Rob Thatcher, Jeff Davies, Tim Mackrill, Geoffrey Hall, Alistair Lawrence, Adam Jones and Chris Hughes.

Maps in this report contain Ordnance Survey data © Crown copyright and database rights 2021

Contents

| | |
|---|--|
| Page 3 | Executive Summary |
| Page 4 | Rutland Ospreys |
| Page 8 | Wetland Bird Survey (WeBS) |
| Page 12 | Breeding Waders |
| Page 16 | Breeding Water Rails |
| Page 18 | Ringing Group Report |
| Page 32 | Colour Marked Birds |
| Page 35 | Hippoboscidae Recording |
| Page 36 | Rare Bird Report |
| Page 39 | Butterfly Report |
| Page 42 | Moth Trap Report |
| Page 45 | Orthoptera Records |
| Page 46 | Bees of Rutland Water |
| Page 48 | Hoverfly Report |
| Page 50 | Willow Emerald Damselfly |
| Page 52 | Reed Beetles of Rutland Water |
| Page 55 | Beetle Recording |
| Page 56 | Aquatic Invertebrate Survey |
| Page 59 | Plant Galls |
| Page 61 | Orchids on Eggleton Meadows |
| Page 62 | Fungi Report |
| Page 63 | Rutland Water Breeding Bird Survey |
| Page 65 | Vegetation Survey of Lagoons and Ponds |
| (Appendices available as a separate document) | |
| Records can be sent to Tim Sexton, Species and Recording Officer at: tsexton@lrwt.org.uk or by post: | |
| Leicestershire and Rutland Wildlife Trust, | |
| The Volunteer Training Centre, | |
| Oakham Road, Near Hambleton, | |
| Oakham, Rutland, LE15 8TL | |

Executive Summary

Tim Sexton

Rutland Water Nature Reserve is a Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar Wetland of International Importance as it supports exceptional numbers and diversity of passage and wintering waterfowl. Counts of wintering water birds regularly exceed 20,000 individuals, including internationally important numbers of Gadwall (*Anas strepera*) and Shoveler (*A. clypeata*) along with nationally important numbers of several other duck species. The diversity of waders using the site on passage is outstanding for an inland site, while the diversity of the population of breeding waterfowl and breeding passerines is of increasing significance.

The site is owned by Anglian Water (AW) and managed in close partnership with Leicestershire and Rutland Wildlife Trust (LRWT). The Nature Reserve consists of a mosaic of wetland habitats that is dominated by a large reservoir along with lagoons, islands, reedbed, marshland and wet grassland. Woodlands (along with ancient woodland compartments), scrubland, pasture and species-rich grasslands support important assemblages of breeding birds and assemblages of invertebrates.

Legislative requirements for monitoring the condition of the RAMSAR, SPA and SSSI are met through the monthly Wetland Bird Surveys (WeBS), which have taken place at Rutland since 1975. The Reserve Management Plan also sets out an annual work programme for non-legislative species monitoring to provide feedback on habitat management which includes (but is not limited to); WeBS, Osprey Monitoring, Breeding Wader Surveys, Water Vole Surveys, Mink Surveys, Wildfowl Ringing, CES and other Ringing, Breeding Seabird Census, Winter Bird Surveys, Tern Raft Monitoring, Sand Martin Nest Bank Recording, Breeding Bird Surveys, Invertebrate Surveys.

In the autumn/winter of 2020/2021 (the WeBS year runs from July to June) the threshold for international importance was not met for Shoveler but was far exceeded for Gadwall. The threshold for

national importance, and therefore favourable condition of the SSSI, was exceeded on both counts. The overall species maxima, a qualifying feature of the RAMSAR designation was also exceeded.

During the 25th year since the project to reintroduce Ospreys back in to England at Rutland Water began, the Manton Bay Ospreys, Maya and 33/11 successfully reared two chicks in 2021. A further 17 chicks were reared from seven nests in the surrounding landscape. There was further reason to celebrate as the project reached the 200th chick milestone.

It was our most successful year in the artificial sand martin nesting banks, situated on Lagoons 2 and 5, with 1,648 sand martin chicks ringed from the two banks. A total of 524 nest records have been submitted to the British Trust for Ornithology (BTO). 1,113 birds were processed at the two Constant Effort Ringing Sites (CES). This long term monitoring project will in 2022 be entering its 40th year. In all 5,880 birds of 51 species were processed by Staff and members of the Rutland Water Ringing Group in 2021.

A total of 1,254 nesting pairs of bird were recorded through the Rutland Water Breeding Bird Survey.

Over 400 species of moth were recorded at the moth trapping sites in Cherry Wood and Lyndon along with an additional session in Sharple's Meadow. 23 species were new for the Reserve, bringing the overall number of moth species recorded on the site to 757. In addition, 24 butterfly species were recorded across the Egleton and Lyndon Reserves.

While there were no systematic surveys for dragonflies and damselflies in 2021, casual records showed that the Hairy Dragonfly (*Brachytron pratense*) continued to increase in number on the Reserve and that Willow Emerald Damselfly (*Chalcolestes viridis*) is now confirmed to be breeding on the site.

A number of notable wetland beetle species, new to Leicestershire and Rutland, were also discovered in the recording period including the reed beetle *Donacia cinerea* (Nationally Notable B) and the rove beetle *Stenus fornicatus* (Nationally Notable B). The finds are indicative of an ever improving, species rich wetland habitat at Rutland.



Manton Bay Breeding Summary (Abi Mustard)

2021 marked the seventh year female Maya and male 33(11) have been paired up and the sixth year they have successfully bred and reared young.

In 2021, male 33(11) was the first to return to Rutland, landing on the Manton Bay nest at 12:29 on 19th March, however Maya arrived only 23 minutes later at 12:52! This is the second year in a row this particular pair have returned on the same day.

Maya and 33(11) were the first of the breeding pairs that the Rutland Osprey Project monitors, to start incubating. This year Maya laid three eggs in total, the first on 30th March, the second on 2nd April and the third on 8th April. As we normally see from this pair, both adults took it in turns to incubate, with Maya naturally doing the majority, but 33(11) incubating for longer than some of our other breeding males.

The first chick hatched on 8th May and the second hatched on 10th May. However, the third egg never hatched and this could have been due to exposure to

cold temperatures. The assumption is that the unhatched egg was also the first egg to be laid, taking into consideration incubation times, as the first chick to hatch was at the very end of the possible hatching period of the first egg to be laid.

When the chicks were approximately six weeks old they were ready to be ringed and sexed. In 2021, the oldest chick was given the ring number 096, and turned out to be a male, and the youngest chick was fitted with the ring number 095, and was a female. Only two weeks later, 096 fledged on 1st July and 095 fledged on 2nd July.

The two juveniles both left for their first migration on the morning of 22nd August, with female 095 last being sighted at 09:10 and male 096 leaving only three minutes later at 09:13. Adult female Maya was the next to leave for her migration on the evening of 30th August and adult male 33(11) was the last of the family to leave, on the morning of 31st August.

Over the course of the season, our volunteers recorded that male 33(11) brought 172 fish back to the nest – the actual figure is likely to be much higher – with the top species being Trout and Roach.

Off-site Nest Report (Tim Mackrill)

Site B

The regular breeding male, 30(10), was observed fishing at Horn Mill on 24th March and seen at the nest by the estate gamekeeper later that afternoon. HJ8, the colour-ringed female from Argyll in Scotland who has bred at the site with 30(10) each year since 2017, was present at the nest with 30(10) on the morning of 27th March, suggesting she had arrived the previous day. 30(10) delivered a large Trout, caught in the reservoir, to the nest. Incubation was first recorded on 7th April. The behaviour of the breeding birds indicated that a chick had hatched on 14th May. On 28th May three chicks were visible in the nest, which were likely 2-2.5 weeks old. On 24th June all three chicks were standing on the nest, with one flapping strongly. They were subsequently ringed on 26th June and all were found to be females. All three chicks subsequently fledged successfully. 097 and 098 were observed flying well on 22nd July and 099 was present at the nest with both adult birds on 19th August.

Site C

Female 25(10) returned during the afternoon of 16th March and was subsequently seen at the Manton Bay nest the next morning. Her mate since 2013, 11(10), was back at the Site C nest with her on the morning of 27th March. The birds were seen to be incubating for the first time on 7th April. 11(10) arrived at the nest with a large trout on the morning of 14th May. He left it on the side of the nest but 25(10) did not take any. 11(10) left the fish on the side of the nest and did not attempt to take over incubation, indicating that the first chick may have been hatching. Two small chicks were visible in the nest on 28th May, with three seen on 8th June. The three chicks, two females and a male, were ringed on 26th June. All three juveniles fledged successfully and were flying well on 22nd July. 11(10) and two juveniles were still present on 19th August.

Site J

An Osprey was seen at the nest for the first time on 27th March by the estate gamekeeper. This was identified as the regular breeding male 1K(13) on 30th March, when 00(09), the breeding female from the Site K nest was also present. Two Ospreys had also been

seen at the nest the day before, suggesting that 00(09) had visited then as well. 1K(13) was again present at the nest on 16th April, but S6(15), his mate since 2018, sadly failed to return. S6(15) was known to winter in Carmona in southern Spain and was observed at her wintering site on 13th October 2020, and so it was particularly disappointing that she failed to return. 1K(13) remained at the nest alone during May and did not pair up with a female in time to breed. However, an unringed female was present at the nest from 21st July, indicating that she may return to breed next spring.

Site K

An Osprey was first observed at the nest on 24th March, and was subsequently identified as female 00(09) who has bred at the site since 2014. The regular breeding male, 06(09) (who has lost his colour ring) was back with her on the morning of 30th March. However, later that morning 00(09) was seen on the Site J nest, where the established breeding female S6(15) had not returned. 06(09) and 00(09) were at the nest together on 1st April and incubation was first recorded on 13th April. Chicks hatched in late May, and at least two chicks were visible in the nest on 2nd June when they were fed a trout by 00(09). The largest chick was approximately 10 days old. Three chicks were visible in the nest on 14th June and 24th June, with the adult birds both in attendance on each occasion. The three chicks, a female and two males, were ringed on 28th June. All three juveniles fledged successfully and were flying strongly and beginning to venture away from the nest on 23rd July. 355 was subsequently seen at Eyebrook Reservoir on 10th August and on Lagoon 4 at Rutland Water on 20th August. These sites are 6.5 and 10 miles from the Site K nest respectively. All three juveniles were still present at the nest on 18th August, with the adult male. 00(09), however, was absent, indicating she had departed on migration.

Site L

51(11) was observed fishing at Horn Mill Trout Farm on 27th March and was back at the Site L nest the same day. 2AF(16) was present at the nest for the first time on 9th April. Incubation was first recorded on 21st April. Hatching was confirmed on 1st June when 2AF was seen offering fish down into the nest cup for the

first time. On 8th June two chicks were visible in the nest for the first time. The two chicks, a male and a female, were ringed on 5th July. The ringing details are shown below. 361 was flying by 22nd July, followed later by 362. Both juveniles and the two adults were still present at the nest just under a month later on 19th August, but only 51(11) was present on 30th August, suggesting the rest of the family may have departed on migration.

Site N

5N(04), the oldest bird in the Rutland population, returned on 21st March. She was joined a week later, on 27th March, by 6K(14), whom she first bred with in 2020. Successful copulations were observed. Incubation was first recorded on 12th April. At least two chicks were visible for the first time on 1st June when 5N fed them a large roach delivered by 6K(14). The largest chick was approximately 10 days old. Three chicks were subsequently visible for the first time on 9th June. Three male chicks were ringed on 28th June. All three chicks fledged successfully and were flying strongly on 22nd July. The adult male 6K(14) and two juveniles were still present on 18th and 19th August, but it was likely that 5N(04) and the remaining juvenile had departed on migration.

Site O

The Scottish metal-ringed female (from Argyll) returned to Site O on 23rd March and was joined by 8F(12) the next day. 03(09), who was ousted from the nest by 8F(12) in 2020 did not return this year. Incubation was first recorded on 13th April. Hatching was confirmed on 28th May, and two chicks were visible in the nest for the first time on 2nd June and again on 8th June. The two chicks, a male and a female, were ringed on 28th June. Both birds fledged successfully and 360 was photographed at Eyebrook Reservoir on 4th August. 359 was still present at the nest with 8F(12) on 30th August, but the female and 360 both had likely departed on migration.

Site R

T4(16), who was present at the site during the latter part of 2019, returned on 1st April and immediately began refurbishing the nest. Sadly 2F(12), the female that bred at the site from 2015, did not return this spring, but T4(16) was joined by an unringed female on

22nd April, and she was still present on 26th April. During this period the female was catching her own fish at Horn Mill Trout Farm, where she was seen with both T4(16) and also 2AA(16) on 21st April. The unringed female was food-begging on the nest on 7th May and was again present on 10th May when she was eating a large trout in a dead tree near the nest. She remained in the local area for the rest of the summer and it is likely that she will return and breed for the first time in 2022. T4(16) and the unringed female were both still present at the nest on 19th August. Having failed to breed, T4(16) built a frustration nest in a dead oak tree 125 metres from the existing nest, and the birds favoured this site during the latter part of the summer.

Site S

An Osprey was present on the nest on 25th March, although only viewed from a distance. 30(05) was at the nest with a male, later identified as T3(16) on 29th March. The regular breeding male 32(11) failed to return, and T3(16) took his place. Incubation was underway by 16th April. 30(05) was observed offering food into the nest for the first time on 23rd May, and over subsequent weeks it became apparent that there was just a single chick in the nest. The chick, a male, was ringed on 5th July. 079 fledged successfully on 16th July. He was seen at Hollowell Reservoir on 10th August and at Pitsford Reservoir the same week.



079 on the nest after being ringed on 5th July

Site T

Satellite-tagged male 4K(13) returned to the site he occupied last year, on 14th April, and immediately began refurbishing the nest. He was joined by an unringed female (a different individual to the bird at Site R) on 23rd April. She was still present at the nest on 29th April, but was not seen subsequently. 4K(13) remained in the local area throughout the summer, but failed to attract a mate.

Other returning birds

2AA(16) was first seen on 1st April at Horn Mill Trout Farm, and was present at the Site M artificial nest on a daily basis throughout April and early May. He continued to be seen at Horn Mill for the rest of the summer.

T7(16) was first seen on 11th April adding sticks to the Site V artificial nest in Northamptonshire (although not seen there subsequently). He became a regular visitor to Horn Mill Trout Farm from 23rd April, spending prolonged periods perched in the vicinity, even when not fishing. During the same period he also made daily visits to the Site P artificial nest, often eating fish there. T7(16) continued to fish at Horn Mill Trout Farm throughout the summer, but spent less time at the Site P nest.



T7(16) at Site P nest on 29th April

3AH(17) was first recorded intruding at the Manton Bay nest on 18th April. He was present at the Site P artificial nest on 17th May.

2AM(17) was seen at Blithfield Reservoir in Staffordshire on 22nd April. Interestingly, he was first

seen at this site in 2019 prior to his return to Rutland in 2020. He was then perched near the Site J nest on 30th April.

3AB(17) was recorded for the first time this year on 17th May, when he was captured by the trail camera on the Site P nest. He was present in the same location on 27th May. A blue-ringed male Osprey was present at Fishlake Meadows in Hampshire on 22nd and 25th May, and was subsequently identified as 3AB(17). The bird spent the rest of the summer at the site – the third successive year that he has summered there. An artificial nest has now been erected and an unringed female was present in early September.

055(19), a 2019 Manton Bay male, was seen for the first time since his first migration, intruding at his natal nest on 16th May. He was seen at Eyebrook Reservoir the same day. Both observations were made by volunteer, Chris Wood.

056(19), another 2019 Manton Bay male, was seen for the first time since his first migration at Horn Mill on 15th June. He became a regular visitor thereafter and was last seen on 4th September.

059(19) 059(19), a 2019 Site R male, was recorded intruding at the Cors Dyfi nest in mid-Wales on 2nd June. This was the first record of this bird since autumn 2019. He was subsequently seen at Otmoor in Oxfordshire on 16th July, North Yorkshire on 25th July, and then back in Rutland at Horn Mill on 27th August. Metal-ringed female (likely Scottish) was photographed at Horn Mill on 2nd and 3rd July.



055(19) at Eyebrook Reservoir on 16th May

Wetland Bird Survey

(WeBS)



Shoveler © Rob Thatcher

Wetland Bird Survey (WeBS) 2020/21

(Tim Sexton)

The Wetland Bird Survey (WeBS) is one of the most valuable surveys undertaken at Rutland Water. The principal aims are to monitor the wintering waterbird population across the Reservoir and Nature Reserve, providing an important indicator of the health of the wetland and feed back to the RAMSAR/SPA designation.

The WeBS has taken place at Rutland Water since 1975, recording over 5.5 million birds and 128 different species. The results of the WeBS counts over the last 45 years provide us with a unique opportunity to look at long-term population trends as the site matures, along with gaining an understanding of the responses of wintering and resident waterbirds to ever-changing environmental pressures.

Core counts (which coincide with the national survey between October and March then on the following Tuesdays between April and September) were carried out in every month except for January 2021 (due to COVID-19 lockdown restrictions). The reporting period for WeBS runs between July 2020 and June

2021 (to coincide with the BTO reporting period), and during that time a total of 109,293 birds were recorded of 70 species.

The highlights of the year include: the largest count of Great White Egret through the WeBS, the second largest count of Cormorant ever, the fifth highest count of Little Egret, the sixth highest count of Little Grebe and one of the highest counts of Gadwall in recent years.

Over the recording period the species maxima for Shoveler did not meet the required threshold for international importance (set at 650), with only 302 recorded in September 2020. The 5-year peak mean count for Shoveler between 16/17 and 20/21 was also only 307 individuals, which means the site will no longer qualify as internationally important for this species. This is in part due to the increase in the threshold for international importance from 450 to 650 individuals. Compared with the citation baseline figure at Rutland Water of 450 individuals (5-year peak mean 85/86 to 89/90), the current figure is not that dissimilar and the total did however exceed the minimum threshold set for favourable condition of the SSSI (set at 285) and well exceeded the threshold for national importance in Great Britain

(threshold set at 190) (fig 1.1). The threshold for international importance for Gadwall was exceeded in July 2020 with 1,744 recorded (threshold set at 1,200). This equates to around 15% of the NW European flyway population and around 25% of the British population (fig 1.2). The 5-year mean peak count for Gadwall between 16/17 and 20/21 was 1,456 individuals, making Rutland Water the number 1 site in the UK for this species!

The thresholds for national importance were also reached for Goldeneye (threshold set at 190), Tufted Duck (threshold set at 1,300), Little Grebe (threshold set at 150), Great Crested Grebe (threshold set at 170) and coot (threshold set at 2,000). The overall species maxima for the year was 23,997, well above the baseline peak count for the SPA (21,050) (fig 1.3) although shows a slight declining trend over the ten year period.

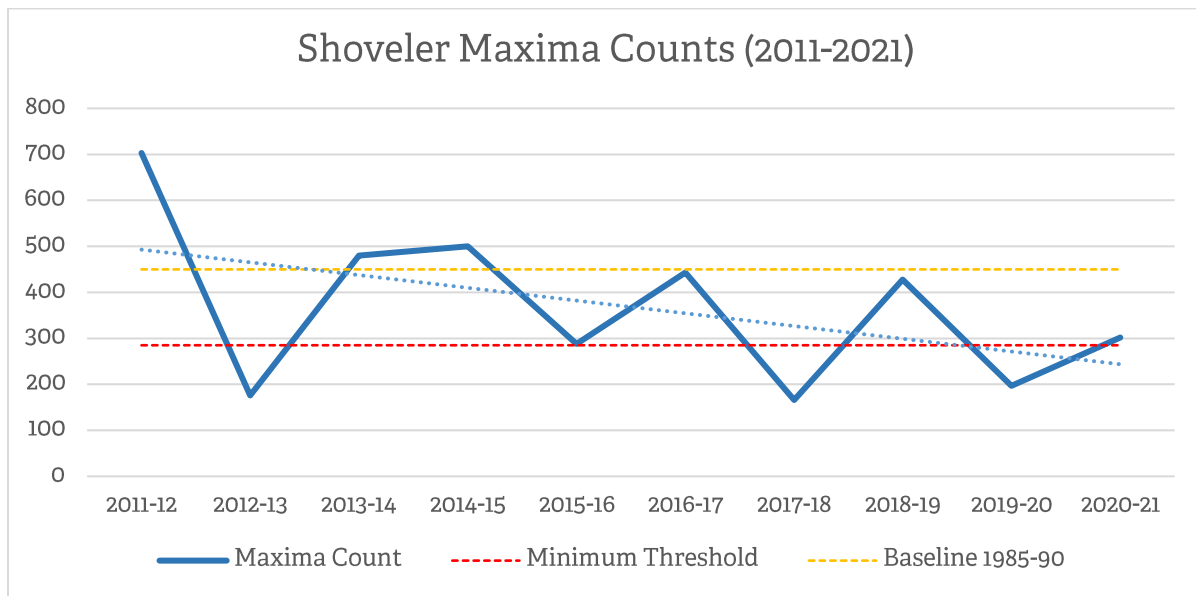


Fig1.1 Maxima count for Shoveler (2011 – 2021)

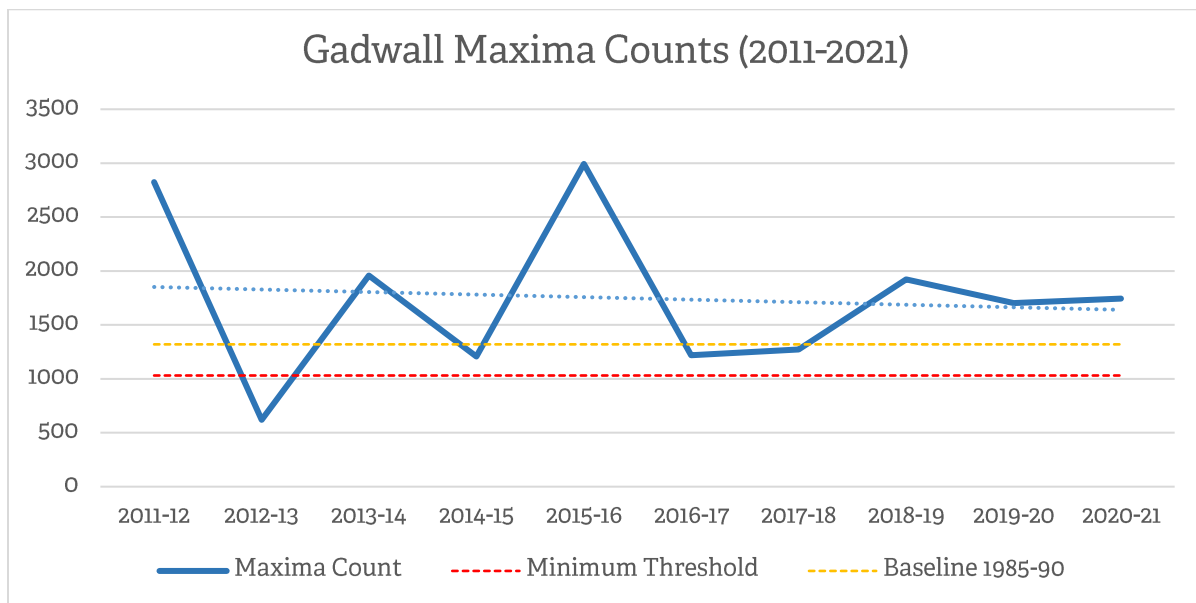


Fig 1.2 Maxima count for Gadwall (2011 – 2021)

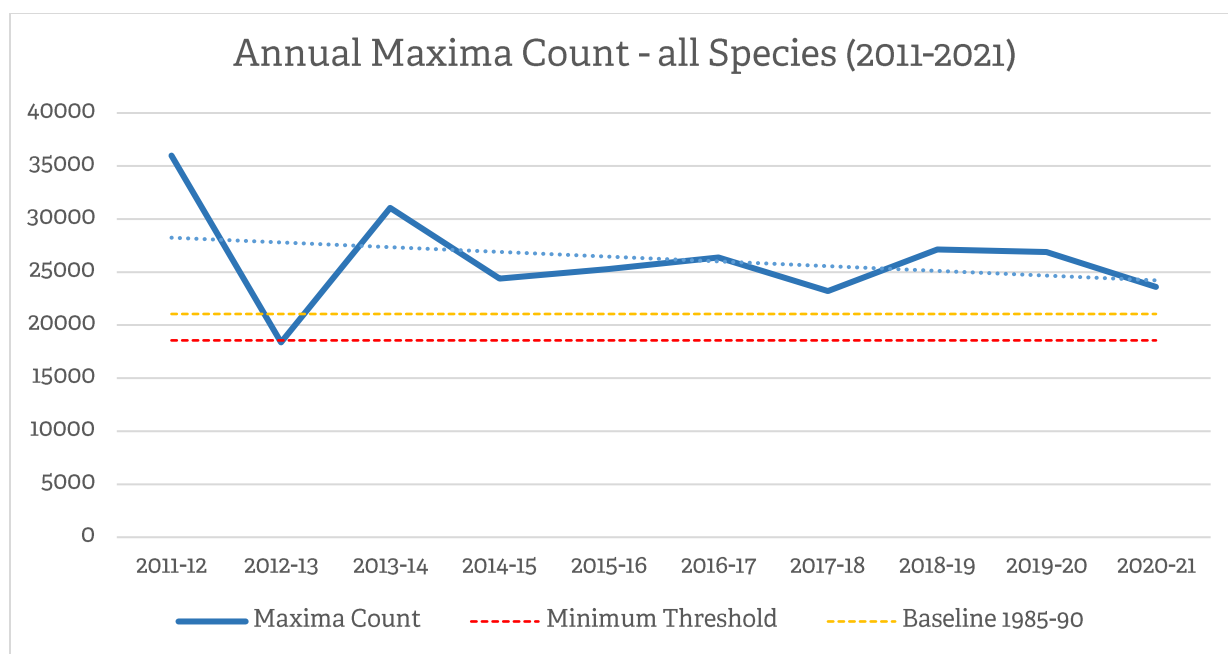


Fig 1.3 Sum of combined annual species maxima counts (2011-2021)

Figure 1.4 (below) shows the population trends for species maxima counts in 2021 against the 10-year mean for the most common species recorded through the WeBS. Comparisons are shown against the latest available UK data taken from Frost *et al*, 2021.

Cleaning-up Historic Data

Some time was spent in 2021 locating missing WeBS data from between 2006 and 2020 and entering the

results in to the BTO WeBS portal. This has enabled more accurate analysis of trends against historic records. Monthly data for the site as a whole unit is now available as far back as 1995 for summer and winter counts and to 1975 for winter counts. A volunteer is currently working on cleaning up our in house datasets to enable comparisons by individual recording area. The resulting file should provide a single dataset covering 20 years.

| Species | Rutland Water 10 Year Trend 2011/12 – 2020/21 | UK Population Trend 2008/09 – 2019/19 | Species | Rutland Water 10 Year Trend 2011/12 – 2020/21 | UK Population Trend 2008/09 – 2019/19 |
|----------------|--|---|---------------------|--|---|
| Canada Goose | ▼10% | ▲14% | Pochard | ▼15% | ▼39% |
| Greylag Goose | ▲28% | ▲21% | Tufted Duck | ▼17% | ▼3% |
| Mute Swan | ▼3% | ▼4% | Goldeneye | ▼9% | ▼26% |
| Egyptian Goose | ▼42% | ▲102% | Goosander | ▼6% | ▲14% |
| Shelduck | ▼54% | ▼11% | Little Grebe | ▲8% | ▼3% |
| Shoveler | ▼18% | ▲17% | Great Crested Grebe | ▲23% | ▼14% |
| Gadwall | ▲14% | ▲10% | Little Egret | ▲2% | ▲36% |
| Wigeon | ▼24% | ▼6% | Great White Egret | ▲244% | - |
| Mallard | ▼3% | ▼15% | Cormorant | ▲104% | ▲30% |
| Pintail | ▲20% | ▼22% | Lapwing | ▲1% | ▼9% |
| Teal | ▼32% | ▲7% | Golden Plover | ▼65% | ▼14% |

Table 1.4 Population trends for mean species maxima counts over the last 10 years (2011/12 – 2020/21)

Rutland Water Nature Reserve Wildlife Report 2021

| Species Total and Maxima Counts 2020/21 | | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|----------|-------|-------|-----|---------------|-------|--------|--|
| SPECIES | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | Totals | |
| Canada Goose | 931 | 530 | 651 | 605 | 324 | 535 | No Count | 502 | 116 | 104 | 131 | 899 | 931 | |
| Barnacle Goose | 0 | 0 | 0 | 0 | 0 | 2 | No Count | 2 | 0 | 0 | 0 | 0 | 2 | |
| Greylag Goose | 1,121 | 482 | 828 | 680 | 884 | 613 | No Count | 222 | 247 | 211 | 252 | 1,229 | 1,229 | |
| White-fronted Goose | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 1 | 0 | 0 | 0 | 1 | |
| Hybrid Goose | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 1 | 0 | 1 | |
| Mute Swan | 468 | 462 | 243 | 379 | 405 | 392 | No Count | 173 | 132 | 132 | 195 | 354 | 468 | |
| Whooper Swan | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Egyptian Goose | 54 | 63 | 43 | 27 | 25 | 31 | No Count | 7 | 17 | 28 | 37 | 42 | 63 | |
| Shelduck | 0 | 4 | 4 | 6 | 11 | 13 | No Count | 19 | 24 | 14 | 8 | 9 | 24 | |
| Ruddy Shelduck | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Mandarin Duck | 0 | 0 | 3 | 1 | 3 | 0 | No Count | 3 | 2 | 2 | 0 | 2 | 3 | |
| Garganey | 0 | 3 | 2 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 3 | |
| Shoveler | 27 | 132 | 302 | 301 | 160 | 81 | No Count | 66 | 67 | 151 | 3 | 4 | 302 | |
| Gadwall | 1,744 | 1,462 | 1,397 | 1,531 | 805 | 666 | No Count | 321 | 136 | 91 | 140 | 526 | 1,744 | |
| Wigeon | 5 | 18 | 1,618 | 3,160 | 3,514 | 3,131 | No Count | 2,056 | 1,422 | 58 | 2 | 3 | 3,514 | |
| Mallard | 842 | 1,162 | 1,236 | 724 | 766 | 704 | No Count | 392 | 306 | 247 | 226 | 532 | 1,236 | |
| Pintail | 0 | 1 | 78 | 171 | 122 | 149 | No Count | 36 | 2 | 1 | 0 | 0 | 171 | |
| Teal | 42 | 269 | 831 | 769 | 903 | 893 | No Count | 219 | 107 | 92 | 1 | 6 | 903 | |
| Red-crested Pochard | 0 | 0 | 2 | 0 | 40 | 14 | No Count | 0 | 0 | 0 | 0 | 0 | 40 | |
| Pochard | 27 | 58 | 57 | 78 | 6 | 119 | No Count | 58 | 80 | 23 | 9 | 14 | 119 | |
| Tufted Duck | 1,478 | 4,724 | 4,907 | 2,455 | 2,791 | 2,764 | No Count | 1,280 | 973 | 829 | 204 | 260 | 4,907 | |
| Scaup | 0 | 0 | 0 | 1 | 2 | 0 | No Count | 9 | 1 | 0 | 0 | 0 | 9 | |
| Bufflehead | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Goldeneye | 0 | 0 | 3 | 52 | 87 | 249 | No Count | 326 | 341 | 48 | 1 | 1 | 341 | |
| Smew | 0 | 0 | 0 | 0 | 0 | 4 | No Count | 3 | 4 | 0 | 0 | 0 | 4 | |
| Goosander | 0 | 0 | 0 | 0 | 21 | 22 | No Count | 12 | 0 | 0 | 0 | 0 | 22 | |
| Great Northern Diver | 0 | 0 | 0 | 0 | 3 | 6 | No Count | 3 | 3 | 3 | 0 | 0 | 6 | |
| Little Grebe | 58 | 162 | 100 | 117 | 147 | 163 | No Count | 108 | 9 | 0 | 1 | 4 | 163 | |
| Red-necked Grebe | 376 | 0 | 1 | 1 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 376 | |
| Great Crested Grebe | 0 | 677 | 459 | 407 | 386 | 298 | No Count | 114 | 112 | 102 | 125 | 156 | 677 | |
| Slavonian Grebe | 0 | 0 | 0 | 1 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 1 | |
| Black-necked Grebe | 0 | 0 | 1 | 0 | 0 | 1 | No Count | 1 | 0 | 0 | 0 | 0 | 1 | |
| Bittern | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Grey Heron | 10 | 20 | 29 | 41 | 25 | 24 | No Count | 3 | 29 | 4 | 3 | 10 | 41 | |
| Great White Egret | 0 | 15 | 23 | 33 | 25 | 23 | No Count | 3 | 2 | 0 | 0 | 1 | 33 | |
| Little Egret | 0 | 55 | 80 | 58 | 31 | 36 | No Count | 0 | 3 | 8 | 11 | 31 | 80 | |
| Shag | 0 | 0 | 0 | 1 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 1 | |
| Cormorant | 368 | 723 | 1,228 | 600 | 350 | 263 | No Count | 141 | 142 | 142 | 167 | 149 | 1,228 | |
| Water Rail | 8 | 0 | 6 | 0 | 0 | 8 | No Count | 0 | 12 | 0 | 21 | 0 | 21 | |
| Moorhen | 62 | 152 | 134 | 99 | 56 | 77 | No Count | 22 | 28 | 23 | 21 | 28 | 152 | |
| Coot | 797 | 1,387 | 2,256 | 2,414 | 1,648 | 2,525 | No Count | 1,146 | 436 | 105 | 107 | 256 | 2,525 | |
| Oystercatcher | 18 | 0 | 0 | 0 | 0 | 1 | No Count | 2 | 34 | 20 | 33 | 21 | 34 | |
| Avocet | 0 | 0 | 0 | 0 | 3 | 0 | No Count | 0 | 1 | 11 | 20 | 22 | 22 | |
| Lapwing | 50 | 265 | 67 | 684 | 1,583 | 2,270 | No Count | 94 | 21 | 26 | 25 | 48 | 2,270 | |
| Golden Plover | 0 | 0 | 0 | 192 | 0 | 8 | No Count | 4 | 120 | 0 | 0 | 0 | 192 | |
| American Golden Plover | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 1 | 1 | |
| Ringed Plover | 2 | 5 | 6 | 4 | 0 | 0 | No Count | 0 | 0 | 3 | 6 | 3 | 6 | |
| Little Ringed Plover | 8 | 5 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 6 | 6 | 10 | 10 | |
| Whimbrel | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 1 | 0 | 0 | 1 | |
| Curlew | 8 | 6 | 0 | 8 | 10 | 7 | No Count | 0 | 0 | 0 | 0 | 0 | 10 | |
| Sanderling | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 9 | 6 | 3 | 0 | 0 | 9 | |
| Black-tailed Godwit | 6 | 8 | 8 | 7 | 3 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 8 | |
| Knot | 0 | 0 | 1 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 1 | |
| Dunlin | 0 | 0 | 7 | 3 | 8 | 8 | No Count | 6 | 0 | 3 | 1 | 0 | 8 | |
| Turnstone | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Ruff | 2 | 5 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 5 | |
| Jack Snipe | 0 | 0 | 0 | 1 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 1 | |
| Snipe | 0 | 16 | 23 | 8 | 13 | 12 | No Count | 0 | 3 | 4 | 0 | 0 | 23 | |
| Common Sandpiper | 4 | 9 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 9 | |
| Green Sandpiper | 8 | 23 | 9 | 9 | 4 | 5 | No Count | 0 | 5 | 2 | 0 | 2 | 23 | |
| Wood Sandpiper | 0 | 2 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 2 | |
| Spotted Redshank | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Redshank | 1 | 0 | 0 | 3 | 2 | 6 | No Count | 5 | 6 | 16 | 0 | 3 | 16 | |
| Greenshank | 1 | 4 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 4 | |
| Black-headed Gull | 252 | 0 | 0 | 0 | 0 | 0 | No Count | 72 | 0 | 35 | 147 | 212 | 252 | |
| Mediterranean Gull | 1 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 1 | |
| Common Gull | 2 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 2 | 1 | 2 | |
| Great Black-backed Gull | 28 | 38 | 0 | 0 | 0 | 0 | No Count | 2 | 0 | 20 | 13 | 5 | 38 | |
| Herring Gull | 2 | 0 | 0 | 0 | 0 | 0 | No Count | 1 | 0 | 1 | 0 | 0 | 2 | |
| Yellow-legged Gull | 11 | 16 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 1 | 16 | |
| Lesser Black-backed Gull | 2 | 5 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 6 | 7 | 2 | 7 | |
| Common Tern | 101 | 58 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 127 | 72 | 127 | |
| Arctic Tern | 0 | 0 | 2 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 2 | |
| Black Tern | 0 | 0 | 0 | 0 | 0 | 0 | No Count | 0 | 0 | 0 | 0 | 0 | 0 | |
| Kingfisher | 0 | 0 | 1 | 2 | 0 | 0 | No Count | 0 | 0 | 1 | 0 | 0 | 2 | |
| Total does not include gulls due to incomplete coverage | | | | | | | | | | | Maxima Total: | | 23,997 | |

Breeding Waders



Avocet © Malcolm Heaven

Breeding Wader Survey

(Sarah Bedford)

The aim of this survey is to monitor the breeding successes and failures of wading birds (waders) on the lagoons at Rutland Water Nature Reserve (RWNR). Breeding wader surveys have previously been carried out at the reserve in 2018 and 2019. A 2020 survey was not possible due to the coronavirus pandemic. Surveying resumed in the spring of 2021 with a slightly delayed start to wait for the easing of local pandemic lockdown restrictions.

A group of 10 local volunteers was responsible for monitoring and recording the activities of any wading birds found on their allocated lagoon. Each volunteer was asked to return their data to the nature reserve for analysis.

Wader surveyors were asked to survey their allocated lagoon ideally for 2-4 hours at least once per week, dependent upon lagoon size and bird activity. The

method employed was a fixed-point observation study. Observation points were usually hides; the only exception was on Lagoon 7 where there are no hides. In this case the surveyor took position in a temporary camouflaged canvas hide, erected on the bank of the lagoon, close to the sluice gate.

Survey Methodology

The surveyors were asked to look for specific behaviour associated with breeding waders and enter any findings onto both a recording form and a map of the lagoon. Numbered concrete blocks are present on the lagoon islands; this enabled surveyors to note specifically where within the lagoon any breeding behaviour occurred and later in the season, to record exactly where chicks were present.

The behaviours that the surveyors were asked to observe and record were:

Courtship - Behaviours such as chasing, courtship flights and territorial displays. Due to the mobility of

birds engaging in courtship, it often proves difficult to accurately assign an island number to any birds behaving in this way.

Copulation - Any records of active copulation are recorded. It is normally possible to assign an island number to this behaviour.

Nest scraping - Surveyors record any evidence of birds scraping out or building a nest.

Incubation - Any observations of birds sat motionless on an island for long periods is a strong indicator of incubation. Roosting waders normally stand upright on one leg; a bird sat on the ground is likely to be incubating. Any birds suspected to be incubating were regularly observed to see if they were relieved by their mate which would act as confirmation of incubation.

Brooding - Once eggs have hatched, adult birds will routinely shelter their young chicks underneath their bodies. Signs of this behaviour were recorded if observed.

Predation events - An opportunity for surveyors to note any aerial or ground predators present during their monitoring period. Even if there was no actual predation of a nest, the presence of predators was still observed and recorded and any effects this may have had on the breeding waders present.

Notes - Surveyors were encouraged to make further notes of anything they felt pertinent to the survey including other disturbance and non-breeding waders present during the recording period.

The position of the nest was recorded as accurately as possible on the surveyors' lagoon maps with a cross and the BTO species code for the bird. The type of behaviour observed was recorded as such: i = incubation, b = brooding or chicks was written with the number preceding the BTO code to denote the number of chicks for that species. A new map was used for each survey visit.

Results

Surveys were carried out and data was obtained for Lagoons 4-8 at Rutland Water Nature Reserve. Regular visits were also made to Lagoons 1-3 and the

Wet Meadow on Lagoon 1; with the exception of one failed attempt by a pair of oystercatchers on Lagoon 3, no breeding behaviour from wading birds was observed in any of those places.

| Species | Pairs | Breeding attempts | Fledged chicks |
|----------------------|-----------|-------------------|----------------|
| Avocet | 10 | 10 | 30 |
| Lapwing | 10 | 27 | 19 |
| Little Ringed Plover | 5 | 5 | 2 |
| Oystercatcher | 16 | 17 | 12 |
| Redshank | 3 | 3 | 7 |
| Total | 44 | 62 | 70 |

Table 2.1 Total number of breeding attempts and fledglings by species across the reserve as a whole.

Compared to previous years, 2021 was an improvement for fledglings leaving the nest of wading species. In 2019, for example, 43 fledglings across the same five species were observed.

The location of the breeding attempts and fledging chicks of each species can be seen on maps for each lagoon in Appendix 1.



The 'Rod Pod' Bird Hide on Lagoon 7

Lagoon 4

The results show the highest number of chicks fledging from Lagoon 4. This is attributable to a

number of factors: the size of the lagoon (it is the largest of the five lagoons surveyed), lagoon water levels, food availability for chicks and predation or lack of it. There was a high number of breeding black headed gulls on Lagoon 4 in 2021. This could be seen as a possible benefit to other wading birds; the “strength in numbers” approach to see off aerial predators including great black-backed gulls and peregrine falcons could have contributed to the improved chances of fledglings of all species reaching maturity. In the winter of 2020/21, the islands of Lagoon 4 were levelled with a bulldozer, changing their profile to make them bigger and flatter and therefore more appealing to waders by offering the type of habitat they prefer to breed in. In addition, in the spring of 2021, a predator gate was erected on the access slope

into Lagoon 4, presenting a significant barrier to land-based predators trying to access the lagoon islands.

Lagoon 5

There were no successful breeding attempts on this lagoon and very little breeding activity in general during the 2021 breeding season.

Lagoons 6, 7 and 8

There was mixed success on all three of these lagoons with similar numbers of birds attempting to breed on each and Lagoon 6 appearing to have the greatest success at bringing chicks to fledgling status.

A summary of breeding attempts by lagoon is shown in table 2.2 (below).

| Species | Lagoon 4 | | Lagoon 5 | | Lagoon 6 | | Lagoon 7 | | Lagoon 8 | | Totals | |
|---------------|----------|----|----------|----|----------|----|----------|----|----------|----|------------------|----------------|
| | BA | FC | BA | FC | BA | FC | BA | FC | BA | FC | Breeding attempt | Fledged chicks |
| LP | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 |
| AV | 10 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 30 |
| L | 12 | 14 | 4 | 0 | 5 | 3 | 5 | 1 | 1 | 1 | 27 | 19 |
| OC | 7 | 8 | 2 | 0 | 2 | 2 | 1 | 0 | 4 | 2 | 16 | 12 |
| RK | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 3 | 7 |
| Totals | 34 | 54 | 6 | 0 | 9 | 8 | 7 | 5 | 5 | 3 | 61* | 70 |

Table 2.2: Number of breeding attempts and fledglings by species and individual lagoon. Key: BA – Breeding attempt, FC – Fledged chicks, LP – Little ringed plover, AV – Avocet, L – Lapwing, OC – Oystercatcher, RK – Redshank. *note – failed breeding attempt by oystercatcher pair on Lagoon 3 not recorded in Table 2.3

| Year* | Counting method | Oystercatcher | Lapwing | Avocet | Little Ringed Plover | Redshank |
|-------|-----------------|---------------|---------|--------|----------------------|----------|
| 2018 | Number of nests | 12 | 21 | 1 | 1 | 3 |
| 2019 | Fledged chicks | 2 | 20 | 2 | 7 | 5 |
| 2021 | Fledged chicks | 12 | 19 | 30 | 2 | 7 |

Table 2.3: Comparison of annual data by species * no surveys took place in 2020 due to the coronavirus pandemic

Conclusions

The 2021 season has largely been seen as a very successful one for breeding waders at Rutland Water Nature Reserve. Unprecedented numbers of avocet pairs and fledging chicks on Lagoon 4 were a definite highlight of the breeding season at the reserve.

The installation of a predator gate, levelling of the islands and the strength in numbers theory with Black-headed Gulls present may all have been factors contributing to the success of all species on Lagoon 4 and it enjoyed the greatest fledging success by far compared to the other lagoons.

With the exception of one failed attempt by a pair of oystercatchers on Lagoon 3, no breeding behaviour from wading birds was observed on Lagoons 1, 2 3 and the Wet Meadow. These older lagoons have taller islands with eroded edges offering poor breeding habitat, which can perhaps explain the lack of wader breeding activity there.

In studying the final results, the inconsistency of comparative data must be acknowledged (see table

2.3) as different data has been gathered since the survey began in 2018. It can be concluded, however, that the avocet success is above and beyond anything previously seen.

The Wet Meadow survey did not yield any useful results; a review about whether and how to continue that flush survey technique will be carried out before the beginning of the next breeding season.

It is intended that a 2022 survey will be carried out across the lagoons in the same way as in 2021.

Acknowledgements

Volunteers were essential to carrying out these surveys and collectively, carried out over 210 hours of surveying between April and July. An enormous thank you to Rod Baker, Nick Coombs, Jeff Davies, Keith Elliot, Steve Lister, Shirley Maxfield, Chris Park, Jane Phillpott and Ann & Tom Price. This survey could not have taken place without their dedication.



Avocet chick © Malcolm Heaven

Breeding Water Rails



Water Rail © Linda Schlemmer

Breeding Water Rail Survey

(Tim Sexton)

The Water Rail (*Rallus aquaticus*) is a small relative of the Moorhen and Coot. Considered to be 'an uncommon winter bird and bird of passage, rarely breeding in Leicestershire and Rutland', Water Rails have been known to breed at Rutland Water since the late 1970s. There have been regular sightings of adults with young recorded by the Osprey Volunteers from Waderscape Hide in Manton Bay and occasional confirmed records elsewhere – a number from Burley Fish Ponds in the early days of the Reserve.

Their characteristic 'sharming' calls can be heard throughout the summer months from the reedbeds of Lagoon 3, Lagoon 1 and Field 16, so the actual number

of breeding pairs is expected to be higher than reported.

Due to their secretive nature, and preferred habitat of dense emergent vegetation, Water Rails are typically only detected from their vocalisations.

As a consequence, it is difficult to make accurate counts of Water Rail through the monthly Wetland Bird Surveys (WeBS), meaning estimations are frequently used. Typical estimates are around 10 individuals in the summer and low double figures in the winter – the largest count being 24. Actual birds heard during WeBS counts represent just a handful of calling individuals.

Although Water Rails are not threatened within the UK they are often considered to be a reliable indicator of wetland habitat quality and are an umbrella species for reedbeds. As such, in early spring 2021, a

Playback Survey was undertaken to get an accurate figure of the total number of Water Rail using the site and number of breeding pairs at Rutland Water.

Using the methodology described in Gilbert *et al*, 1998, a total of six areas of wetland habitat which were deemed to be suitable for breeding Water Rail (as detailed in Jenkins *et al*, 2002) were surveyed. Three visits were made on the 30th March 2021, 30th April and the 7th May 2021 to coincide with their peak breeding activity - whilst they are known to have an extended breeding season from March to June, most nesting attempts are made in April and May (Jenkins, 1999).

A survey route was planned to safely access the habitat with the most potential and 100m 'playback points' were plotted along the route using QGIS and located in the field using the QFIELD app. So as not to unnecessarily disturb the nesting ospreys in Manton Bay, the calls were played from each of the hides rather than at 100m intervals. Surveys were supported by the Trainee Reserve Officers and carried out at 6am (similar studies of Water Rails have shown best responses before 9am).

An MP3 recording of Water Rail sharming calls was played at each survey point from a phone connected to an ANKER Bluetooth Speaker. After two minutes,

if a response had not been heard, the MP3 was played for a second time. If there was no response to the second call it was assumed a bird/pair was not present. Activity was recorded on the QFIELD Mobile App along with the type of response: bird sharming in response to playback (R), unprovoked sharming (S), sharming duet (D), other calls (C), sighting (V).

Results

Table 3.1 summarises the response to playback. A positive response to the playback during a survey at a single location was considered to represent a potential breeding territory and a response on two or more of the survey dates at the same location was presumed to be a confirmed breeding territory.

Over the survey period, eight different sample points had birds respond to the playback on two or more occasions, suggesting eight nesting pairs were present on the Reserve this year. While no nests were found during the surveys, a pair with one chick was noted from Waderscape Hide in the Manton Bay Survey Area on the 10th August.

A follow-up survey is planned for the winter to monitor overwintering Water Rails, using a similar methodology.

| Survey Area | 30/03/2021 | 30/04/2021 | 07/05/2021 | No. Nesting Pairs |
|-------------------|--------------|------------|------------|-------------------|
| Burley Fish Ponds | 1 (R) | 1 (R) | 1 (R) | 1 |
| Lagoon 3 | 3 (R), 1 (C) | 3 (R) | 3 (R) | 3 |
| Lagoon 2 | 1 (R) | 1 (R) | 1 (R) | 1 |
| Lagoon 1 | 0 | 0 | 0 | 0 |
| Wet Meadow | 0 | 0 | 0 | 0 |
| Field 16 | 3 (R) | 2 (R) | 2 (R) | 2 |
| Manton Bay | 0 | 1 (R) | 1 (R) | 1 |

Table 3.1 Bird sharming in response to playback (R), other calls heard in response to playback (C).

Grasshopper Warbler © Chris Hughes



Ringling Group Report

Bird Ringing Report

(Luke Nelson)

Terminology and abbreviations used in this report

BTO - The British Trust for Ornithology, the charitable body who coordinate and oversee all ringing licensing and activities in the UK.

CES - Constant Effort Sites, a standardised method of ringing whereby nets are set in the same place year on year for 12 visits within 10 day periods between May and September.

CONTROL - A bird caught by a ringer more than 5km away from the site where it was originally ringed

PROCESSED - The term referring to processing of a bird for ringing, re-trap or control.

PULLI - Refers to the juvenile birds (chicks) in the nest, unable to fly or fly very weakly.

RAS - The Re-trap Adults for Survival (RAS) scheme is a national standardised ringing programme within the BTO Ringing Scheme; ringers aim to catch or re-sight at least 50 adult birds of a single species within the breeding season.

RECOVERY - A bird caught as in control above or a bird found by a third party e.g. reported by a member of the public.

RETRAP - A bird caught by a ringer at the same site where it was originally ringed or, if sites are close together, a bird caught within 5km of where it was first ringed.

RINGED - The application of a ring to a bird's leg. Data such as age, sex, wing length, weight etc. are also obtained.

RINGING BASE - Birds are brought back to a central area for processing.

2021 Summary

After limited bird ringing in 2020 due to Covid restrictions, 2021 allowed for the return of ringing activities on the reserve when restrictions eased in April. A total of 5,880 birds of 51 species were

processed at Rutland Water during 2021, compared with 3,679 in 2020 and 6,538 in 2019.

2021 saw the continuation of our long term projects including our two CES sites, Sand Martin RAS & nest monitoring, Black-headed gull & Cormorant colour-ringing projects, and nest box monitoring. General ringing at established sites continued, as well as a trial of the BTO's winter ringing project.

Ringing demonstrations resumed from September, with a session for Wildlife and Conservation first year students from Nottingham Trent University. During the winter, monthly public demonstrations were held, alternating between Lyndon and AWBC. These proved popular and were well received. Thank you to Garry & Candice Barker and Chris Hughes for their help in running these demonstrations, Paul Stammers for his help with scribing, and Laura Brady, Libby Smith and Abi Mustard for organising and helping facilitate the events.



A Chiffchaff ringed at Rutland Water

Oldest known Chiffchaff recorded

Last year we set the longevity record for Chiffchaff on the reserve! An individual was ringed as a juvenile here in July 2009 and wasn't encountered again until June 2020, 10 years, 10 months and 27 days after it was ringed. This beats the previous record holder by three years. The average lifespan for a Chiffchaff is just two years.

| Total number of birds processed at RWNr in 2021 | | | |
|---|------------|---------------------|-------|
| Species | Full-grown | Re-traps/recoveries | Pulli |
| Barn Owl | 0 | 0 | 16 |
| Black-headed Gull | 0 | 7 | 78 |
| Blackbird | 78 | 47 | 5 |
| Blackcap | 515 | 54 | 0 |
| Blue Tit | 266 | 124 | 247 |
| Bullfinch | 31 | 16 | 0 |
| Cetti's Warbler | 27 | 29 | 0 |
| Chaffinch | 18 | 2 | 0 |
| Chiffchaff | 218 | 63 | 0 |
| Coal Tit | 2 | 0 | 0 |
| Collared Dove | 0 | 0 | 3 |
| Cormorant | 0 | 0 | 2 |
| Dunnoek | 101 | 98 | 0 |
| Garden Warbler | 93 | 49 | 0 |
| Goldcrest | 20 | 3 | 0 |
| Goldfinch | 25 | 0 | 0 |
| Grasshopper Warbler | 7 | 2 | 0 |
| Great Spotted Woodpecker | 1 | 1 | 0 |
| Great Tit | 89 | 53 | 87 |
| Greenfinch | 1 | 0 | 0 |
| House Sparrow | 4 | 0 | 0 |
| Jackdaw | 0 | 1 | 10 |
| Jay | 3 | 0 | 0 |
| Kestrel | 0 | 0 | 6 |
| Kingfisher | 2 | 0 | 0 |
| Lesser Redpoll | 4 | 0 | 0 |
| Lesser Whitethroat | 44 | 7 | 0 |
| Linnet | 4 | 0 | 0 |
| Long-tailed Tit | 141 | 40 | 0 |
| Marsh Tit | 2 | 4 | 0 |
| Meadow Pipit | 1 | 0 | 0 |
| Nightingale | 3 | 0 | 0 |
| Osprey | 0 | 0 | 2 |
| Oystercatcher | 0 | 1 | 0 |
| Pied Wagtail | 0 | 0 | 5 |
| Redwing | 24 | 0 | 0 |
| Reed Bunting | 57 | 18 | 0 |
| Reed Warbler | 195 | 86 | 0 |
| Robin | 100 | 38 | 0 |
| Sand Martin | 57 | 308 | 1,648 |
| Sedge Warbler | 116 | 98 | 0 |
| Siskin | 1 | 0 | 0 |
| Song Thrush | 27 | 16 | 0 |
| Sparrowhawk | 2 | 0 | 0 |
| Spotted Flycatcher | 2 | 0 | 0 |
| Stock Dove | 2 | 1 | 0 |
| Tawny Owl | 0 | 0 | 3 |
| Treecreeper | 13 | 5 | 0 |
| Whitethroat | 35 | 12 | 0 |
| Willow Warbler | 47 | 9 | 0 |
| Wren | 129 | 69 | 0 |
| Totals: | 2,507 | 1,261 | 2,112 |
| Total number of birds processed: | | | 5,880 |

Table 4.1 Total number of birds processed at RWNr in 2021

CES

The Constant Effort Sites (CES) scheme is the first national standardised ringing program within the BTO and has been running since 1983. Ringers operate the same nets in the same locations over the same time period at regular intervals through the breeding season at around 120 sites throughout Britain and Ireland. The Scheme provides information on population size, breeding success and survival of 24 common songbird species living in scrub and wetland habitats. Rutland Water Nature Reserve operates two established CES sites at Lagoon 3 and Field 16. The Lagoon 3 CES program started during the CES scheme's inception in 1983 and has been run almost continuously since then. The Field 16 CES site was established in 2008 and has been run continuously since its inception.

Lagoon 3 CES

The Lagoon 3 CES site operates a total of 144m of mist nets through a variety of woodland, wet scrub and reed bed. All 12 of the 12 recommended visits were successfully completed at Lagoon 3 in 2021. 531 birds were processed as part of CES. 4 of the 24 species monitored by the CES scheme were not caught at this site in 2021: Willow tit, Chaffinch, Greenfinch & Goldfinch. 4 non-CES species were caught: Grasshopper Warbler, Jay, Kingfisher and Nightingale. A pair of Grasshopper Warbler in breeding condition were caught in early visits, but no juveniles were caught to confirm breeding. Breeding of Kingfisher, Jay and Nightingale were confirmed by first-year birds being caught. Both the male and female Nightingale of the breeding pair were caught.



A juvenile Nightingale caught in the Lagoon 3 CES

| | Adult | Juvenile | Full-grown | Total |
|---------------------|-------|----------|------------|-------|
| Blackbird | 11 | 3 | 0 | 14 |
| Blackcap | 42 | 25 | 0 | 67 |
| Blue Tit | 13 | 43 | 0 | 56 |
| Bullfinch | 6 | 0 | 0 | 6 |
| Cetti's Warbler | 3 | 7 | 0 | 10 |
| Chiffchaff | 17 | 24 | 0 | 41 |
| Dunnock | 14 | 3 | 0 | 17 |
| Garden Warbler | 9 | 14 | 0 | 23 |
| Grasshopper Warbler | 2 | 0 | 0 | 2 |
| Great Tit | 10 | 16 | 0 | 26 |
| Jay | 1 | 1 | 0 | 2 |
| Kingfisher | 0 | 2 | 0 | 2 |
| Lesser Whitethroat | 1 | 2 | 0 | 3 |
| Long-tailed Tit | 9 | 14 | 16 | 39 |
| Nightingale | 2 | 1 | 0 | 3 |
| Reed Bunting | 9 | 2 | 0 | 11 |
| Reed Warbler | 57 | 33 | 0 | 90 |
| Robin | 4 | 15 | 0 | 19 |
| Sedge Warbler | 28 | 18 | 0 | 46 |
| Song Thrush | 3 | 0 | 0 | 3 |
| Treecreeper | 0 | 1 | 0 | 1 |
| Whitethroat | 2 | 0 | 0 | 2 |
| Willow Warbler | 3 | 7 | 0 | 10 |
| Wren | 12 | 26 | 0 | 38 |
| Totals: | 258 | 257 | 16 | 531 |

Table 4.2 Total birds processed at Lagoon 3 CES

Field 16 CES

The Field 16 CES operates a total of 180m of mist nets through a variety of woodland, wet scrub and reed bed. All 12 of the 12 recommended visits were successfully completed at Field 16 in 2021. 582 birds were processed in total at this site. 2 of the 24 target CES species were not caught at this site in 2021: Greenfinch & Willow Tit. 3 additional species were caught. A solo Grasshopper Warbler was caught in the first visit, perhaps a passing migrant as this species wasn't recorded at any further visits or during breeding bird surveys. Juveniles of Goldcrest and Marsh Tit were caught, confirming successful

breeding. This site in particular is productive for Willow Warblers, compared to other CES sites nationally where there has been a decline. The site yielded a foreign control with a Belgian ringed Sedge Warbler in an early visit, caught during return migration the previous year. One Reed Warbler which was recaptured was originally ringed as an adult in 2013! This is now at least nine years old, and has been caught at least once a year since, showing how faithful this species is to its breeding site, returning to the exact spot to breed each year from sub-Saharan Africa.

| | Adult | Juvenile | Full-grown | Total |
|---------------------|-------|----------|------------|-------|
| Blackbird | 10 | 5 | 0 | 15 |
| Blackcap | 22 | 29 | 0 | 51 |
| Blue Tit | 11 | 31 | 0 | 42 |
| Bullfinch | 10 | 3 | 0 | 13 |
| Cetti's Warbler | 3 | 4 | 0 | 7 |
| Chaffinch | 0 | 1 | 0 | 1 |
| Chiffchaff | 24 | 69 | 0 | 93 |
| Dunnock | 7 | 8 | 0 | 15 |
| Garden Warbler | 24 | 8 | 0 | 32 |
| Goldcrest | 0 | 2 | 0 | 2 |
| Goldfinch | 2 | 0 | 0 | 2 |
| Grasshopper Warbler | 1 | 0 | 0 | 1 |
| Great Tit | 7 | 0 | 0 | 7 |
| Lesser Whitethroat | 5 | 2 | 0 | 7 |
| Long-tailed Tit | 8 | 18 | 7 | 33 |
| Marsh Tit | 0 | 2 | 0 | 2 |
| Reed Bunting | 13 | 2 | 0 | 15 |
| Reed Warbler | 72 | 28 | 0 | 100 |
| Robin | 3 | 18 | 0 | 21 |
| Sedge Warbler | 31 | 18 | 0 | 49 |
| Song Thrush | 10 | 0 | 0 | 10 |
| Treecreeper | 2 | 2 | 0 | 4 |
| Whitethroat | 6 | 1 | 0 | 7 |
| Willow Warbler | 3 | 14 | 0 | 17 |
| Wren | 9 | 27 | 0 | 36 |
| Totals: | 283 | 292 | 7 | 582 |

Exchange with Brandon Marsh

In late May/early June we had individuals from 3 species on the reserve which all hatched at Brandon Marsh Nature Reserve, Warwickshire Wildlife Trust's HQ: a Sand Martin ringed in 2019, a colour-ringed Common Tern ringed in 2011, and an Oystercatcher ringed 14 years ago in 2007!

Sand Martin Monitoring

The first Sand Martin bank on the reserve was constructed in 1999, with a second built in 2014 with Sand Martins starting to occupy in 2015.

This provision of nesting habitat has allowed the number of breeding Sand Martin to greatly increase on the reserve, leading to this year being the most successful breeding season to date, with the highest number of pulli ringed: 1,648!

Weekly checks of the banks occurred from late April until the end of August with nest record data being collected and suitable pulli being ringed. This data has been submitted to the BTO in 524 nest records.

RAS

We were able to carry out the Re-trapping Adults for Survival (RAS) sessions for the Sand Martin banks in 2021, after missing a year due to Covid.

One morning a year, in the breeding season, for each Sand Martin bank we put mist-nets up before dawn to catch the adults as they emerge, to generate data which allows the BTO to estimate adult survival rates between years.

This year turned out to be our biggest catch yet with 342 adults caught in total, 82% of these being recaptures from pulli ringed here or adults caught in previous RAS sessions, a fantastic recapture rate! We also had 7 controls, including a bird ringed last summer in France during migration.

The totals for the two RAS sessions, undertaken on the 3rd June and 8th June are summarised in tables 4.4 and 4.5. A summary of Sand Martin controls is included in table 4.6

Table 4.3 Total birds processed at Field 16 CES

| Re-trapping Adults for Survival (RAS) - L5 Sand Martins 2021 | | | | |
|--|-----------------|------------------------|-------------------------|---------|
| Date | New adult birds | Re-trapped adult birds | 1st calendar year birds | Control |
| 03-Jun | 23 | 106 | 3 | 6 |
| Total number of birds processed: | | | | 138 |

Table 4.4 Re-trapping Adults for Survival (RAS) - L5 Sand Martins 2021

| Re-trapping Adults for Survival (RAS) - L2 Sand Martins 2021 | | | | |
|--|-----------------|------------------------|-------------------------|---------|
| Date | New adult birds | Re-trapped adult birds | 1st calendar year birds | Control |
| 08-Jun | 33 | 173 | 2 | 1 |
| Total number of birds processed: | | | | 209 |

Table 4.5 Re-trapping Adults for Survival (RAS) - L2 Sand Martins 2021

| Ring number | Age | Date | Location |
|-------------|-----|------------|--|
| AHJ4489 | 1 | 02/08/2020 | Donington on Bain, Lincolnshire, UK |
| | 4F | 03/06/2021 | Lax Hill (Lax Hill), Rutland, England; 86km SSW; 305 days |
| C991983 | 1 | 11/07/2019 | Ferry Meadows Country Park, Peterborough, UK |
| | 4M | 03/06/2021 | Lax Hill (Lax Hill), Rutland, England; 28km WNW; 693 days |
| AHF5433 | 1 | 30/05/2019 | Brandon Marsh, Warwickshire, UK |
| | 4F | 03/06/2021 | Lax Hill (Lax Hill), Rutland, England; 59km ENE; 735 days |
| ACB2315 | 1 | 07/07/2020 | Attenborough Nature Reserve, Nottinghamshire, UK |
| | 4M | 03/06/2021 | Lax Hill (Lax Hill), Rutland, England; 47km SE; 331 days |
| ABJ5126 | 1 | 13/07/2019 | Bagworth Heath, Leicestershire, UK |
| | 4F | 03/06/2021 | Lax Hill (Lax Hill), Rutland, England; 43km E; 691 days |
| 8905302 | 3 | 24/08/2020 | Chenal, Chenac-Saint-Seurin-d'Uzet, Charente-Maritime, France |
| | 4F | 03/06/2021 | Lax Hill (Lax Hill), Rutland, England; 793km N; 283 days |
| E052913 | 3 | 22/05/2019 | Ferry Meadows Country Park, Peterborough, UK |
| | 4 M | 08/06/2021 | Browns Island (Browns Island), Rutland, England; 29KM WNW; 748 days |

Table 4.6 Sand Martin Controls in 2021

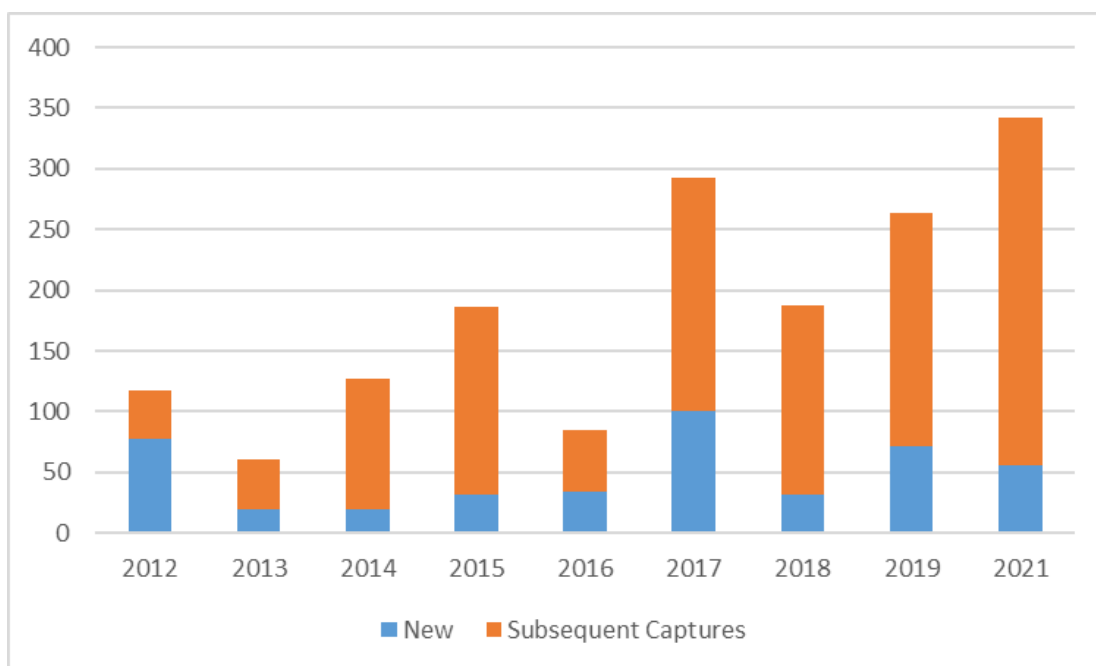


Figure 4.1 Adult Sand Martins caught in Re-trapping Adult for Survival sessions at Rutland Water Nature Reserve. Lagoon 5 got sampled from 2015 after its creation, and in 2016 a Lagoon 2 RAS session didn't take place.

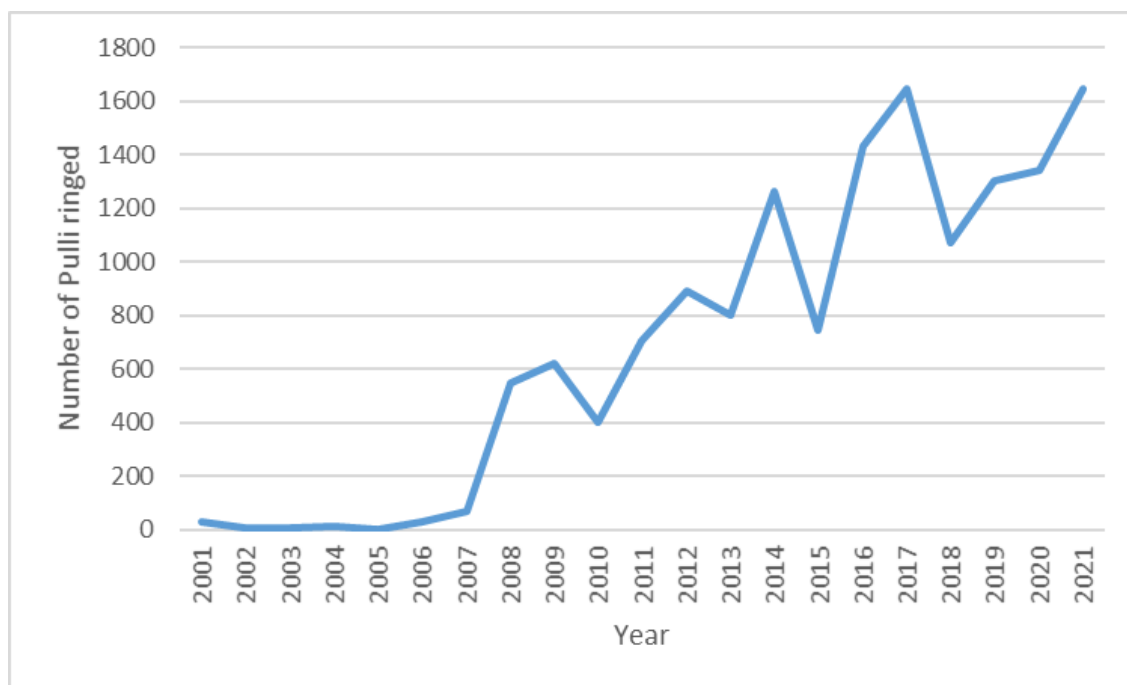


Figure 4.2 Sand Martin pulli ringed at Rutland Water Nature reserve over time.

Below is a summary of the data from 2021. Lagoon 2 is clearly the more established and productive bank, with super high occupancy in the top row of nest chambers at 96%.

| | Lagoon 2 | Lagoon 5 |
|---|----------|----------|
| Number of nest chambers occupied | 189 | 121 |
| % of nest chambers occupied | 54 | 25 |
| % top row occupancy | 96 | 42 |
| % middle row occupancy | 65 | 25 |
| % bottom row occupancy | 17 | 17 |
| Number of broods | 327 | 195 |
| Number of live eggs in nests | 1,461 | 860 |
| Average clutch size | 4.47 | 4.41 |
| Number of hatched chicks | 1,122 | 656 |
| % of live eggs hatched | 77 | 76 |
| Number of fledged chicks | 1,073 | 597 |
| % of hatched chicks fledged | 96 | 91 |
| Number of ringed chicks | 1,063 | 585 |
| Estimated number of breeding pairs | 175 | 98 |

Table 4.7 Sand Martin summary 2021

Nest Box Monitoring and Nest Recording

Large Hole Boxes

There are approximately 45 large hole nest boxes sited across Rutland Water Nature Reserve, designed to attract Barn Owl, Kestrel, Little Owl, Stock Dove and Tawny Owl. These are monitored with a focus on Barn and Tawny Owl and Kestrel.

Quite a few boxes were in poor condition or fallen down due to a missed year of maintenance because of the pandemic, so artificial nesting opportunities for some species, such as Kestrel, were more limited.



One Kestrel brood of six chicks was discovered, which was using an old Barn Owl box which was missing its roof. During ringing this box was taken down and replaced with a Kestrel box in the same position, where the chicks were replaced. Subsequent visits confirmed the chicks weren't affected by the move.



Kestrel chicks © Tim Sexton

After one single Barn Owl chick ringed in 2020, 2021 was a much more productive year with sixteen chicks being ringed from four broods. Changes in productivity are expected in Barn Owls due to the cyclical nature of small mammal populations which the Barn Owls feed on. Two broods were ringed in June, and two in September, suggesting second broods or re-nesting attempts. A third brood was found in September but the chicks were dead, perhaps due to death of an adult.

| Large hole nest boxes - ringing of adults and pulli | | | | | | |
|---|--------------------------|------------|------------------|---------------|-----------------|---------------------------------|
| Species | Number of boxes occupied | New Adults | Re-trapped birds | Control birds | Number of pulli | Total number of birds processed |
| Barn Owl | 5 | 0 | 0 | 0 | 16 | 16 |
| Kestrel | 1 | 0 | 0 | 0 | 6 | 6 |
| Little Owl | 0 | 0 | 0 | 0 | 0 | 0 |
| Stock Dove | 5 | 2 | 1 | 0 | 0 | 3 |
| Tawny Owl | 2 | 0 | 0 | 0 | 3 | 3 |
| Jackdaw | 5 | 0 | 0 | 0 | 10 | 10 |
| Mandarin | 1 | 0 | 0 | 0 | 0 | 0 |
| Total number of birds processed: | | | | | | 38 |

Table 4.8 Large hole nest boxes - ringing of adults and pulli

Small Hole Boxes

There are over 300 small hole nest boxes for songbirds in various woodlands across the reserve. Most of these aren't monitored regularly apart from those on the Lyndon side of the reserve, where Garry and Candice Barker have been monitoring since 2008.

Nest box monitoring is done in conjunction with mist-netting sessions later in the season, allowing post-juvenile survival to be monitored in addition to nesting productivity.

2021 was an interesting season at Lyndon because no monitoring or maintenance took place in 2020 due to the pandemic, so the availability of boxes suitable for nesting was reduced. This was due to boxes having

come down in the winter, no cleaning out being done and damaged boxes not been maintained or replaced. As a result, only 86 out of 112 boxes were available to the birds. 42 of the 86 boxes were occupied of which 38 had chicks and in the other 4, dead chicks were found. Below is a summary of the species ringed in 2021 and the 2 previous years obviously with the exception of the pandemic year.

Some of the boxes on the Eggleton side of the reserve were checked whilst they were being mapped, with 24 Blue Tit chicks ringed from 4 boxes, and 12 Great Tit chicks ringed from 2 boxes.

A Summary of pulli ringed from small hole nest boxes at Lyndon between 2018 and 2021 is shown in table 4.9

| Pulli ringed from small hole nest boxes at Lyndon | | | | |
|---|------------|------------|------------|------------|
| Species/Year | 2018 | 2019 | 2021 | Totals |
| Blue Tit | 188 | 157 | 33 | 378 |
| Coal Tit | 0 | 10 | 0 | 10 |
| Great Tit | 103 | 116 | 76 | 295 |
| Totals | 291 | 283 | 109 | 683 |

Table 4.9 Pulli ringed from small hole nest boxes at Lyndon

Nest Recording of Open Nest Species

Nest records of species which don't use nest boxes were recorded on an ad-hoc basis to provide data to the BTO's Nest Record Scheme. A summary is shown in table 4.10.

Winter ringing project

During the winter of 2021/2022 we took part in a pilot initiative for the BTO: the Winter Ringing Project. The aim of this project was to use standardised effort for winter ringing visits at a bird feeder site, to generate survival data and other demographic data for species not covered by the CES scheme. We took part on the reserve at our Lagoon 2 feeder site.

| Nest records of open nest species | | | | |
|-----------------------------------|-----------------------|----------------------------|-----------------|------------------------|
| Species | Number of nests found | Number of successful nests | Number of pulli | Number of pulli ringed |
| Blackbird | 2 | 1 | 5 | 5 |
| Blackcap | 1 | 1 | 4 | 0 |
| Chaffinch | 1 | 0 | 0 | 0 |
| Collared Dove | 3 | 3 | 4 | 3 |
| Dunnock | 1 | 0 | 0 | 0 |
| Pied Wagtail | 1 | 1 | 5 | 5 |
| Reed Bunting | 1 | 0 | 0 | 0 |
| Song Thrush | 2 | 0 | 0 | 0 |
| Wren | 2 | 1 | 6 | 0 |
| Totals | 14 | 7 | 24 | 13 |

Table 4.10 Nest records of open nest species

Fieldfare Hide Ringing Site

(Chris Hughes)

Despite issues around the Covid pandemic, 11 ringing sessions were held this year between May and September with just over 800 birds of 25 species processed.

Highlights included a welcome re-appearance of Cetti's Warbler after an absence of 4 years, with Grasshopper Warbler almost doubling the total number caught since ringing at this site began in 2013.

2021 was a mixed breeding season for many species although productive autumn sessions provided good numbers of juvenile Blackcap with 231 being ringed. 12 adult Bullfinch were ringed but no juveniles were caught whereas neither Marsh Tit nor Treecreeper adults were caught yet juveniles were.

The nets were all set to the south of the hide in mixed scrub and grassland with the usual configuration of 8 nets – 5 x 60', 3 x 40'. Thanks to some judicious gardening by Tim Sexton and RW colleagues, the net rides and access routes were much easier to work.



Blackcap © Luke Neilson

The standout figure is Blackcap with 242 (86%) of those ringed being juvenile birds, mostly caught in the autumn as they move through the site.

Birds are routinely checked for fat deposits and electronically weighed and the weights of Blackcaps ringed in the three September sessions (231 birds) showed that 28 weighed within the range of 16.1 –17.0g, 90 fell between 17.1 – 18g and 73 between 18.1 and 19.0g with 24 between 19.1 – 20g. The lightest were three birds all weighing in at 15.9g. There were 13 birds over 20g, the heaviest newly ringed bird weighing 21.5g. Analysis shows that age and sex made no difference to weight, with adults of both sexes and young birds ranging from 15.9 to 21.5g.

In the 14 days between the first and last visits in September (2nd, 8th and 16th) just three birds ringed were retrapped. None of those ringed on 2 September were retrapped again and only 3 (all juveniles) of the 86 ringed on the 8th were retrapped on the 16th. Their weights had increased from 17.9 to 19.7g, 17.6 to 21.0g and 18.4 to 22.4g respectively, the latter being the heaviest of all the Blackcaps recorded in September.

Clearly the site is very attractive to this species as they refuel and store fat and the low numbers of retraps perhaps suggests that most birds do quickly move on. How quickly they do move through and how long some stay would need more research.

The only consecutive autumn ringing sessions here were 31 August – 1 September 2018. The August session was unusual as it didn't start until after 1pm with the following morning being 'normal' timings. 19 Blackcaps were ringed on 31st, none of which were recaptured the next day. For context, the weights of spring /summer ringed 2021 Blackcaps ranged from 14.6g to 18g with most in the mid 16g mark.

A summary of the total birds processed at the Fieldfare Ringing Site is shown in table 4.11

A table of recoveries and notable recaptures from the site can be found in appendix 2

Acknowledgements

I'm grateful to Tim Sexton and colleagues for site preparation and the following ringers for their support: Garry Barker, Luke Nelson, Colin Hewitt and Sam Pitt-Miller.

| Species | Full grown | Retrap/control | Total |
|---------------------|------------|----------------|-------|
| Blackbird | 19 | 14 | 33 |
| Blackcap | 282 | 14 | 296 |
| Blue Tit | 29 | 13 | 42 |
| Bullfinch | 12 | 5 | 17 |
| Cetti's Warbler | 5 | 3 | 8 |
| Chaffinch | 1 | 0 | 1 |
| Chiffchaff | 40 | 21 | 61 |
| Dunnock | 14 | 32 | 46 |
| Garden Warbler | 26 | 20 | 46 |
| Goldcrest | 2 | 0 | 2 |
| Grasshopper Warbler | 3 | 0 | 3 |
| Great Tit | 10 | 4 | 14 |
| Lesser Whitethroat | 24 | 5 | 29 |
| Long tailed Tit | 23 | 4 | 27 |
| Marsh Tit | 0 | 2 | 2 |
| Meadow Pipit | 1 | 0 | 1 |
| Reed Bunting | 8 | 4 | 12 |
| Reed Warbler | 4 | 0 | 4 |
| Robin | 26 | 6 | 32 |
| Sedge Warbler | 16 | 26 | 42 |
| Song Thrush | 6 | 4 | 10 |
| Treecreeper | 4 | 2 | 6 |
| Whitethroat | 18 | 11 | 29 |
| Willow Warbler | 10 | 4 | 14 |
| Wren | 18 | 11 | 29 |
| Total | 601 | 205 | 806 |

Table 4.11 Total Birds Processed at Fieldfare Hide Ringing Site

Greenbank Ringing Site

(Mike Polling)

The Covid restrictions shut down ringing at Rutland Water for 2020, with the result that the Greenbank site, which is largely a reedbed, was allowed to become overgrown.

With the reopening of ringing in 2021, the first challenge was to find the old net rides. Initially only two were found and ringing restarted using these and the path between the main water and the nearby lagoon. Exploration for the other rides being hampered by the breeding season and not wishing to disturb any nesting birds.

Once the breeding season was over, a pathway into the reed bed was opened up allowing another net ride to be established, and then with help from Tim Sexton, the northerly aspect of the reed bed was opened with two of the old net rides being rediscovered, and two new net rides being created.

While out ringing on one occasion an Otter was seen to cross the path from the main water to the lagoon.



A Cetti's Warbler Ringed at Greenbank

| Species | Full grown | Retrap/control | Total |
|--------------------|------------|----------------|-------|
| Blackbird | 10 | 5 | 15 |
| Blackcap | 15 | 2 | 17 |
| Blue Tit | 13 | 4 | 17 |
| Cetti's Warbler | 3 | 4 | 7 |
| Chaffinch | 2 | 0 | 2 |
| Chiffchaff | 17 | 4 | 21 |
| Dunnock | 13 | 6 | 19 |
| Garden Warbler | 8 | 3 | 11 |
| Goldcrest | 2 | 1 | 3 |
| Great Tit | 3 | 0 | 3 |
| Lesser Whitethroat | 1 | 0 | 1 |
| Long tailed Tit | 25 | 5 | 30 |
| Reed Bunting | 5 | 0 | 5 |
| Reed Warbler | 29 | 4 | 33 |
| Robin | 12 | 7 | 19 |
| Sedge Warbler | 5 | 7 | 12 |
| Song Thrush | 4 | 0 | 4 |
| Treecreeper | 1 | 0 | 1 |
| Willow Warbler | 2 | 0 | 2 |
| Wren | 12 | 5 | 17 |
| Total | 183 | 57 | 240 |

Table 4.12 Total Birds Processed at Greenbank Ringing Site

Lyndon Ringing Site

(Garry and Candice Barker)

Despite Covid 19 restrictions, 8 mist netting sessions were held this year between mid-April and the end of November with just under 600 birds of 30 species processed.

Highlights included the return of Sedge Warbler to the site after an absence of breeding birds for 8 years. This is thanks to the habitat management on the site over the last few years, coppicing some of the larger trees, creating lower scrubland habitat.

In September, the first ringing of two Spotted Flycatcher juveniles occurred at the Lyndon site. Only 11 other full grown Spotted Flycatchers had been ringed on the reserve since the year 2000.

Monitoring and ringing of Great Tit and Blue Tit pulli from nests in any of approximately 100 nest boxes erected in Berry Butts and Gibbet Gorse and around the Lyndon Centre. The numbers for these we have not included in the totals as they have been included in the nest box report. However, it is really interesting for us to recapture these Great Tits and

Blue Tits in our mist nets. In 2021 we recaptured one Great Tit and eleven Blue Tits on our site but others have been recaptured elsewhere around the reserve at other ringing sites. This gives us even more data regarding successful fledging, survival and dispersal of juveniles around Rutland Water or further afield.



A Blue Tit nest from Lyndon

Blackcaps made up 22% of the new birds ringed and of these, 77% were juveniles.

Typically, our ringing site has between 350 to 400 feet of mist netting erected during the sessions and normally we don't ring on the site between the end of December and mid-March unless we are giving ringing demonstrations, when we rely on the feeding station, in the wildflower meadow in front of the centre, to bring in the birds. Generally, the ringing site provides sufficient natural food for the breeding birds and the winter migrants which we are targeting. The numbers of birds captured each session varies but our lowest catch in 2021 was 31 birds in November and our highest catch was 117 in September.

A summary of the total birds processed at the Lyndon Ringing Site is shown in table 4.13

A table of recoveries and notable recaptures from the site can be found in appendix 3

Acknowledgements

Thanks to all the staff and volunteers at the Lyndon Centre, the osprey and habitat team volunteers, Joe

Davis, Tim Sexton and colleagues for site management. Also, our thanks to the following ringers and helpers for their support throughout the season: Paul Stammers, Luke Nelson, Colin Hewitt, Joshua Sollitt and Sam Pitt-Miller.

| Species | Full grown | Retraps/Controls | Total |
|---------------------------|------------|------------------|------------|
| Reed Bunting | 6 | 3 | 9 |
| Chiffchaff | 29 | 11 | 40 |
| Goldcrest | 12 | 2 | 14 |
| Wren | 24 | 10 | 34 |
| Blackcap | 103 | 6 | 109 |
| Linnet | 4 | 0 | 4 |
| Long-tailed Tit | 24 | 7 | 31 |
| Dunnoek | 34 | 23 | 57 |
| Robin | 21 | 6 | 27 |
| Blackbird | 26 | 4 | 30 |
| Blue Tit | 61 | 34 | 95 |
| Sedge Warbler | 8 | 2 | 10 |
| Whitethroat | 7 | 1 | 8 |
| Garden Warbler | 14 | 6 | 20 |
| Lesser Whitethroat | 9 | 1 | 10 |
| Song Thrush | 9 | 1 | 10 |
| Willow Warbler | 9 | 0 | 9 |
| Great Tit | 19 | 13 | 32 |
| Chaffinch | 3 | 0 | 3 |
| Treecreeper | 3 | 0 | 3 |
| Bullfinch | 4 | 1 | 5 |
| Reed Warbler | 2 | 0 | 2 |
| Cetti's Warbler | 0 | 1 | 1 |
| Spotted Flycatcher | 2 | 0 | 2 |
| Goldfinch | 15 | 0 | 15 |
| Redwing | 12 | 0 | 12 |
| Great Spotted Woodpecker | 1 | 1 | 2 |
| Sparrowhawk | 1 | 0 | 1 |
| Lesser Redpoll | 2 | 0 | 2 |
| Greenfinch | 1 | 0 | 1 |
| Total (30 Species) | 465 | 133 | 598 |

Table 4.13

Black-headed Gull

Ringling



Black-headed Gulls © Tim Sexton

Black-headed Gull Ringing

(Garry and Candice Barker)

We were keen to get back to the Black-headed Gull colour ringing project in 2021 following the closure of the reserve due to Covid in 2020.

In 2021 Lagoon 3 and Burley Fishponds rafts were visited for ringing purposes. However, the dense algae on the surface of Lagoon 2 prevented safe access to the rafts so no chicks were ringed there.

We still managed to colour ring a total of 70 gulls, 34 on Burley Fishponds and 36 on Lagoon 3.

Thanks go to Tim Sexton and Luke Nelson, for their help on the day.

We continue to receive good numbers of sightings from colour ringed birds previously ringed on the Reserve in 2018 and 2019. The sightings indicate a predominant westwards movement with 12 birds

reported heading north-west, west or south-west. The exceptions were 3 northwards movements, 1 movement south and one movement east.

Our thanks go to all the volunteers who spend many hours reading the colour rings, such a vital role in increasing our knowledge of bird movements which we can add to the data bank to provide the re-sighting history.

Black-headed Gull **2ACK** is probably the highlight of the sighting histories. It was one of our first colour ringed birds in 2018 but was not sighted at all in 2019. In 2020 it returned to Rutland as an adult, being sighted twice on the reserve during the summer. It was then sighted in County Dublin in Eire during the following winter before being sighted back on the Reserve in 2021 where it was reported many times on Lagoon 4, almost certainly breeding.

A comprehensive list of re-sightings can be found in Appendix 4.

Cormorant Ringing

(Garry and Candice Barker)

The colour ringing of Cormorants at the Burley Fishponds colony continued in 2021 albeit on a very small scale compared to previous years. Only 2 chicks were ringed in 2021 as the staggered timing of breeding between pairs presented challenges as to which nests could be targeted for ringing. The higher water level also presented safety issues with respect to nest accessibility.

Even though only 2 birds were ringed in the colony in 2021, one of those birds has already been sighted at

Grafham Water as below. So a 50% re-sighting rate! This bodes well for future re-sightings particularly as so many more bird watchers are becoming enthralled with colour ring reading/reporting.

Many thanks to all the birdwatchers who have reported colour ringed birds. This report wouldn't be possible without your valued field skills.

Thanks to Tim Sexton and Luke Nelson for their help during the 2021 visit to the colony.

A comprehensive list of re-sightings can be found in Appendix 5.

Black-headed Gull © Tim Sexton



Colour Marked Birds

Colour Marked Birds at Rutland

(Steve Lister)

The use of colour marking techniques such as plastic leg-rings, nasal saddles and wing-tags in addition to the standard metal rings used by ringers enables

individual birds to be identified without being recaptured.

As well as always searching for colour-marked birds myself I have collated the sightings of other people at Rutland Water and elsewhere in Leicestershire and Rutland for over ten years. 2021 was not a particularly productive year in this respect as Covid-19

restrictions limited access for much of the first three months; plus the numbers of birds marked in 2020 and 2021 also suffered due to restrictions on ringers operating.

A total of 37 colour-marked birds was seen at Rutland Water in 2021, featuring 11 different species. Just over half consisted of Black-headed Gulls and Cormorants that had been ringed at Rutland Water between 2013 and 2021. Six of those ringed elsewhere originated from overseas.

Tufted Duck - A female with a nasal saddle pale blue BXBFBX seen on 18th November had been ringed in northern France on 2nd July 2020. Nine similarly marked birds from the same French scheme have been seen at Rutland Water before.

Lapwing - One with a leg flag and a combination of coloured rings (Bf//Y-R//GG) seen on both 23rd July and 24th August had been ringed as a chick at Elmley RSPB, Kent in May 2020. It was also seen at Rutland Water last summer but there are no other sightings. On the face of it quite a surprising movement.

Curlew - One seen on June 12th had a combination of colour-rings (Y(P)N-O) showing that it had been ringed as an adult female in a roost in Montgomeryshire, Wales on 20th March.

Black-tailed Godwit - Two individuals of the Icelandic race with quite different histories.

OG-YY(H) on July 11th had been ringed as an adult male on the Tagus estuary in Portugal on 11th March; in the intervening four months it will have travelled to Iceland and back but there are no additional sightings.

OWB-OLO was in a small flock at Rutland Water early on 26th July; the flock was flushed by a Peregrine and most did not return. This bird had been ringed on the River Orwell in Suffolk on 17th November 2017 and had a long history of sightings on estuaries in Suffolk and Essex. Remarkably, it was seen very near where it was originally ringed the same evening as it had been seen at Rutland Water.

Black-headed Gull - This species produced by far the most colour-ring sightings due to the large numbers of chicks ringed in 2018/19 and this year: these birds have blue rings with codes beginning with 2A, 2B or

2C followed by another two letters. 15 were seen during the spring and summer, involving eight ringed in 2018, five in 2019 and two in 2021. At least one of the older birds bred successfully and several others nested. Many of the birds ringed in 2018/19 have been reported well beyond the Leicestershire/Rutland area, with several seen abroad: one of the birds that returned this year, Blue 2ACK, wintered in Ireland and another, Blue 2AKT, has been seen in north Wales.

Two other colour-ringed birds were seen. Blue K246 probably wintered as it was seen on both 26th January and 16th April: it is a bird ringed as a chick on a rooftop in Minsk, the capital of Belarus, in June 2020.

Yellow T1PN on 20th July and 24th August has wintered at Rutland Water since 2017 and was ringed as an adult in a Polish breeding colony in May 2017.

Common Gull - Yellow 2H71 seen on 1st January proved to have been ringed as an adult at Falkirk, Scotland in September 2020.

Great Black-backed Gull - Two colour-ringed birds were seen, both with a bit of local history. Yellow X:056 on 13th August is a bird ringed as a chick on the Isle of May, Scotland in June 2017: it had already been seen at Rutland Water in April and August 2018 and then September 2019, and after the latest sighting here it moved to the Shawell/Cotesbach area in south Leicestershire where it was seen between 16th August and 25th September. Black JJ808 on 3rd September took a bit of sorting out as the ring was damaged, the final 8 was almost lost, fortunately, the same bird had been seen in south Leicestershire in 2019, and was again after the Rutland Water sighting. It was a bird ringed as a chick in Rogaland, Norway in July 2018.

Lesser Black-backed Gull - Orange PLoT on August 20th was a bird ringed at Pitsea Landfill Site in Essex in March 2010; it had been seen in Shropshire in 2012 and south Leicestershire in December 2017 and is known to breed on Amrum island in northern Germany.

Common Tern - Four colour-ringed birds were seen amongst the burgeoning numbers breeding on Lagoons 3 and 4. Two came from the well-studied colony at Watermead Country Park, Leicestershire: Lime U55 on 13th and 17th August was ringed as a

chick in 2015, and Orange U14 on 3rd August in 2019. The other two came from a colony at Brandon Marsh near Coventry. The first had a combination O-Rm which shows that it was one of seven chicks marked identically in 2011: it or one of the other six had already been seen at Rutland Water in six of the last eight years. This year it was present between 18th May and 3rd August and bred successfully, and it may have done in other years. Finally, G(19)-Rm, present at least between 20th July and 13th August was a chick ringed at Brandon Marsh in 2016 and seen at Rutland Water previously in August/September 2019.

Cormorant - Relatively few chicks have been ringed at Rutland Water in recent years so sightings of local birds are dwindling fast, with just four birds seen this year:

Yellow ZZ7 (ringed in 2014) on 30th March and five times in September/October

Yellow ZD4 (ringed in 2011) on 18th April

Yellow ZH7 (ringed in 2014) on 1st July and 17th October

Yellow ZI4 (ringed in 2013) on 3rd and 21st September

Two birds from elsewhere were seen in the autumn. Orange O67 between 3rd September and 12th October had been ringed as a 2021 chick at Hale, Cheshire: it was subsequently seen at Whisby, Lincolnshire in November and December.

Yellow F548 on 24th and 28th September proved to be a German bird, ringed at the Walnau bird reserve in June; another bird from this colony was at Rutland Water in September 2020.

Little Egret - O(V)-G(V) between 18th September and 15th October was a bird ringed as a chick at Netherhall, Essex in May 2016. It had been seen several times previously in Essex, Hertfordshire and Northamptonshire.

Acknowledgements.

Thanks to the observers who noted and reported details of rings: Tim Appleton, Rod Baker, Chris Hubbard, Steve Lister, Terry Mitcham, Chris Park and Tim Sexton. Thanks also to the contacts for the various ringing schemes involved for responding with the relevant information.

Understanding colour-ring combination notation.

Colours are described using standard abbreviations:

N (Black), U (Brown), C (Dark Pink), G (Dark Green), L (Light Green/Lime), B (Dark Blue), P (Pale Blue), R (Red), Y (Yellow), O (Orange), K (Light Pink), S (Silver/Grey), W (White), V (Violet/Mauve/Purple).

Metal rings are coded m.

Flags are described using the same colour codes but followed by f.

Any codes on rings are shown in brackets after the colour eg Y(X) would be a yellow ring marked with X.

Rings on the left leg are shown before those on the right, separated by a dash.

If there are rings on both the upper leg (tibia) and lower leg (tarsus) they are separated by //.

Examples:

Lapwing Bf//Y-R//GG was marked with a blue flag on the left tibia, a yellow ring on the left tarsus, a red ring on the right tibia and two dark green rings on the right tarsus.

Common Tern G(19)-Rm had a dark green ring coded 19 on the left leg and a red ring above a metal ring on the right leg.

Flat Flies



Hippoboscidae recording

(Luke Nelson)

Hippoboscidae, more commonly known as flat flies, louse flies or keds, are parasites of birds and mammals which feed on blood. They are rarely seen away from their host species, meaning that they are usually only seen by people who handle wildlife. Very little is known about the current distribution of this group of flies. Most work on the UK species was undertaken in the 1950s and 1960s and the most up-to-date guide to the British Species was published in 1984. Many counties have no records of any species.

In 2021 the “Mapping the UK's Flat Flies Project” was set up to discover more about the state of the UK's flat flies in terms of both their geographical and host species distribution. Bird ringers were called upon to submit specimens from across the country. At Rutland Water flat flies were collected during ringing operations where possible to contribute to this new project. A total of twelve flies were collected from four host bird species. These were sent to Denise Wawman, the national Hippoboscidae recorder, for identification. Three species of flat fly were recorded.

Stenopteryx hirundinis were found on Sand Martins, from two adults caught emerging from the Sand

Martin bank, and from chicks in the nest. *S.hirundinis* parasitizes House & Sand Martins, occasionally Swallows and, rarely, Swifts. *Ornithomya avicularia* was recorded on Reed Bunting and Blackbird, and *Ornithomya fringillina* on a Robin.

The *Ornithomya* species are restricted more by habitat than by host specificity with *O.avicularia* and *O.fringillina* occurring mainly in lowland areas of more enclosed vegetation, and mainly on juvenile birds. This reflects the habitat of the location of recording for the *Ornithomya* specimens, and they were all found on juvenile birds. *O.avicularia* occurs on larger birds from Greenfinch upwards, with *O.fringillina* on smaller birds from Greenfinch downwards.

These are all first records for the reserve. Specimens will be collected going forward to contribute more to the Hippoboscidae recording scheme and further our understanding of these overlooked creatures and their diversity on the reserve.

Reference: Hutson, A. M. (1984) ‘Keds, Flat-flies and Bat-Flies: Diptera, Hippoboscidae and Nycteribiidae’, Handbooks for the Identification of British Insects, 10(7).

Rare Bird Report



Great White Egrets © Tim Sexton

Rare Bird Report

(Tim Appleton)

Bewick's Swan

2 adults from 24th to 27th December. Bewick's Swans are becoming increasingly rare, so these 2 birds were a welcome sight.

Whooper Swan

Whooper Swans were recorded on 4 days in January. The largest flock was of 22th on 3rd January. A single bird stayed for 2 days from 19 March in the North Arm. In October the first 10 returning birds arrived on 20th October. There were 9th on 21st October and 2 on 22 October.

There were no records in November. A flock of 36 Whoopers was recorded on the WeBS count on 21st December.

Pink-footed Geese

3 adult birds arrived on 25 November and were seen intermittently through to the end of December.

White-fronted Geese

The only record in 2021 was of a single goose during the WeBS count on 15 March.

Barnacle Geese

2 adults were first seen on 22 April and remained until 24 April.

Ruddy Shelduck

3 birds were recorded from 2 to 7 August on Lagoon 4. These were followed by 2 on 22 September one more on 23 and 24 September. A single bird was present from 24 to 31 October.

Ruddy Shelduck are currently in categories B, D and E on the British list.

Reeves Pheasant

A new species for Rutland Water Nature Reserve was recorded on 30th March and was seen a few days later in the Egleton Meadows. Origin: escape.

Black-throated Diver

A single bird made a brief visit on 3rd January located in the North Arm. It flew in a westerly direction later that morning.

Gannet

A single record on 7th July was the only sighting in 2021.

Cattle Egret

An adult was recorded at Burley Fishponds on 19th October.

Great White Egret

A record count of 41 Great White Egrets were recorded at their roost site on Lagoon 2 on 28th October.



Great White Egrets in front of Crake Hide

White Stork

There were 2 records in 2021. A single bird was seen on the Lyndon Reserve on 18th April. A further report of 2 birds flying overhead on 31 August.

Glossy Ibis

A single Glossy Ibis was first found on 23rd August and remained until 6th September frequenting most of the lagoons.

Spoonbill

The first Spoonbill was recorded on 21st and 22nd March. A second bird was in Burley Fishponds on 12th April. Lagoon 4 hosted a single bird on 19th May.

Honey Buzzard

A single bird flew across Lagoon 3 on 31st July. This rare sighting was observed by Rod Baker, Dave Scott and Roger Davies.

White-tailed Eagle

2 birds were recorded at Rutland Water from the Isle of Wight reintroduction project. The first was on 29th May flying from the North Arm due south over the reserve. A second bird roosted overnight in Burley Wood on 17th September leaving early on the 18th.

Kentish Plover

The first reserve record was found on 21st August from Plover Hide on Lagoon 4. This was the 8th record for Leicestershire and Rutland and the first since 2010.

American Golden Plover

First seen early on 15th June on Lagoon 4 by Steve Lister. It subsequently moved to Lagoon 3 before departing into the west mid evening. This is the second record for Rutland Water, the first being on 2nd November 1996 on Lagoon 1.

Temminck's Stint

Recorded in most years. Lagoon 4 being a favoured site. A single bird was recorded from 8th to 9th May.

Bonaparte's Gull

A new Leicestershire and Rutland County record. The gull was first identified as a Little Gull on 13th April but always seen at a great distance. On 20 April Steve Lister finally observed the bird at close quarters on Lagoon 4 and positively identified the bird as a first winter Bonaparte's Gull. It was last seen on 24th April.

Black-legged Kittiwake

The only record of the year was a single bird on 3rd January in the North Arm, found by Tim Appleton

Sandwich Tern

7 Sandwich Terns was one of the largest single flocks recorded at Rutland Water. They stayed briefly on Lagoon 4 on 21st August.

Roseate Tern

The second record for Rutland Water and only the third for Leicestershire and Rutland was found by Chris Park on 2nd May on Lagoon 4. The bird was seen by many observers before flying north around midday. The first record for Rutland Water was another adult recorded by Andy Foryan on 15th August 2004.

Short-eared Owl

The only record of this once common species at Rutland Water was seen on 10th August.

Water Pipit

A single bird was found along the shoreline of the North Arm on 2nd November. This species is probably under-recorded at Rutland Water.

Black Redstart

A migrant bird was seen on 30th April at the dam.

Ring Ouzel

A male was recorded in the willow trees between Snipe and Harrier Hide on 24th April. The bird remained all day, giving excellent views.

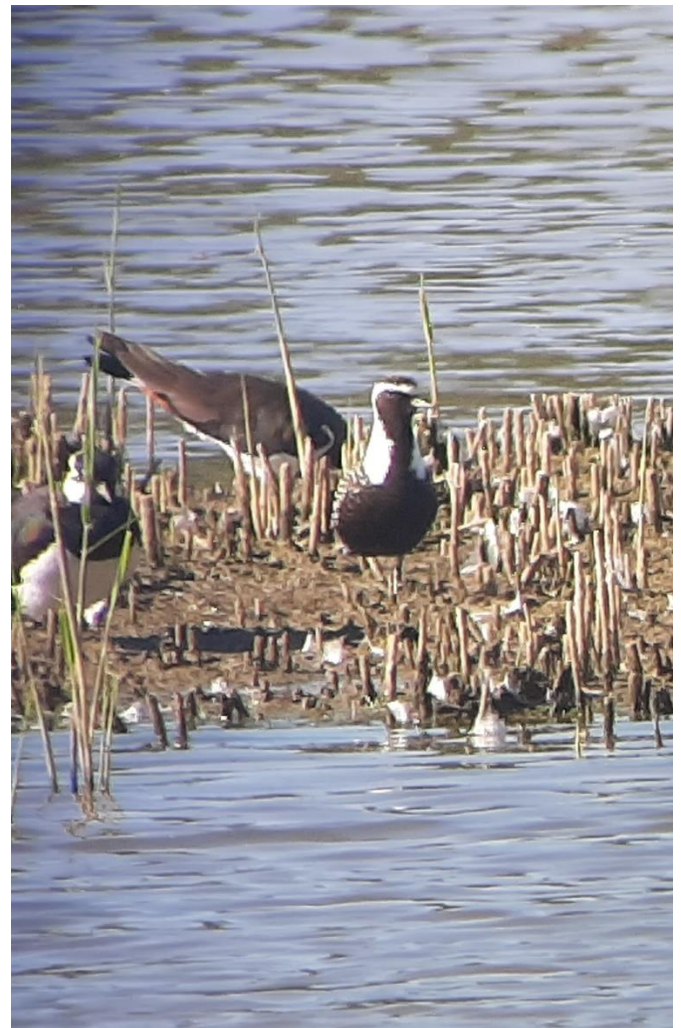
Icterine Warbler

Second County Record and a first for Rutland Water on 29th June.

An Icterine Warbler was first identified by Steve Lister and Terry Sherwood by its distinctive call in the scrub between Lagoon 3 and Lagoon 4. The bird remained elusive, only occasionally giving good views when a positive identification was made. The bird remained mainly hidden all afternoon but was regularly heard singing until early evening. There were no further sightings. The first County Record was trapped and ringed at Stanford Reservoir on 14th June 2008.

Bearded Tit/Reedling

A single bird seen on 4th March was joined by a second bird on 5th March, both staying until 8th March. As with most records of Bearded Tits, they were seen in the reed beds on Lagoon 3.



American Golden Plover digiscoped from Shoveler Hide



Butterflies of Rutland Water

(Alistair Lawrence)

Introduction

After a cold start in 2021, the end of March saw some warm and sunny days return followed by the month of April being one of the sunniest and driest ever. Thereafter, the summer was a mixture of cool and damp periods followed by warm and sunny days.

The year also saw Sharple's Meadow becoming very established with a resulting proliferation and variety of wildflowers blooming throughout the summer, resulting in a good tally of butterflies being recorded.

This report reflects the recording work of Alistair Lawrence, Brian Webster, Chris Butterfield and Tim Sexton. The records for Lyndon reserve mostly come from the Big Butterfly Count undertaken by Tim Sexton in July.

A transect was undertaken between the Anglian Water Birdwatching Centre and Lax Hill by Brian Webster – referred to in the report as Lax Hill Transect.

Overall a total of 24 species of butterfly were recorded, 21 of which are attributable to Eggleton (an * denotes the species was not seen in Sharple's Meadow).

Eggleton

***Green-veined White** (*Pieris napi*) - Five were seen on 18th April and a further 5 were seen on 26 April, including four on the Summer Trail. The last record was on 5th September

Small White (*Pieris rapae*) – The first sighting was on 26th April when four were seen, including two between Mallard and Snipe hides, then occasionally through the summer with later records on 13th September, when three were seen in Sharple's Meadow and three near Redshank Hide. There was a final very late sighting at AWBC then Burley Fishponds on 9th November (possibly the same individual).

Orange Tip (*Anthocharis cardamines*) – First seen on 11th April and the final record was on 30th May. A number of eggs were found on Cuckooflower (*Cardamine pratensis*) on 4th May in Eggleton Meadows.

***Peacock** (*Aglaia io*) - A single individual was seen on 11th April and the last report was on 8th August.

***Speckled Wood** (*Pararge aegeria*) - First seen on 18th April and then throughout the summer with the highest number of 11 recorded on 13th June and the last report on 13th September with one near Buzzard hide and another on the Summer Trail.

Small Tortoiseshell (*Aglaia urticae*) - A single individual recorded on 11th April and seen throughout the summer, with five at Sharple's Meadow on 2nd July. The final record was on 2nd September at Tern Hide.

Large Skipper (*Ochlodes sylvanus*) - First observed on 13th June and the last report was 11th July.

Small Skipper (*Thymelicus sylvestris*) - A single individual recorded on 13th June with the final report on the 1st August.

Brimstone (*Gonepteryx rhamni*) - The first sighting was on the 18th April and the last on 22nd August.

Red Admiral (*Vanessa atalanta*) - The first sighting was on 13th June and then throughout the summer with a maximum of nine recorded on 8th August followed by four seen nectaring on flowers outside the AWBC on 20th August. The final sighting was a very late record near the VTC on 8th November.

Marbled White (*Melanargia galathea*) - Two were seen on Sharple's Meadow on 2nd July.

Large White (*Pieris brassicae*) - First seen on 4th July and the last record was on 5th September.

Meadow Brown (*Maniola jurtina*) - The first records were on the 13th June with a total of 9 observed, with numbers rising to a maximum of 25 on 2nd July (Sharple's Meadow) and 45 on 16th July. Numbers peaked at 61 on the Lax Hill transect on 4th July. The final sighting was on the 8th August.

Ringlet (*Aphantopus hyperantus*) - First recorded on 20th June with numbers exceeding 35 on 16th July with the final sighting on 3rd August.

Gatekeeper (*Pyronia tithonus*) - The first record on 11th July. Eight were counted at Sharple's Meadow on 29th July. A total of 44 were recorded on the Lax Hill

transect on 1st August with a final sighting on 22nd August.

Comma (*Polygonia c-album*) - First observed on the Lax Hill transect on 11th April with numbers not exceeding more than two throughout the summer. The last record was a single individual on 22nd August.

Painted Lady (*Vanessa cardui*) - Two individuals were seen by Fran Payne (Reserve Officer - Grasslands) on 7th June at Sharple's Meadow. There was another sighting on 29th July in the Wet Meadow. The final record was a very late sighting close to Shoveler Hide on 8th November.

***White Letter Hairstreak** (*Satyrus w-album*) - a single sighting on Lax Hill, near the hand gate to the circular walk, on the 17th July.

***Small Copper** (*Lycaena phlaeas*) - a single individual on 29th July in Wet Meadow and a single individual seen along the Lax Hill transect on 8th August.

***Small Heath** (*Coenonympha pamphilus*) - a single individual seen along the Lax Hill transect on 20th June.

***Holly Blue** (*Celastrina argiolus*) - Just a single record on 9th May along the Lax Hill transect.

Lyndon

Small Heath (*Coenonympha pamphilus*) - a single sighting of 3 individuals on 3rd June between Gibbet Gorse and Berrybutt Spiney.

Purple Hairstreak (*Favonius quercus*) - a single individual recorded from Gibbet Gorse on 17th July.

Lyndon Big Butterfly Count

A transect along the grassland from Tufted Duck Hide to Lyndon Centre was surveyed as part of Butterfly Conservation's big Butterfly Count on the 18th July by Tim Sexton Recording the following species:

Small Tortoiseshell (*Aglaia urticae*) - Two individuals.

Silver-washed Fritillary (*Argynnis paphia*) - a single individual passed through near Tufted Duck Hide.

Comma (*Polygonia c-album*) - a single individual.

Red Admiral (*Vanessa atalanta*) - a single individual.

Small White (*Pieris rapae*) - a single individual.

Large White (*Pieris brassicae*) - 15 individuals.

Small Skipper (*Thymelicus sylvestris*) - 27 individuals.

Essex Skipper (*Thymelicus lineola*) - Two identified but likely to have been more.

Marbled White (*Melanargia galathea*) - a single individual.

Meadow Brown (*Maniola jurtina*) - 212 recorded.

Ringlet (*Aphantopus hyperantus*) - 43 recorded.

Gatekeeper (*Pyronia tithonus*) - 13 recorded.

Speckled Wood (*Pararge aegeria*) - Two individuals.



Purple Hairstreak Butterfly in Gibbet Gorse



Marbled White Butterfly - This species was first seen in Eggleton in July 2019 at Sharple's Meadow

Moth Trapping



Blue Underwing © Tim Sexton

Moth Trapping Summary

(Tim Sexton)

A total of 443 species were recorded across the Nature Reserve with 23 species being added to the Reserve's moth list including the Small Metal-mark (*Prochoreutis myllerana*) recorded at both Cherry Wood Ponds and Lagoon 4 in July, Dotted Fan-foot (*Macrochilo cribrumalis*) caught at Lagoon 3 Reedbed, also in July and a Hummingbird Hawk-moth (*Macroglossum stellatarum*) seen in September at Lyndon. This brings the overall list for the Reserve to date to 757.

Between sessions at Lagoon 3 Reedbed, Lyndon and Sharple's Meadow there was a total of 30 nights of trapping and 143 trap sessions (total number of traps used x nights trapped).

A relaxation of COVID 19 measures in summer enabled us to run a 'Mega Moth Night' on 29th July where trappers from different sites, along with the County Recorder, came together to run a number of traps between Cherry Wood and Sharple's Meadow.

With mild conditions, and warm temperatures, the resulting catch reached an incredible 184 species and 2,065 moths! Highlights of which included Maple Pug (*Eupithecia inturbata*) and Tree-lichen Beauty (*Cryphia algae*), a rare migrant. The night was eventually brought to a close around 1am due to rain.



Permanent Moth Trap in Cherry Wood

Lagoon 3 Reedbed Moth Trap

(Ron Follows)

There was a slow start to the year with access to the Nature Reserve restricted until mid-April (due to COVID 19 measures) followed by a cold wet period in April and May. June saw an improvement in weather conditions enabling some good mothing sessions in July to September, with odd mild periods in October and November allowing some late season sessions.

Moth trapping continued as in previous years with seven traps operated from dusk through to dawn approx. every couple of weeks. All traps used were 240v mains powered and consisted of one 250w MV Skinner (a static trap located in the entrance to Cherry Wood), two 125w MV Robinson, three 125w MV 'Box' plus a '20w' Actinic 'Box' trap.

Overall, 15 sessions were undertaken throughout the survey period, giving a total of 105 trap nights'.

In total, 390 species were recorded during the year which brings the location checklist total to 613 species.

A total of 17 new species were added to the checklist for Lagoon 3 Reedbed area (six of which had not been recorded at RWNr previously) – Dotted Fan-foot (*Macrochilo cribrumalis*) being the highlight. This is typically a localised species in the UK, inhabiting fens and other wetland habitats within East Anglia and southern parts of the country.

See table 5.1 for details of new species recorded.

The dates of trapping with the numbers of moths along with the numbers of species caught are summarised in table 5.2.

A list of all species trapped at Lagoon 3 are included in Appendix 6.

| Code | Vernacular | Taxon | New to Reserve | Other Records |
|--------|--------------------------|--------------------------------|----------------|----------------------|
| 49.040 | a moth | <i>Lozotaeniodes formosana</i> | N | AWBC 2000 |
| 49.138 | a moth | <i>Cochylis molliculana</i> | Y | |
| 49.151 | a moth | <i>Apotomis capreana</i> | Y | |
| 49.200 | Cherry Bark Tortrix | <i>Enarmonia formosana</i> | N | Gorse Close 2011 |
| 49.237 | a moth | <i>Epinotia signatana</i> | N | Gorse Close 2013 |
| 49.243 | a moth | <i>Epinotia demarniana</i> | Y | |
| 69.017 | Small Elephant Hawk-moth | <i>Deilephila porcellus</i> | N | Per John Wright 2000 |
| 70.037 | Clay Triple-lines | <i>Cyclophora linearia</i> | N | Record from 2012 |
| 70.218 | Latticed Heath | <i>Chiasmia clathrata</i> | N | Gibbet Gorse 2004 |
| 70.233 | August Thorn | <i>Ennomos quercinaria</i> | N | Lyndon 2018 |
| 72.052 | Dotted Fan-foot | <i>Macrochilo cribrumalis</i> | N | Rothamsted Trap 2011 |
| 73.070 | Bordered Sallow | <i>Pyrrhia umbra</i> | N | North Arm Yard 2006 |
| 73.215 | Lesser-spotted Pinion | <i>Cosmia affinis</i> | N | Rothamsted Trap 2013 |
| 73.231 | Deep-brown Dart | <i>Aporophyla lutulenta</i> | N | Lyndon 2018 |
| 40.006 | a moth | <i>Mompha jurassicella</i> | Y | |
| 49.133 | a moth | <i>Cochylis nana</i> | Y | |
| 49.264 | a moth | <i>Eucosma obumbratana</i> | Y | |

Table 5.1 New species recorded in trapping location in 2021

| Date of trapping | Number of moths | Number of Species | Micro Species | Macro Species |
|------------------|-----------------|-------------------|---------------|---------------|
| 20/04/2021 | 107 | 16 | 0 | 16 |
| 09/05/2021 | 54 | 25 | 2 | 23 |
| 19/05/2021 | 51 | 15 | 0 | 15 |
| 05/06/2021 | 374 | 76 | 14 | 62 |
| 16/06/2021 | 1190 | 144 | 44 | 100 |
| 04/07/2021 | 797 | 121 | 37 | 84 |
| 16/07/2021 | 1,387 | 173 | 62 | 111 |
| 31/07/2021 | 1,128 | 125 | 42 | 83 |
| 14/08/2021 | 3,078 | 123 | 37 | 86 |
| 27/08/2021 | 427 | 70 | 19 | 51 |
| 10/09/2021 | 1341 | 76 | 21 | 55 |
| 24/09/2021 | 175 | 31 | 4 | 27 |
| 09/10/2021 | 424 | 32 | 2 | 30 |
| 23/10/2021 | 244 | 24 | 2 | 22 |
| 13/11/2021 | 104 | 19 | 4 | 15 |

Table 5.2 Moth Trapping Session Summary

Lyndon Moth Trap

(Paul Bennett)

Poor weather and a second year of covid restrictions meant that again we were unable to record any early season moths with the first trap not put out until 1st June. The meadow area was trapped on 12 occasions from the mains using a plastic trap with a wemlite125w bulb, with the woodland area being trapped on 10 occasions using a battery operated MV20w bulb with a timer switch. The final trap of the year was put out on 13th November.

The total species count from the meadow was 186 with 147 macro moths and 39 micros, the woodland count was 93 with 68 macros and 25 micros. A number of micro moths from the woodland were leaf miners identified by Graham Finch and were new for the site list. The site has been regularly trapped since 2012 although 2015 and 2016 less so due to trap problems and family health issues with the recorder at the time. The overall site count stands at 410 species with 284 macros and 126 micros.

Generally this was a below average year in terms of numbers with some of the most common species giving much lower returns than usual, although the occasional humid night proved very productive with the night of 18th July in particular yielding 347 moths of 89 species from the one trap put out, which is the highest number of both moths and species recorded on this site from a single trap.

Seven macro moths were new for the site with the highlight being two Clifden Nonpareil, sometimes referred to as the Blue Underwing (*Catocalia fraxini*) seen in pristine condition on 14th September, this record was not a first for the year for the county or the first ever for VC55 but the more regular sightings of this beautiful moth bodes well for further appearances and hopefully it will be seen in the area on a more regular basis and maybe breed here in future years. A much more understated moth was White-point but this appeared in several traps and seemed to be part of an influx particularly in the eastern part of VC55. A Hummingbird Hawk-moth seen on the 12th November was a reflection of the mild autumn weather. While it is not rare, it is unusual to see them still in flight so late in the season. Pale Eggar,

Large Emerald, Little Emerald and Pale-shouldered Brocade were the other macro firsts.

It is hoped to run a 'Mega Moth Night' across the whole of the Lyndon site sometime in 2022 which would surely increase the species total, particularly if the reed bed area is trapped, which is a different habitat to where the traps are currently sited.

Day Flying Moths

(Tim Sexton)

Macro Moths

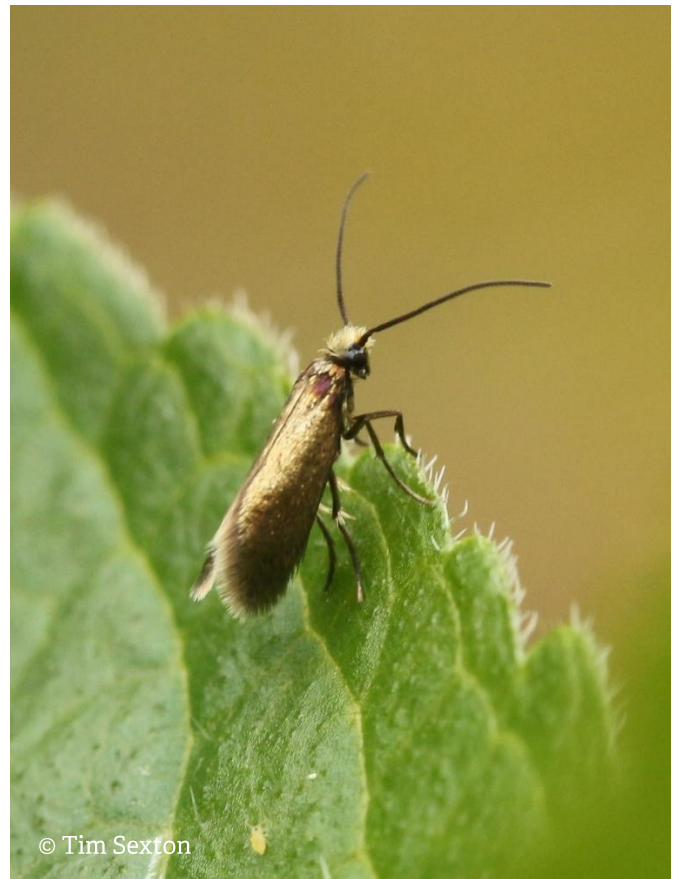
Good numbers of Chimney Sweeper were noted in Egleton Meadows, near AWBC in late June along with several Burnet Companion. A total of 21 Six-spot Burnet were recorded in the meadows at Lyndon during the Big Butterfly Count on 18th July. Also in July, a single Scarlet Tiger was spotted near Swan Hide on the 16th. A formerly uncommon species in Leicestershire and Rutland, the Scarlet Tiger appears to be spreading in recent years from its stronghold in South West England.



Chimney Sweeper from Egleton Meadows

Day Flying Micro Moths new to the Reserve

A single Small Metal-mark (*Prochoreutis myllerana*) was found at the Cherry Wood ponds on 29th July. A further 20+ were found around the larval foodplant (Skullcap) on Lagoon 4 in August. A Nationally Notable B Species, this is a scarce moth in Leicestershire and Rutland, with just one other record in VC55. They can only be reliably separated from the similar *P.sehestediana* by close examination and gen det (identifying the moth from the genitalia with a microscope).



Plain Gold showing functional jaws

A single individual of the Marsh Marigold Moth or Plain Gold as it is commonly known (*Micropterix calthella*) was found on Lax Hill on 11th May. Despite its diminutive size, 8-10mm, this species is unusual amongst moths in that it has functional jaws - which it uses to feed on pollen grains.

Orthoptera Records

Short-winged Conehead © Tim Sexton

Grasshoppers and Crickets

(Tim Sexton)

Although there were no targeted surveys for Grasshoppers and Crickets in 2021, nine species were recorded through casual records made in the summer (summarised in table 6.1) - including an impressive count of 100+ Roesel's Bush Cricket in Lagoon 2 Meadow in late August.

Highlights of the year include a macropterous (long-winged) form of the Short-winged Conehead (*Conocephalus dorsalis f. burri*), an uncommon find which was discovered at Fran's Pond in early September. One of only a few records in Leicestershire and Rutland, it is considered that the production of macropters within a population is the product of hot summers (particularly between April and July) that accelerate the growth of nymphs. The resulting individuals, which in the case of the Short-Winged Conehead are capable of flight, can then go on to inhabit new areas (Gardinier, 2009).



© Jeff Davies

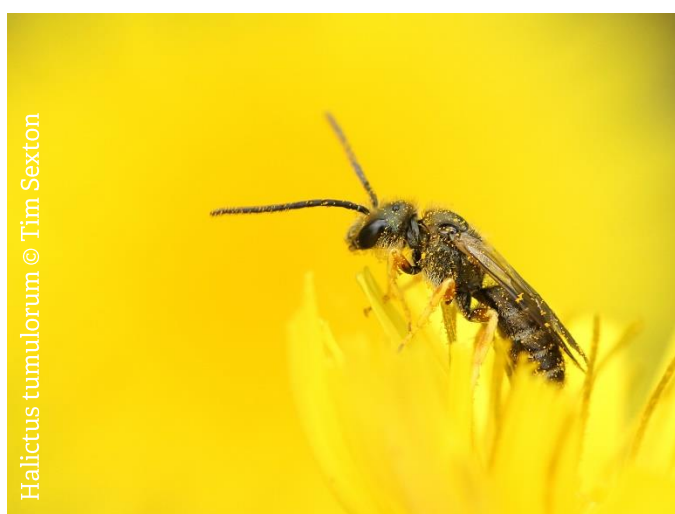
Macropterous form of Short-winged Conehead

There was a particularly late record of Roesel's Bush-cricket on 10th October, spotted during the WeBS survey, when a male was heard stridulating at the edge of the Fisherman's car park past Cottage Wood. Two females were also recorded in the vicinity.

A botanical survey of the islands on the lagoons provided additional records of both Common and Slender Groundhopper, the latter preferring areas of short vegetation in damp situations and as such is often under-recorded in the vice county.

| Vernacular | Scientific Name | First Record | Last Record |
|--------------------------|-------------------------------------|--------------|-------------|
| Meadow Grasshopper | <i>Pseudochorthippus parallelus</i> | 28/08/2021 | 28/08/2021 |
| Lesser Marsh Grasshopper | <i>Chorthippus albomarginatus</i> | 28/09/2021 | 28/09/2021 |
| Speckled Bush-cricket | <i>Leptophyes punctatissima</i> | 29/06/2021 | 14/09/2021 |
| Long Winged Conehead | <i>Conocephalus fuscus</i> | 15/07/2021 | 10/09/2021 |
| Roesel's Bush-cricket | <i>Roeseliana roeselii</i> | 14/07/2021 | 10/10/2021 |
| Short-winged Conehead | <i>Conocephalus dorsalis</i> | 19/08/2021 | 28/09/2021 |
| Oak Bush Cricket | <i>Meconema thalassinum</i> | 27/08/2021 | 15/09/2021 |
| Slender Groundhopper | <i>Tetrix subulata</i> | 02/06/2021 | 24/09/2021 |
| Common Groundhopper | <i>Tetrix undulata</i> | 19/08/2021 | 20/08/2021 |

Table 6.1 - Orthoptera records 2021



Bees of Rutland Water

(Tim Sexton)

Historically, there have been few surveys of bees at Rutland Water. The majority of records come from the last ten years and are attributable to just a few recorders. In that time 55 species of 12 genera have been recorded (see table 7.1).

In 2021, 32 species of bee were recorded through surveys undertaken by Brian Wetton and casual records from Tim Sexton – most of the surveys focused on the Egleton side of the Reserve. A total of ten new species to the Reserve were discovered including *Andrena dorsata*, *A.clerkella*, *A.humilis*, *A.subopaca*, *Nomada ferruginata*, *N.lathburiana*, *N.leucophthalma*, *N.ruficornis*, *Osmia bicornis* and *O.leaiana*.

| Genus | Vernacular | Species |
|---------------------|------------------------|---------|
| <i>Sphecodes</i> | Blood Bees | 1 |
| <i>Osmia</i> | Mason Bees | 3 |
| <i>Nomada</i> | Cuckoo Bees | 9 |
| <i>Lasioglossum</i> | Furrow Bees | 1 |
| <i>Halictus</i> | End-banded Furrow Bees | 2 |
| <i>Hylaeus</i> | Yellow-faced Bees | 2 |
| <i>Andrena</i> | Mining Bees | 17 |
| <i>Anthophora</i> | Flower Bees | 2 |
| <i>Apis</i> | Honey Bees | 1 |
| <i>Bombus</i> | Bumblebees | 14 |
| <i>Colletes</i> | Plasterer Bees | 2 |
| <i>Coelioxys</i> | Sharp-tailed Bees | 1 |

Table 7.1 Bee Families Recorded at Rutland Water

Five of the species recorded in 2021 are considered to be rare or uncommon in Leicestershire and Rutland; *Andrena dorsata* has just one other record in VC55, *Andrena humilis* has just three records (centred around the Bradgate Park area of Leicestershire), *Andrena praecox* is a shallow blossom feeder and has a handful of records in the vice county, *Nomada ferruginata* has just two records in VC55 and the former red data book (RDB3) species *Nomada lathburiana* appears to be spreading in the region along with its host, *Andrena cineraria*.

A bee house which was built in the early spring by volunteer Dave Cole had almost an instant success and attracted three species of solitary bee through the summer which eventually nested in there; *Osmia bicornis*, *Osmia caerulea* and the leafcutter bee *Megachile centuncularis*.

Hoverflies of Rutland



Rhingia campestris © Tim Sexton

Annual Hoverfly Report

(Brian Wetton)

Visits to Rutland Water were restricted due to Covid regulations and family commitments so that only seven visits were made, all to Eggleton Reserve. The visits comprised one in April, two in May, one in July, two in August and one in September. Thus spring, summer and early autumn species were recorded and the total number of species was 65.

On 22nd April only nine species were seen. Of note was a *Platycheirus ambiguus* feeding on Blackthorn, its usual food plant, and a little-recorded *Platycheirus occultus*.

By 12th May numbers had increased to 16 species. Several typical spring species were around including *Epistrophe eligans*, *Leucozona lucorum* and *Cheilosia ranunculi*, the last, as its name suggests, feeding on

buttercups. Amongst the scarcer species were *Cheilosia latifrons* and *Neoascia meticulosa*. In addition to the hoverflies, two soldierflies were also seen: *Beris chalybata* and *Beris geniculata*.

23rd May was a cold spring day and only 13 species were recorded including continued numbers of the spring species noted 11 days earlier and another spring buttercup feeder, *Cheilosia albitarsis*.

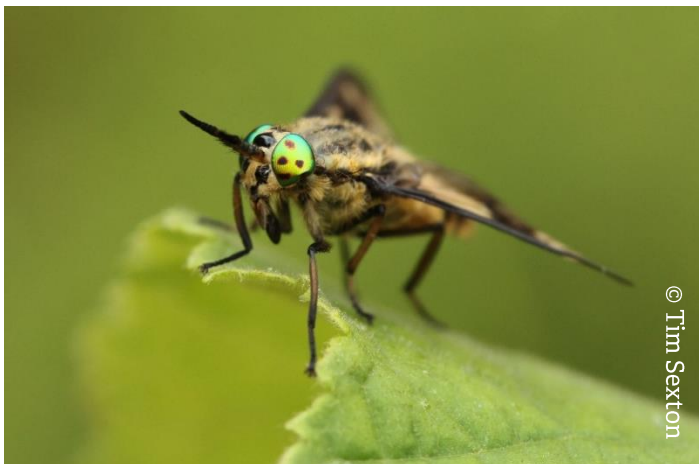
No further visits were made until 4th July when again only 14 species were recorded. Some typical summer species were by then on the wing, including *Chrysotoxum bicinctum*, *Epistrophe grossulariae* (replacing *Epistrophe eligans*), *Meliscaeva auricollis*, *Cheilosia illustrata*, *Volucella pellucens* (the Pied Hoverfly) and several eristaline species, including *Anasimyia contracta*. Other families of flies were more numerous, including the attractive *dolychopid*, *Poecilobothrum nobilitatus*, the males wing-displaying by muddy pools; the common snipefly

Chrysopilus cristatus; the green-eyed horsefly
Chrysops relictus; and the common tachinids,
Mesembrina meridiana and *Tachina fera*.



Chrysotoxum bicinctum a common summer species

On 15th August, 27 species were recorded, a good selection of summer-flying species including the common syrphid species *Episyrphus balteatus* (Marmalade Fly), *Eupeodes latifasciatus*, *Melangyna compositarum*, *Sphaerophoria scripta*, *Syrphus ribesii* and *Syrphus vitripennis*; common *Cheilosia* species *impressa*, *pagana* and *proxima*; common *eristalines* *Eristalis arbustorum*, *nemorum*, *pertinax* and *tenax*, *Helophilus pendulus*, *Myathropa florea* and *Parhelophilus versicolor*; the Pied Hoverfly *Volucella pellucens*; and the little *Syritta pipiens* of the xylotini family.



Chrysops relictus the Twin-lobed Deerfly

More unusual species recorded were *Cheilosia griseiventris*, *Cheilosia vulpina*, *Orthonevra nobilis* and *Pipiza fenestrata*, the last accompanying its commoner relatives *Pipiza noctiluca* and *Pipizella viduata*. The relatively recent colonist *Rhingia rostrata* was found. It is thought to breed in the vicinity of badger latrines and has become quite common at Eggleton. Two interesting records of other fly families were specimens of the large soldier fly *Stratiomys singularior*, much scarcer than its relative *Stratiomys potamida*, and also the beautiful *Phasia hemiptera*, a parasite on heteropteran bugs. Sharples Meadow was the most productive feeding habitat for most species.

The visit on 27th August was equally productive with 29 species. Additional summer species included the common *Platycheirus clypeatus*, *Eupeodes corollae*, *Eupeodes luniger*, less common *Melangyna umbellatarum*, *Cheilosia vernalis* and the fungal-breeding *Cheilosia scutellata*. Notable additions were *Sphaerophoria interrupta*, the locally scarce *Cheilosia soror* (more commonly found on southern downlands), *Chalcosyrphus nemorum* (a species of decaying wood) and the huge hornet mimic *Volucella zonaria*.

The final visit on 12th September still recorded 23 species. Of special note was a specimen of the scarce *Eupeodes bucculatus*. Two large *Volucella inanis* were seen and, surprisingly, the normally common *Xylota segnis* had its first record of the year.



Willow Emerald Damselflies Confirmed Breeding

(Tim Sexton)

In 2019, the first record of Willow Emerald Damselfly (*Chalcolestes viridis*) for Rutland Water was reported from the ponds in Field 16 – following the first VC55 record at nearby Eyebrook Reservoir. A recent colonist to the UK, this species has rapidly expanded its range from East Anglia where it was first discovered in 2007. Having only been seen twice previously in the UK (in 1979 and 1992), a sudden boom of 400 records in Suffolk in 2009 enabled the species

to gain a foothold in neighbouring counties and beyond in the years since.

With reports of increasing sightings of Willow Emeralds in Northamptonshire and Leicestershire during the late summer of 2021, it was decided that a survey of the small ponds and watercourses around the Nature Reserve should be undertaken to see whether the species has become established at Rutland.

The following locations were surveyed on the 6th September 2021; Burley Fish Ponds (SK 876 086), Cherry Wood Ponds (SK 887 082), Eggleton Brook (SK

879 073), Field 16 Ponds (SK 880 060), Lagoon 7 Ponds (SK 878 063, SK 877 059), and the Sounding Bridge at Manton Bay (SK 877 052).

Willow Emeralds were recorded from all of the locations except for the Sounding Bridge at Manton Bay – perhaps due to the open aspect at that location. At both Cherry Wood Ponds and Field 16 Ponds, males and females were seen copulating, suggesting successful breeding of this species at Rutland Water. Additional records of individuals along the Lyndon side of the Reserve were submitted by volunteers in the following week.

Willow Emerald Damselflies can be easily distinguished from the similar Emerald Damselfly in the field by looking at the colour of the pterostigma on the wings. In the Willow Emerald it is pale, in the Emerald Damselfly it is black. They have a prominent spur on the side of the thorax and both male and female Willow Emeralds are metallic green in colour with no blue colouration of the males.



A Common Emerald Damselfly for comparison

Unique amongst British species of Odonata, Willow Emerald Damselflies lay their eggs under the bark of broadleaf trees (particularly Willows and Alder, although other species are used). The females lay a number of eggs in a row along twigs overhanging the water, leaving behind a distinct scar which differ in appearance depending on the host tree.

The eggs overwinter in the twig and hatch the following spring, when the larvae drop into the water. The larvae develop rapidly through the spring and summer and are ready to emerge as an adult by July.

The adults can be seen on the wing from mid-July to October and can even be seen as late as November in mild years.



Willow Emerald egg laying scars on willow twig

A follow-up survey in late December, to look for overwintering eggs, provided further proof of successful breeding, with a number of leaf scars found on Willows and Alders at Cherry Wood Ponds, Egletton Brook, and Field 16 Ponds.



Willow Emerald Damselfly nymph

'Jewels of the Reeds'



Donacia cinerea © Tim Sexton

The Reed Beetles of Rutland Water

(Tim Sexton)

Reed beetles are medium to large leaf beetles (5-12mm) from the family of Chrysomelidae. In all stages of their life they are associated with marginal and aquatic vegetation, often specific to a particular species plant. They are represented by three genera; *Macrolea*, *Plateumaris* and *Donacia* (21 species in the UK).

Like many wetland specialists, most of the reed beetle species have suffered dramatic declines in the UK in recent years due to loss of habitat from drainage, water abstraction, farmland run-off and infilling of lakes and ponds. As such, many are nationally notable or Red Data Book species. Poor management of wetland sites has also contributed to the rapid decline

of some species (like the red-data book species *Donacia aquatica*) mostly through encroachment and dominance of taller emergent plants such as common reed (*Phragmites australis*) and Bulrush (*Typha latifolia*) which outcompete the host plants.

Of the 19 species of donaciinae recorded in VC55 (Leicestershire and Rutland) to 2020, only *Donacia simplex* and *Plateumaris sericea* had been recorded in Rutland County with *Donacia simplex* being the only recorded species at Rutland Water Nature Reserve (a summary of the historic records of Donaciinae in VC55 can be found in table 7.1). Through targeted searching of host plants during the spring and summer of 2021, a further five species were discovered on the Nature Reserve, including *Donacia cinerea*, a Nationally Notable B Species, which had not previously been recorded in VC55.

Most species of Donaciinae are conspicuously brightly coloured with a metallic, almost jewel-like

brilliance. Unlike other families of Chrysomelidae, which have a typically rounded body shape (akin to a ladybird), reed beetles have long parallel-sided bodies, long antennae and long legs with extended tarsal claws which are hooked for clasping on to the aquatic vegetation.

They can be readily found between the months of April and October by hand searching the leaves or

flowers of emergent vegetation, where they bask in the sunshine and feed. As they will often fly or drop to the ground when disturbed, sweep netting over the tops of emergent vegetation can be a good way of collecting individuals for identification.

Only adult beetles of the genus *Macroplea* remain underwater on their host plants and require a more specific approach to recording.

| Species | Status | VC55 Records | Host Plant |
|--------------------------------|--------|--------------|---|
| <i>Macroplea appendiculata</i> | RDB3 | 1854 - 1860 | Alternate Water Milfoil, Fennel Pondweed |
| <i>Macroplea mutica</i> | Na | 1856 | Fennel Pondweed |
| <i>Donacia aquatca</i> | RDB3 | 1845 - 1899 | Sedges (<i>Carex</i>) |
| <i>Donacia bicolora</i> | RDB2 | 1842 - 1907 | Branched Bur-reed (<i>Sparganium erectum</i>) |
| <i>Donacia clavipes</i> | Nb | 1842 - 1932 | Common Reed (<i>Phragmites australis</i>) |
| <i>Donacia crassipes</i> | Nb | 1842 - 1895 | Water Lilies (<i>Nymphaea</i> and <i>Nuphar</i>) |
| <i>Donacia dentata</i> | Na | 1842 - 1895 | Arrowhead (<i>Sagittaria sagittifolia</i>) |
| <i>Donacia impressa</i> | Na | 1907 - 1989 | Sedges (<i>Carex</i>), Club Rushes (<i>Schoeneoplectus</i>) |
| <i>Donacia marginata</i> | Local | 1842 - 1907 | Branched Bur-reed (<i>Sparganium erectum</i>) |
| <i>Donacia semicuprea</i> | Local | 1842 - 2020 | Sweet Grasses (<i>Glyceria</i>) |
| <i>Donacia simplex</i> | Com. | 1842 - 2020 | Bur-reeds (<i>Sparganium</i>) |
| <i>Donacia sparganii</i> | Na | 1845 - 1899 | Floating leaves of Bur-reeds (<i>Sparganium</i>) |
| <i>Donacia thalassina</i> | Nb | 1895 | Sedges (<i>Carex</i>) |
| <i>Donacia versicolor</i> | Com. | 1842 - 1992 | Pondweeds (<i>potamogeton</i>) |
| <i>Donacia vulgaris</i> | Local | 1842 - 2020 | Branched Bur-reed (<i>Sparganium erectum</i>) |
| <i>Plateumaris braccata</i> | Nb | 1842 - 1984 | Bur-reeds (<i>Sparganium</i>), Reeds (<i>Phragmites</i>) |
| <i>Plateumaris discolor</i> | Com. | 1959 | Sedges (<i>Carex</i>), Sweet Grasses (<i>Glyceria</i>) |
| <i>Plateumaris rustica</i> | Nb | 1842 - 2017 | Sedges (<i>Carex</i>) |
| <i>Plateumaris sericea</i> | Com. | 1842 - 2019 | Bur-reeds (<i>Sparganium</i>) |

Table 7.1 Historic records of Donaciinae in VC55, up to 2020 (adapted from 'An Annotated Checklist of the Beetles of VC55', G. Finch)

New Records for Rutland Water in 2021

Donacia cinerea – The first record for VC55 was collected on the 23rd July 2021 from Lagoon 8 from within an extensive stand of Bulrush (*Typha latifolia*) and Lesser Reedmace (*Typha angustifolia*) in the northern end of the lagoon. Both the larvae and adults of this species feed exclusively on *Typha* spp.

Adults on leaves, larvae on the roots. They can be readily separated in the field from other British species in the genus from the dense pubescence which covers the upperparts of their body.

Donacia clavipes – Following an absence in Leicestershire and Rutland of almost 90 years, three records of this species were submitted in a single

week in VC55, including an individual which was intercepted in flight along the track between the VTC and Cherry Wood on the 6th June 2021. A further individual was found in Lagoon 3 reedbed (in front of the ringing hut), on the 8th June 2021.



Donacia clavipes

Donacia marginata - First record in VC55 since 1907. A single individual found on Branched Bur-reed in marginal vegetation on the edge of South Arm III (back end of Lagoon 1) between Fieldfare Hide and Brown's Island.



Donacia marginata

Donacia thalassina - The first record in VC55 since 1895. Two individuals were found in a stand of common spike rush (*Eleocharis palustris*) at the edge of one of the Lagoon 2 Islands while undertaking a survey of aquatic vegetation. Identification confirmed by G. Finch



Donacia thalassina

Donacia vulgaris - 10+ individuals recorded in the Typha bed in the northern end of Lagoon 8. Whilst widespread in VC55, this represented the first record of this species in Rutland County and Rutland Water Nature Reserve. Later found on Typha in Lagoon 2 (to the right of Redshank Hide) during a survey of aquatic vegetation.



Donacia vulgaris

It is hoped that through targeted surveys of the beetle's food plants in the spring and summer of 2022, that more species of Donaciinae can be found at Rutland Water. Furthering our knowledge of the local distribution of these attractive wetland beetles.



Beetle Recording

(Graham Finch)

The outcome of an initial conversation between Steve Lane, Tim Sexton and myself regarding an opportunity to undertake some baseline beetle recording at Rutland Water Nature Reserve resulted in our first meet up on the dry and mild morning of 24th November 2021 at the Anglian Birdwatching Centre. After a brief introduction five of us made our way to a field close by with plenty of *Deschampsia* and *Juncus* tussocks to sieve. Almost as soon as we were through the gate Steve shouted “that tussocks mine, it’s got my name on it”. The first couple of hours were spent here, later on we moved to an area of reed debris, we also managed to pull in a bit of pond dipping and general grubbing.

The day passed far too quickly and the light was fading fast, after a desperate attempt to identify beetles using the torch on Tim’s phone we sensibly, had to admit defeat, but this was not before we had

discussed our finds of the day, and safely stored several tubes of specimens to take home for critical examination later. Back in the car park we reminisced over the last 5 or 6 hours, just before we were about to leave Steve shouts, “We should do this again, before Christmas,” of course we agreed.

Over the course of the following week specimens were checked and it was becoming very clear that we had found some noteworthy species between us including two new species for Leicestershire and Rutland (VC55) - *Stenus fornicatus*, a small Rove beetle, and one of the Flea Beetles - *Longitarsus strigicollis*, add these to several other species which we have either very few records for VC55 or have not been recorded for a considerable time, such as, *Badister dilatatus* from 1995 *Olophrum fuscum* from 1977 and *Chaetocnema arida* from 1983, all three species have been recorded only once before in the vice county. There are far too many species to list in detail here, but there were nine other species whose records for the county are in single figures, this is from a database that stretches back for over 200 years of beetle recording!

The follow up was 15 December 2021, again we were lucky, and the weather was perfect. We met at the Volunteer Training Centre and headed for Cherry Wood. We sieved, sifted and pond dipped our way through the first half of the day, then on our way back to the centre spent an hour or so beating dead branches in the woodland beside Oakham Road.

Back in the car park and losing the light fast we agreed we had had another excellent day we reviewed our finds *Gabrius osseticus* new to VC55 plus some of the more significant treasures like *Demetrias imperialis* (two previous records), *Liogluta longiuscula* (three previous records), *Phloiophilus edwardsii* (three previous records) and *Ennearthron cornutum* (two previous records) the list goes on. All in all, we managed to record 109 species in November 104 in December which gave us a total of 213 species combined, three new to VC55 and numerous notables, plus we really did enjoy ourselves. Oh yes, and guess what, a familiar voice rang out “We should do this again.” so we suggested keeping an eye on the weather and make a plan for the end of February beginning of March.



Aquatic Invertebrates

Aquatic Invertebrate Sampling

(Tim Sexton)

The eight Lagoons at Rutland Water Nature Reserve receive water from different sources across the site. Lagoons 2, 3 and 4 are fed by treated water from the Oakham Water Treatment Works, which is either filtered through the Lagoon 3 reedbed and Lagoon 3 before flowing in to Lagoon 2, or is pumped directly into Lagoon 4 before being gravity fed back in to the Lagoon 3 reedbed near Bittern Hide. Lagoons 5 and 7 receive water from the main reservoir, but Lagoon 7 is also under the influence of agricultural run-off from the surrounding fields.

The Wet Meadow and Lagoon 1 receive water from Lagoon 5, and Lagoons 6 and 8 are fed from the main reservoir only.

As some of the inputs have the potential to impair water quality and upset ecological balance, through effects such as increased occurrence of algal blooms or reduction in dissolved oxygen, it was decided that a programme of water quality monitoring be established at Rutland Water Nature Reserve to provide baseline data for future monitoring and act as an early warning system for any events that could have a knock-on effect on aquatic plants, invertebrates, and ultimately, waterbird populations. Currently water quality is only monitored using water chemistry (Orthophosphate, Ammonia, Biological Oxygen Demand and Suspended Solids) which is monitored at the outflow from the treatment works before entering Lagoon 3.

The aim of the surveys undertaken through the summer was to test a sampling methodology for monitoring water quality using aquatic invertebrates to assess the health of the lagoons, which could be undertaken with the support of volunteers and can

be easily replicated in subsequent years to establish trends and understand potential impacts.

Methodology

In the absence of a standardised methodology for assessing the water quality of large lakes (over 5ha), The BMWP (Biological Monitoring Working Party) sampling method was used. The BMWP is a scoring system where macroinvertebrates are used to analyse and monitor the health of freshwater bodies (typically rivers and streams) based on their varying tolerances to different stressors, such as pollution.

The system uses families of macroinvertebrates as biological indicators, where each family is assigned a score from 1- 10 based on their sensitivity to pollution. The higher the score, the less tolerant (more sensitive) the macroinvertebrate is to organic pollution. For example, invertebrates that are only tolerant of the cleanest water bodies will be given a tolerance score of 10, and those tolerant of more polluted water bodies will be given a lower BMWP score.

In addition, the ASPT (Average Score per Taxon) and the Ntaxa (Number of taxa contributing to the assessment) are calculated.

The standard method to collect specimens for BMWP consists of a 3-minute pond/sweep net with an extra 1-minute hand search to ensure the maximum number of taxa have been found. For the purposes of testing the methodology, two sample point locations were selected on each of the lagoons (Lagoons 2 – 8), chosen to be representative of the general habitat of the lagoon.

The macroinvertebrates from each sample were then sorted and recorded to family level on site, using a field microscope for any tricky taxa.

In addition to recording family groups through BMWP, specimens of some taxonomic groups (mostly hemiptera) were taken to be identified to species level – which requires microscopy in some cases. A species list is included in table 8.3.

Location of sample points

The samples locations were selected to be representative of the overall habitat on the lagoon

and were collected between late June and early October.

Lagoon 2

Sample Point 1 SK 88361 07676

Sample Point 2 SK 88227 07521

Lagoon 3

Sample Point 1 SK 89152 07788

Sample Point 2 SK 88605 08094

Lagoon 4

Sample Point 1 SK 88122 08263

Sample Point 2 SK 88200 08265

Lagoon 5

Sample Point 1 SK 87917 06718

Sample Point 2 SK 88039 06596

Lagoon 6

Sample Point 1 SK 88166 06531

Sample Point 2 SK 88190 06520

Lagoon 7

Sample Point 1 SK 87988 05947

Sample Point 2 SK 87915 05944

Lagoon 8

Sample Point 1 SK 88176 06370

Sample Point 2 SK 88235 06317

A map showing the locations of all sample points is shown in Appendix 7

Results

The BMWP results were calculated for each sample point and then combined to give a score per lagoon (Table 8.1).

An interpretation of the scores is given in table 8.2.

| Lagoon | No. of Odonata & Megaloptera families | No. of Coleoptera families | BMWP Total | Ntaxa Score | ASPT Score |
|----------|---------------------------------------|----------------------------|------------|-------------|------------|
| Lagoon 2 | 2 | 1 | 95 | 20 | 4.75 |
| Lagoon 3 | 0 | 0 | 39 | 9 | 3.33 |
| Lagoon 4 | 1 | 1 | 84 | 19 | 4.42 |
| Lagoon 5 | 2 | 1 | 58 | 12 | 4.72 |
| Lagoon 6 | 2 | 2 | 92 | 19 | 4.84 |
| Lagoon 7 | 1 | 0 | 54 | 13 | 4.15 |
| Lagoon 8 | 3 | 2 | 110 | 23 | 4.78 |

Table 8.1 Combined BMWP scores for each Lagoon

From the results of the samples taken through the summer, there is a significant difference between the BMWP score in Lagoons 3, 5 and 7. Lagoon 3 scored the lowest for BMWP, Ntaxa and ASPT and from these results is considered to be in poor condition (polluted or impacted). Lagoon 3 was also the only lagoon to have neither Odonata/Megaloptera nor Coleoptera families (good water quality indicators). The lagoon with the highest score was Lagoon 8, which is considered to be very good (unpolluted, unimpacted).

Given the size of the lagoons, and the limited number of samples taken per lagoon, it would be beneficial to carry out additional sampling on the worst affected areas to provide more robust evidence of pollution impacts. A simplified sampling methodology has been devised (that does not take into account abundance of each family group) which will speed up the time taken to process each sample, thus enabling more samples to be taken per lagoon in a single season.

| BMWP score | Category | Interpretation |
|------------|-----------|-----------------------------|
| 0-10 | Very Poor | Heavily polluted |
| 11-40 | Poor | Polluted or impacted |
| 41-70 | Moderate | Moderately impacted |
| 71-100 | Good | Clean but slightly impacted |
| >100 | Very good | Unpolluted, unimpacted |

Table 8.2 Interpretation Table for BMWP Score

In addition to aquatic invertebrate sampling, a process of monitoring water quality through chemical sampling is currently being planned, which can be undertaken on each lagoon on a regular basis and correlated with the BMWP scores.

| Species | Common Name |
|------------------------------|------------------------|
| <i>Callicorixa praeusta</i> | A water boatman |
| <i>Corixa dentipes</i> | A water boatman |
| <i>Corixa panzeri</i> | A water boatman |
| <i>Corixa punctata</i> | A water boatman |
| <i>Sigara distincta</i> | A water boatman |
| <i>Sigara dorsalis</i> | A water boatman |
| <i>Sigara falleni</i> | A water boatman |
| <i>Sigara fossarum</i> | A water boatman |
| <i>Micronecta scholtzi</i> | A lesser water boatman |
| <i>Notonecta viridis</i> | Backswimmer |
| <i>Plea minutissima</i> | Pygmy Backswimmer |
| <i>Gerris odontogaster</i> | A pond skater |
| <i>Microvelia reticulata</i> | A pond skater |
| <i>Nepa cinerea</i> | Water Scorpion |
| <i>Ranatra linearis</i> | Water Stick Insect |
| <i>Ilyocoris cimicoides</i> | Saucer Bug |

Table 8.3 Species list of aquatic hemiptera recorded



Micronecta scholtzi – a lesser water boatman from Lagoon 4

Plant Galls



Gymnetron villosulum galls © Tim Sexton

Plant Galls

(Roy Lemmon)

In gall formation the attacker (the galler) induces the plant to produce extra tissue, in some cases almost immediately, and this is then used by the galler for protection in the continuation and often the completion of its life cycle. A gall can vary between a slight thickening of the leaf to a quite considerable growth of new tissue, as in the case of the Robin's pincushion gall on Dog rose. Galls are caused by a wide range of organisms but the principle groups are the Fungi, especially the rusts and their allies, gall mites, gall midges, and the gall wasps, one of which is the cause of the gall referred to above. Many parts of the plant are galled, predominantly leaves, but galls are also found on roots and trunks, branches and twigs, flowers, catkins, and fruits such as the acorn. The plant genus showing the most galling in the UK is *Quercus*, the oaks, followed by *Salix* - the willows and willows.

In 2021, Reports were received from 13 different sites around the reservoir and the main observers were Martin Grimes and Roy Lemmon, both RNHS members, and Tim Sexton, Species and Recording

Officer LRWT. Of the previously recorded galls, four stand out this year: the rust on Water mint, *Mentha aquatic*, has been much more prominent than previously and the rust on Almond willow, *Salix triandra*, which is by no means common, has been reported again. A mite, *Cecidophyes psilonotus* on Spindle, *Euonymus europaeus*, was found anew, only the second report for the site, and a midge galler, *Rabdophaga marginemtorquens*, on Osier, *S. viminalis*, which was last seen in 2019.

There were 5 new records on the reserve this year comprising half of the new species contained in the 2021 RNHS gall report which may well reflect the value of RW as a habitat. There was a mossy gall on Almond willow and a cone gall on White willow, *S. alba*, but it isn't possible at the moment to give the cause of these it may be a bacterium or a phytoplasma. TS, at various sites, found a weevil gall on Pink water speedwell, *Veronica catenata*, caused by *Gymnetron villosulum* (Coleoptera: Circulionidae). MG and RL found a gall on Hemp agrimony, *Eupatorium cannabinum*, caused by a micromoth *Adaina microdactyla* (Lepidoptera: Pterophoridae) from Lyndon. The final new report was of a midge gall on Reed canary grass, *Phalaris arundinacea*, caused by *Mayetiola phalaris* (Diptera: Cecidomyiidae). This

was found at Burley fishponds and as the grass is fairly common it may be found in other parts of the habitat.

10th September 2021 Lag2 SK882074

Plant Galls: Rusts: *Puccinia glechomatis* 111 on *Glechoma hederacea*. *P. menthae* 11 on *Mentha aquatica*. Mite, *Acalitus brevitarsus* on *Alnus glutinosa*. Midge, *Dasineura urticae* on *Urtica dioica*. Gall flies: (Tephritidae) *Urophora cardui* on *Cirsium arvense*. *U. jaceana* in heads of *Centaurea nigra* agg. Non galling organisms: Powdery mildew, *Golovinomyces biocellatus* (anamorph state) on *Mentha aquatica*. Rust, *Coleosporium tussilaginis* on *Odontites vernus*.

21st September 2021 Lag3 SK884079

Plant galls: Powdery mildew *Podosphaera epilobii* on *Epilobium hirsutum*. Rusts: *Melampsora caprearum* on *Salix caprea*. *Phragmidium bulbosum* on *Rubus fruticosus* agg. *P. mucronatum* on *Rosa canina*. *P. violaceum* on *R. fruticosus* agg. *Puccinia lagenophorae* on *Senecio vulgaris*. *P. menthae* on *Mentha aquatica*. *P. punctiformis* on *Cirsium arvense*. Gall midges *Dasineura urticae* on *Urtica dioica*. *Rabdophaga marginemtorquens* on *Salix viminalis*. Sawfly *Eupontania pedunculi* on *Salix caprea*. Non-galling organisms: Chromista, Downy mildew *Bremia lactuca* on *Senecio vulgaris*. Ascomycetes: *Leptotrochila ranunculi* on *Ranunculus repens*. *Podosphaera fugax* anamorph on *Geranium molle* (powdery mildew). Rusts: *Melampsora ribesii-viminalis* on *Salix viminalis*. *Puccinia acetosae* on *Rumex acetosa*. *P. coronata* on *Dactylis glomerata*. *P. magnusiana* on *Phragmites australis*. *P. urticae* var. *urticae-hirtae* on *Carex hirta*

14th October 2021 Cottage Wood SK888084

Plant galls: Rusts: *Gymnosporangium sabinae* on *Pyrus communis*. *Melampsora caprearum* on *Salix caprea*. *Phragmidium bulbosum* on *Rubus fruticosus* agg. *P. mucronatum* on *Rosa canina*. *Puccinia lapsanae* on *Lapsana communis*. Gall mites: *Aceria eriobia* on *Acer campestre*. *A. macrochela* on *A. campestre*. *A. myriadeum* on *A. campestre*. Psyllid: *Psyllopsis fraxini* on *Fraxinus excelsior*. Gall midges: *Dasineura plicatrix* on *R. fruticosus* agg. *Iteomyia caprae* on *Salix caprea*. *Rabdophaga rosaria* on *S.*

caprea. Sawfly: *Eupontania edunculi* on *S. caprea*. Gall wasps: *Diplolepis nervosa* on *Rosa canina*. *Neuroterus albipes*, agamic on *Quercus robur*.

Non galling organisms: Powdery mildew, *Phyllactinia fraxini* anamorph on *Fraxinus excelsior*. Rusts: *Puccinia tanacetii* on *Artemisia vulgaris*. *Tranzschelia discolor* on *Prunus domestica*. *T. pruni-spinosae* on *P. spinosa*. Basidiomycete: *Coprinus comatus*.

14th October 2021 BFP SK882086

Plant galls: Powdery mildew, *Podosphaera epilobii*, holomorph state, on *Epilobium hirsutum*. Rusts: *Melampsora caprearum* on *Salix cinerea*. *Puccinia glechomatis* on *Glechoma hederacea*. *P. menthae* on *Mentha aquatica*. Gall mites: *Eriophyes leiosoma* on *Tilia cordata*. *E. similis* on *Prunus spinosa*. *Phyllocoptes goniothorax* on *Crataegus monogyna*. Gall midges: *Dasineura urticae* on *Urtica dioica*. *Mayetiola phalaris* on *Phalaris arundinacea*. *Rabdophaga rosaria* on *Salix alba*. Sawfly: *Pontania proxima* on *S. alba*. Gall wasps: *Neuroterus albipes*, agamic, on *Quercus robur*. *N. numismalis*, agamic, on *Q. robur*. *N. quercusbaccarum*, agamic, on *Q. robur*. Non galling organisms: Downy Mildew: *Peronospora conglomerata* on *Geranium molle*. Ascomycetes. *Discomycete Rhytisma acerinum* on *Acer pseudoplatanus*. Powdery mildews: *Erysiphe alphitoides*, holomorph state on *Quercus robur*. *Golovinomyces biocellatus* anamorph on *Mentha aquatica*. *Podosphaera aphanis* var. *aphanis* anamorph on *Geum urbanum*. Rusts: *Coleosporium tussilaginis* on *Sonchus arvensis*. *Melampsora larici-populina* on *Populus x canadensis*. *M. ribesii-viminalis* on *Salix viminalis*. *Puccinia behennis* on *Silene dioica*. *P. coronata* on *Phalaris arundinacea*.

18th October 2021 Lyndon SK894056

Plant galls: Rusts: *Melampsora caprearum* on *Salix alba* and *S. caprea*. *Phragmidium bulbosum* on *Rubus fruticosus* agg. *P. mucronatum* on *Rosa canina*. *Puccinia glechomatis* on *Glechoma hederacea*. *P. menthae* on *Mentha aquatica*. Psyllid - *Psyllopsis fraxini* on *Fraxinus excelsior*. Gall midges: *Dasineura crataegi* on *Crataegus laevigata*. *D. plicatrix* on *R. fruticosus* agg. *D. rosae* on *R. canina*. *D. urticae* on *Urtica dioica*. *Rondaniola bursaria* on *Glechoma hederacea*. Sawfly - *Pontania proxima* on *S. alba*. Gall wasps: *Diplolepis nervosa* on *R. canina*. *D. rosae* on *R.*

canina. *Neuroterus albipes* agamic on *Quercus robur*.

N. quercusbaccarum agamic on *Q. robur*.

Non galling organisms: Powdery mildews - *Erysiphe alphitoides*, holomorph, on *Quercus robur*. *E. Urticae*, anamorph, on *Urtica dioica*. *Golovinomyces biocellatus*, holomorph, on *Mentha aquatica*.

Podosphaera clandestina var. *clandestina*, holomorph, on *Crataegus monogyna*. *Sawadaea bicornis*, holomorph, on *Acer campestre*.

Rusts: *Melampsora ribesii-viminalis* on *Salix viminalis*.

Tranzschelia pruni-spinosae on *Prunus spinosa*.

Uromyces viciae-fabae on *Vicia cracca*.



Orchids in Eggleton Meadows

(Tim Sexton)

Last summer a number of botanists and wildlife enthusiasts commented on how 2021 seemed to be 'a year for Bee Orchids' and Rutland Water certainly had its fair share.

During a botanical survey of Eggleton Meadows a total of 106 Bee Orchid spikes were recorded between fields

41 and 42 on Eggleton Meadows alone. To put that number in to perspective, there have never been any official Bee Orchid records in the Reserve's history!



Common Spotted Orchid on Field 32

Across the meadow complex there were a number of other species recorded, albeit in smaller numbers. In Field 32 (adjacent to AWBC) there was a single spike of Common Spotted Orchid. In Field 35 a total of eight Southern Marsh Orchid were recorded. In Field 41 there were seven Bee Orchid spikes, three Southern Marsh Orchids and 67 Common Spotted Orchid. In Field 42 there were 99 Bee Orchids, 12 Common Spotted Orchid and a single Pyramidal Orchid, the first record of this species on the Reserve.



Pyramidal Orchid on Field 42



Psathyrella typhae © Tim Sexton

Fungi Report RWNR 2021

(Linda Clark)

The weather in Rutland for 2021 was slightly drier overall than the long term mean, which has been taken over 31 years.

The driest months being April, August and November. The wettest were January, February and May.

June, July, September, October, November and December were all some of the warmer months in the decade 2012-2021. September being the 2nd warmest since 1994 with 64% of precipitation falling in the last 5 days of the month.

Temperatures in April were the lowest of the decade 2012-2021 and nationally likely to be the coldest April for 99 years.

On Rutland Water NR two main areas were comprehensively surveyed Cherry Wood, Eggleton and Gibbet Gorse, Lyndon. Other records came from all areas of the reserve, Lax Hill, around the hides and tracks. In total 54 species of macro fungi were recorded. 44 species of micro fungi were recorded and identified by Roy Lemmon. Some species of macro fungi also require microscopy for ID and are recorded

as 'presumed' but await confirmation. *Mycena* species are notoriously difficult and many can only be recorded at the Genus level.

Finds at Gibbet Gorse included *Fistulina hepatica*, Beefsteak fungus, *Postia cassia*, Conifer Blueing Bracket and numerous specimens of *Phallus impudicus*, the Stinkhorn.

Scutellinia scutellata, the Common Eyelash, was found at Eggleton. *Cyathus olla*, the Field Bird's nest, showed around the Birdwatching Centre.



© Tim Sexton

Cyathus olla, the Field Bird's nest fungus

In October numerous specimens of *Coprinus comatus*, Shaggy Inkcaps, were seen in front of Swan Hide in the wet meadow.

Lepista saeva, the Field Blewit, appeared in a large ring in the sheep pasture, opposite and between Grebe and Osprey hides.

In June, a rare fungus was found by our Species and Recording Officer, Tim Sexton, growing at the edge of one of the ponds in Cherry Woods. *Psathyrella typhae* is a scarce species associated with the decaying material of bulrushes *Typha spp.* There are only seven records with the National Biodiversity Network and just twelve records in the Kew database. The species identification, new for Leicestershire and Rutland, was confirmed by Roy Lemmon after examining the spores. A specimen has since been requested by Kew Gardens for inclusion in their fungarium, a reference collection of fungi containing 1.25 million dried specimens from around the world.

With thanks to Roy Lemmon, weather recorder for the Rutland Natural History Society.

Breeding Bird Survey



Wren © Adam Jones

Rutland Water Breeding Bird Survey (RWBBS)

(Tim Sexton)

Due to Covid 19 regulations restricting the activities of volunteers on the Reserve in early spring, the Rutland Water Breeding Bird Survey (RWBBS) did not start until mid-April this year (in previous years initial surveys would have been made in late March). This meant that fewer than normal survey visits were made (in a most cases 8 visits were made rather than 10).

A total of 14 areas were surveyed covering the Egleton and Lyndon Reserves along with Barnsdale Woods and the Hambleton Peninsula.

Following the simplified methodology that was devised in 2012, a team of survey volunteers and staff reported the total numbers of singing and seen birds within their survey areas. From the totals of singing

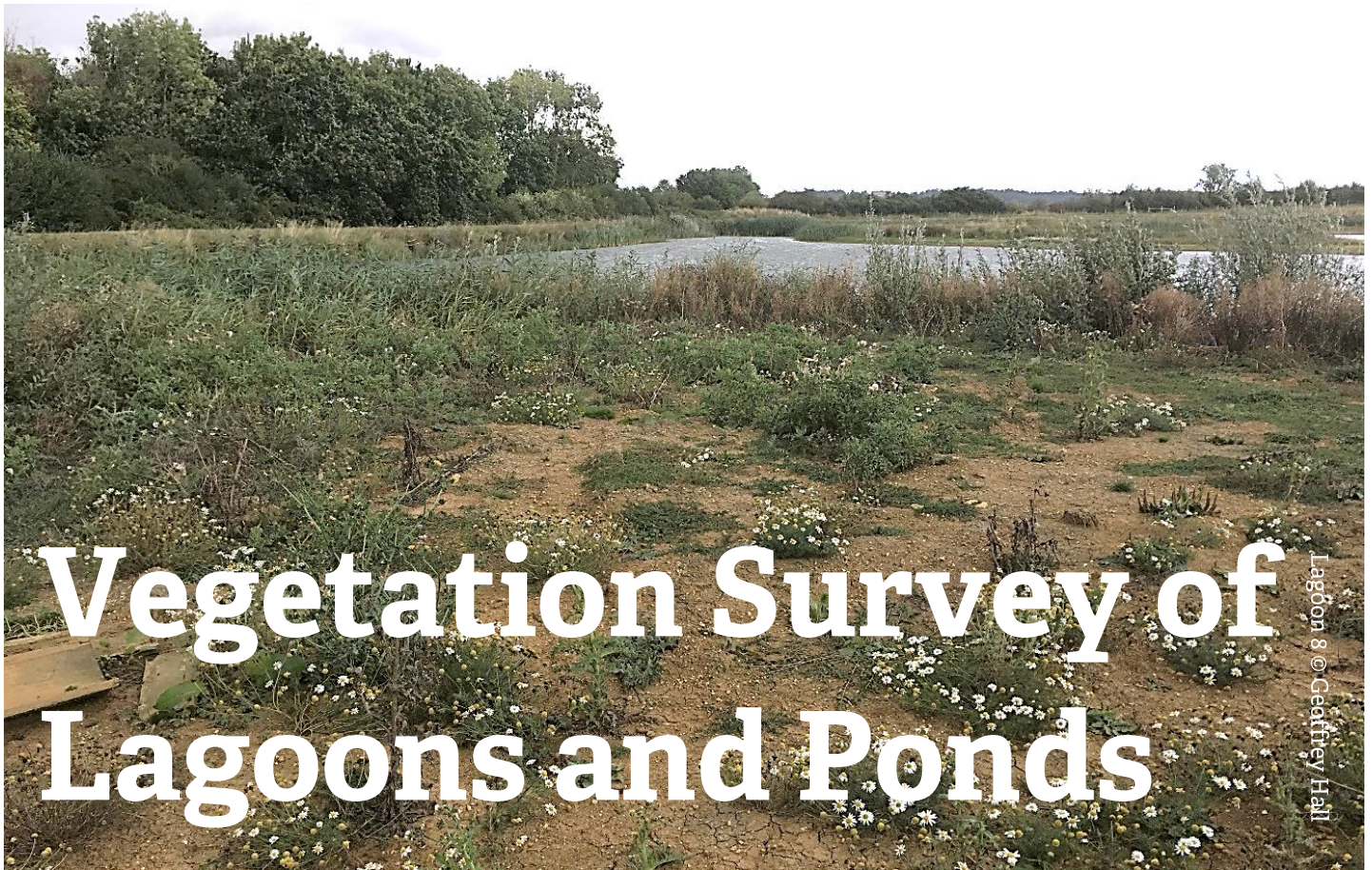
birds, calculations were made that enabled an estimate of the total number of nesting pairs to be reported (thus removing the bias from recorder effort – specifically the differing numbers of survey visits).

In all 1,254 nesting pairs were estimated from the survey data. The top five nesting species on the Reserve were Wren (141 pairs), Blackcap (138 Pairs), Chiffchaff (109 pairs), Blue Tit (75 pairs) and Blackbird (73 pairs).

A summary of the breeding species by area and totals can be seen in the table on page 62.

In order to increase the accuracy of the estimation of the number of territories, and enable a greater understanding of how birds are using the Reserve and the effects of habitat management, it has been proposed that the RWBBS will trial a simplified methodology of territory mapping in 2022. New paper maps will be produced over the winter using QGIS, the digital version can then be used to analyse the data with greater efficiency.

| BTO Code | Species | Cherry Wood | AWBC to Wet Meadow | Brown's Island | Lax Hill | Field 16 | Lagoons 5 and 7 | Burley Fish Ponds | Lagoon 4 | Barnsdale Woods | Hambleton Woods | Lyndon | Cottage Wood | Berrybut Spinneys | Fieldfare Hide Area | Totals |
|-------------|--------------------------|-------------|--------------------|----------------|----------|----------|-----------------|-------------------|----------|-----------------|-----------------|--------|--------------|-------------------|---------------------|--------|
| WR | Wren | 18 | 8 | 3 | 7 | 16 | 2 | 5 | 16 | 3 | 13 | 23 | 15 | 9 | 3 | 141 |
| BC | Blackcap | 26 | 7 | 4 | 10 | 19 | 2 | 2 | 11 | 5 | 9 | 18 | 16 | 6 | 4 | 139 |
| CC | Chiffchaff | 13 | 6 | 3 | 6 | 16 | 2 | 1 | 4 | 6 | 12 | 21 | 8 | 6 | 6 | 110 |
| BT | Blue Tit | 10 | 2 | 2 | 4 | 14 | 2 | 1 | 6 | 7 | 9 | 8 | 8 | 0 | 3 | 76 |
| B | Blackbird | 9 | 5 | 2 | 4 | 11 | 1 | 1 | 9 | 3 | 7 | 8 | 7 | 5 | 2 | 74 |
| R | Robin | 5 | 2 | 1 | 1 | 4 | 2 | 2 | 4 | 4 | 7 | 9 | 18 | 4 | 1 | 64 |
| WP | Woodpigeon | 2 | 4 | 1 | 2 | 10 | 2 | 3 | 9 | 3 | 9 | 7 | 6 | 3 | 2 | 63 |
| GW | Garden Warbler | 2 | 4 | 2 | 2 | 8 | 2 | 0 | 4 | 1 | 4 | 12 | 8 | 2 | 3 | 54 |
| SW | Sedge Warbler | 7 | 4 | 5 | 1 | 7 | 1 | 0 | 10 | 0 | 0 | 6 | 0 | 0 | 2 | 43 |
| CH | Chaffinch | 2 | 3 | 1 | 3 | 4 | 2 | 2 | 3 | 2 | 2 | 4 | 8 | 5 | 0 | 41 |
| GT | Great Tit | 4 | 2 | 1 | 2 | 4 | 2 | 2 | 4 | 1 | 4 | 4 | 5 | 2 | 1 | 38 |
| WW | Willow Warbler | 5 | 5 | 2 | 1 | 4 | 2 | 1 | 4 | 1 | 0 | 8 | 0 | 0 | 4 | 37 |
| RW | Reed Warbler | 13 | 0 | 1 | 0 | 6 | 0 | 0 | 15 | 0 | 0 | 1 | 0 | 0 | 0 | 36 |
| D | Dunnock | 1 | 3 | 1 | 2 | 6 | 1 | 0 | 3 | 1 | 3 | 5 | 2 | 2 | 3 | 33 |
| LT | Long-tailed Tit | 5 | 0 | 0 | 2 | 7 | 0 | 2 | 3 | 3 | 1 | 3 | 2 | 2 | 2 | 32 |
| RB | Reed Bunting | 3 | 2 | 3 | 0 | 3 | 1 | 0 | 11 | 0 | 0 | 3 | 2 | 1 | 1 | 30 |
| WH | Whitethroat | 0 | 0 | 2 | 1 | 4 | 1 | 0 | 6 | 0 | 0 | 7 | 2 | 2 | 2 | 27 |
| ST | Song Thrush | 2 | 2 | 1 | 1 | 3 | 1 | 0 | 2 | 1 | 1 | 3 | 3 | 1 | 2 | 23 |
| R | Rook | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 19 |
| LW | Lesser Whitethroat | 0 | 1 | 1 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 5 | 2 | 0 | 1 | 15 |
| JD | Jackdaw | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 5 | 1 | 2 | 0 | 0 | 0 | 0 | 15 |
| C | Carrion Crow | 2 | 0 | 2 | 1 | 2 | 0 | 0 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 14 |
| PH | Pheasant | 2 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 13 |
| GC | Goldcrest | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 3 | 0 | 11 |
| GO | Goldfinch | 0 | 1 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 10 |
| LI | Linnet | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 9 |
| CK | Cuckoo | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 9 |
| CW | Cetti's Warbler | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| TC | Treecreeper | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 8 |
| BF | Bullfinch | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| G | Green Woodpecker | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| GR | Greenfinch | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 5 |
| GS | Great Spotted Woodpecker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 5 |
| SF | Spotted Flycatcher | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| SD | Stock Dove | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| CT | Coal Tit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| GH | Grasshopper Warbler | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| MG | Magpie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SL | Starling | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 |
| CO | Cormorant | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| MT | Marsh Tit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| OY | Oystercatcher | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| TO | Tawny Owl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| CD | Collared Dove | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| GL | Grey Wagtail | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| J | Jay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| K | Kestrel | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NH | Nuthatch | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| PW | Pied Wagtail | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| RN | Raven | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grand Total | | | | | | | | | | | | | | | | 1,254 |



Vegetation Survey of Lagoons and Ponds

(Geoffrey Hall, BSBI Recorder for Leicestershire & Rutland and Stephen Woodward, BSBI Joint Recorder for Leicestershire & Rutland)

1. INTRODUCTION

Rutland Water Nature Reserve is managed by the Leicestershire & Rutland Wildlife Trust. The reserve is situated at the west end of Rutland Water (SK8807) and includes eight lagoons. They were created at various dates from the 1970s and have been managed principally for their ornithological value. Whereas the bird life is very well recorded, little is known about the vegetation. No systematic recording has been undertaken and few records exist that can provide adequate baseline data. The aquatic vegetation is especially poorly known, as it has not been sampled since construction of the lagoons.

Tim Sexton, of the LRWT staff at Rutland Water, called a site meeting in July 2021 to appeal for help from local botanists. Tim explained that some of the lagoons receive treated water from the Oakham Water Treatment Plant and from agricultural sources via inflows. From the conservation management perspective, it would be very helpful to understand whether or how these discharges affect the aquatic vegetation in the various lagoons. Tim suggested that a botanical survey of the aquatic and riparian vegetation of the lagoons might elucidate the relationship between water quality and vegetation.

After consideration by GH, SFW and Russell Parry (BSBI Joint Recorder for Leicestershire & Rutland), a preliminary study was proposed for Autumn 2021, to determine which species are present on site, and whether there are any rare or scarce species, or particularly species-rich areas, that may need to be considered in the design of a follow-up survey.

Similarly, the marginal and aquatic vegetation of some of the ponds in the vicinity of the lagoons at

Rutland Water has not been recorded, so there are no records to inform habitat management. It was proposed to take the opportunity to record these ponds as well.

To avoid disturbing breeding or wintering birds, the survey was scheduled for four days in September, a time when many aquatic and riparian plants can be identified. This schedule allowed us to record six lagoons and six ponds.

This report covers the preliminary survey conducted during September 2021.

Lagoon 4 was not covered due to work being undertaken to remove the Ichthyosaur.

2. SURVEY AIMS

1. To record the marginal and aquatic vegetation of the six lagoons to provide baseline data to inform the choice of a suitable method for more detailed study of the difference in vegetation composition between lagoons.
2. To record the marginal and aquatic vegetation of selected ponds to provide information for habitat management.

3. SURVEY SITES AND DATES

| Date | Lagoon | Site | Participants |
|--------------|----------|---|--|
| 10 September | Lagoon 2 | East bund | Geoffrey Hall, Stephen Woodward, Helen Ikin |
| 10 September | Lagoon 2 | West shore | Peter Stroh, John Rodgers, Martin Grimes, Roy Lemmon, Tim Sexton |
| 21 September | Lagoon 3 | Margin, ditch, islands near Shoveler Hide, inflow | Stephen Woodward, Russell Parry, Tim Sexton |
| 24 September | Lagoon 6 | Margin and islands | Stephen Woodward, Sara Botterell, John Rodgers |
| 24 September | Lagoon 7 | Margin and islands | Geoffrey Hall, Sara Botterell, Richard Mabbutt, Tim Sexton |
| 28 September | Lagoon 5 | Margin and islands | Geoffrey Hall, Stephen Woodward, Richard Mabbutt, John Rodgers, Tim Sexton |
| 28 September | Lagoon 8 | Margin and islands | Geoffrey Hall, Stephen Woodward, Richard Mabbutt, Tim Sexton |

Table 9.1 Lagoons

| Date | Location and Grid Reference | Site | Participants |
|--------------|-----------------------------|--------------------|--|
| 21 September | Cherry Wood SK88720823 | Pond Left 1 | Stephen Woodward, Russell Parry, Tim Sexton |
| 21 September | Cherry Wood SK88780820 | Pond Left 2 | Stephen Woodward, Russell Parry, Tim Sexton |
| 21 September | Cherry Wood SK88720822 | Pond Right 1 | Stephen Woodward, Russell Parry, Tim Sexton |
| 21 September | Cherry Wood SK88750820 | Pond Right 2 | Stephen Woodward, Russell Parry, Tim Sexton |
| 24 September | Field 16 SK88030606 | Small Reedbed Pond | Geoffrey Hall, Stephen Woodward, Sara Botterell, Richard Mabbutt, Tim Sexton |
| 24 September | Field 16 SK88040604 | Large Reedbed Pond | Geoffrey Hall, Stephen Woodward, Sara Botterell, Richard Mabbutt, Tim Sexton |

Table 9.2 Ponds

4. VEGETATION SURVEYS

Six lagoons were selected for survey, four of which were constructed about ten years ago. Lagoons 2 and 3 were constructed along with the main Reservoir by impounding areas of the reservoir itself using sheet piled walls that were clad in rock armour to create bunds. In these two lagoons, the shore area is older than the bunds. Lagoons 5, 6, 7 and 8 were constructed using earth bunds up to 5m tall to contain the water and screen birds from prevailing weather and disturbance by traffic on local roads. Six ponds were selected for survey: four near Lagoon 3 and two between Lagoons 7 and 8 in the reedbed.

In each of the lagoons and ponds, the marginal vegetation was recorded, and the aquatic vegetation was sampled using grapnel trawls from the margins at suitable sites. In Lagoon 3 it was particularly difficult to find suitable grapnel sites as access was hampered by mud or dense reeds. Plants were identified on site, or later from samples taken at the lagoons, if reference to published taxonomic works was required. Recorders were experienced local botanists who worked on a voluntary basis.

5. RESULTS

5.1 Lagoons

In all, a total of 227 taxa were recorded in and around the six lagoons. Lagoon 2 had the most taxa on any one lagoon (132) and Lagoon 5 had the least (83). Each taxon was allocated to one of four broad habitat categories: aquatic (11 taxa), marginal (60 species), grassland (76 species) or ruderal (54 species), except for trees and shrubs (26 species) which are listed separately. A few plants were found in both categories, so only the most frequent category was chosen. The tables also indicate the conservation status of rare and scarce plants in Leicestershire & Rutland (Jeeves, 2011).

5.1.1 Notable Plants

Rare and scarce native species recorded were: *Alopecurus aequalis*, *Bidens cernua*, *Juncus compressus*, *Limosella aquatica*, *Potamogeton berchtoldii*, *Rumex maritimus* and *Sison amomum*. One notable alien, the arable weed *Erysimum cheiranthoides* was also recorded near the sluice in

Lagoon 3. The scarce hybrid willow *Salix x smithiana* was recorded but may have been planted.



Rumex maritimus on Lagoon 8

R. maritimus, *Schoenoplectus tabernaemontani* and *Bolboschoenus maritimus* are usually found in brackish, coastal habitats. Although it is unusual to find *B. maritimus* inland, recent distribution maps constructed by the BSBI show that both *R. maritimus* and *S. tabernaemontani* are found more often inland than on the coast.

The presence of *Pulicaria dysenterica*, which has undergone substantial decline in VC55, in Lagoon 5 is notable as this was not present in the surrounding grassland or any of the other lagoons, so may have arrived naturally.

The invasive alien *Crassula helmsii* was present in all lagoons, often covering large areas, and poses a huge threat to the survival of the locally rare and scarce plants in these lagoons.



Area of *Crassula* on Lagoon 2

5.1.2 Marginal Flora

Lagoons 2 and 3 had more species than Lagoons 5-8, reflecting their age. The marginal flora of these two older lagoons (2 & 3) was mainly tall herb/fen community, with woody species present as saplings and small trees. The bunds were mainly willow shrubs and trees with grass and herbs, but Lagoon 2 had some *Sison amomum*, a scarce plant in VC55, also known from another area of the reserve. Both lagoons had some more open drawdown zones where the scarce plants *A. aequalis* and *L. aquatica*, and some ruderals associated with marshy and agricultural land, were found.



Limosella aquatica in the drawdown zone of Lagoon 3

The flora of the four recently constructed lagoons (5-8) was less species-rich than the two older lagoons, and had species more characteristic of open sites and more ruderals, some of which may have been derived from plants introduced on the surrounding banks. The central sinuous areas of land ("islands") appear to be functioning as drawdown areas, and are important areas for the growth of *L. aquatica* and *R. maritimus*.

The nearly scarce rush *Juncus compressus* was only present in Lagoon 6, although it had been abundant on the margins of Lagoon 2 about ten years before. Two Horsetails, *Equisetum palustre* and *E. fluviatile*, were only found in Lagoon 8 and may have arrived naturally.

5.1.3 Aquatic Flora

Of the eleven aquatic plants recorded in the lagoons, *Elodea nuttallii* was present in 5 of the 6 lagoons, both

Myriophyllum spicatum and *Lemna minor* were present in 4 lagoons, and *Potamogeton natans* was present in 3 lagoons. Five taxa were only present in one lagoon.

The aquatic flora of the two older lagoons (2 & 3) was more diverse (nine taxa: *Ceratophyllum demersum*, *Elodea nuttallii*, *Lemna minor*, *Lemna trisulca*, *Myriophyllum spicatum*, *Nuphar lutea*, *Potamogeton berchtoldii*, *Potamogeton natans* and *Potamogeton pectinatus*) than the four recently constructed lagoons (5-8). Although all of these species are common in nutrient-rich water, the scarce native Pondweed, *P. berchtoldii*, was present in these two lagoons.

Lagoons 5-8 had abundant, dense stands of *Myriophyllum spicatum* and *Elodea nuttallii*, both indicators of nitrate enrichment. Only one of the three pondweeds recorded, *Potamogeton natans*, was present in Lagoon 8. The perimeter sides of these four recent lagoons shelf steeply, possibly presenting a barrier to colonisation by other species.

5.2. Ponds

In all, 33 taxa were recorded in and around the ponds. Each taxon was allocated to one of two location categories; aquatic (6 taxa) or margins (31 taxa). Locations were used instead of habitat categories, as the transition from margin to dry land was ill-defined in some of the ponds.

5.2.1 Notable Plants

The scarce native Pondweed, *Potamogeton berchtoldii* was also present in one of the Cherry Wood Ponds, near Lagoon 3, where it was also recorded.

The invasive alien *Stratiotes aloides* was dominant in one of the ponds near Lagoon 3. This can completely cover bodies of freshwater and its presence should be carefully monitored and controlled.

5.2.2 Flora of Pond Margins

The four small ponds in Cherry Wood, near Lagoon 3, were all surrounded by dense shrubs and small trees, with little room for marginal vegetation. The species found were all common ones.

The smaller of the two reedbed ponds in Field 16 had more plant species than the larger of the two ponds

which was more shaded and had a dense marginal stand of willows and *Typha latifolia*.

5.3 Record storage and distribution

These records have been digitised by GH and uploaded to the BSBI's Distribution Database. Records will be made available, in spreadsheet format, to LRWT and the local records centre, LRERC.

6. COMMENTS

The small number of aquatic species in all the lagoons and ponds was surprising and suggests that further investigations comparing the aquatic flora in the different lagoons would be unlikely to yield statistically significant results. A more detailed comparison may be worthwhile to quantify changes between the marginal flora of the new and the old

lagoons, to estimate where the change occurs and how long it takes.

The effect of the abundance of *Crassula helmsii* on the draw-down vegetation, especially *Limosella aquatica* and *Rumex maritimus* is worthy of investigation.

7. REFERENCE

Jeeves, M. (2011) The Flora of Leicestershire and Rutland: Checklist and Rare Plant Register. Oadby, Leicestershire and Rutland Wildlife Trust.

A full report including comprehensive species list and maps of surveyed areas is available on request.



One of the four ponds in Cherry Wood during late spring

Leicestershire and Rutland Wildlife Trust

About Us

Why we're here

Our purpose is to bring wildlife back, to empower people to take meaningful action for nature, and to create a society where nature matters.

Who we are

Founded in 1956, Leicestershire and Rutland Wildlife Trust is the leading wildlife conservation charity working to protect and enhance the wildlife and wild places of Leicestershire and Rutland, and enable nature's recovery locally. We believe Leicestershire and Rutland should be rich in wildlife for the benefit of everyone - with more wildlife, more wild places and more people having a strong connection to nature.

We are part of a grassroots movement made up of 46 individual Wildlife Trusts who all believe that we need nature and nature needs us. Each Wildlife Trust is a place-based independent charity with its own legal identity, formed by groups of people getting together and working with others to make a positive difference to wildlife and future generations, starting where they live and work.

Our Vision and Mission

Our vision is of a thriving natural world, with our wildlife and habitats playing a valued role in addressing the climate and ecological emergencies, and people inspired and empowered to take action for nature.

By 2030:

We want to see Leicestershire and Rutland thriving with nature, green spaces, and abundant in wildlife. We want our landscape to be full of wildflowers and alive with birdsong. We want rare, threatened and endangered species to have populations that are stable, resilient and recovering, and to reintroduce species that were once lost in our county.

Most importantly, we want to keep local communities connected with nature, working together with our supporters and wider networks to tackle climate and ecological emergencies and creating a wilder future for everyone in Leicestershire and Rutland.



**Leicestershire
& Rutland**
Wildlife Trust

There are many ways you can
keep in touch and support our work



Facebook

@rutlandwaternaturereserve

@leicswildlife



Twitter

@RutlandWaterNR

@leicswildlife



Instagram

@leiceswildlife

Post us a letter to:

Leicestershire and Rutland Wildlife Trust,

The Volunteer Training Centre,

Oakham Road, Near Hambleton,

Oakham , Rutland, LE15 8TL

Call Us:

01572 720049

Email Us:

info@lrwt.org.uk

Visit our website:

www.lrwt.org.uk

Your support helps us to:

Protect and enhance the wild places of Leicestershire and
Rutland. Inspire people about the natural world. Stand up
for wildlife and the natural environment.



**Leicestershire
& Rutland**
Wildlife Trust

