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Pitsford Water Nature Reserve

Annual Report 2024

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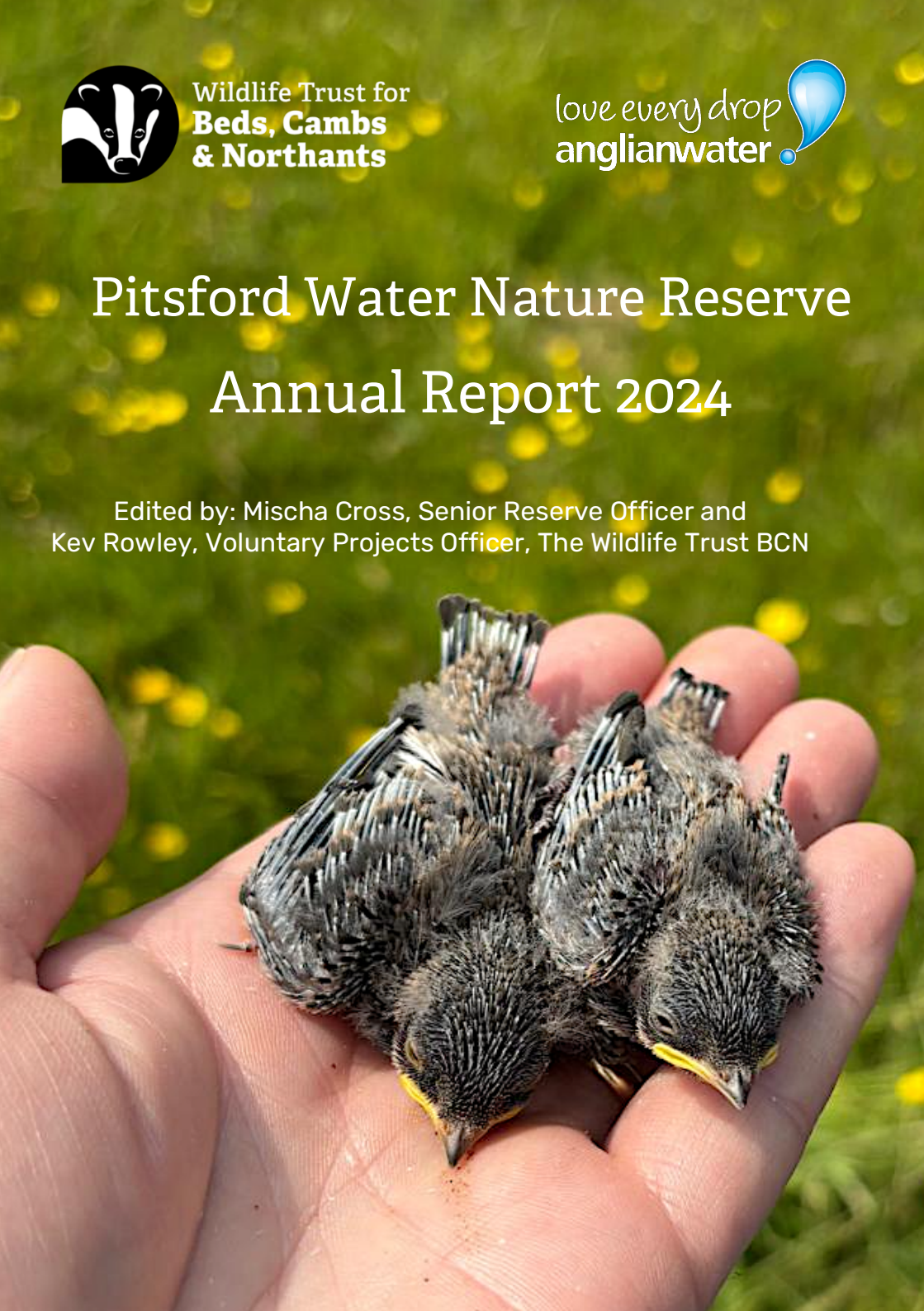

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In Memory of Wendy Gossage

Beloved wife of Robin Gossage. Wendy was a wonderful, kind, funny friend and member of the Pitsford team who is greatly missed by all who that knew her.

Cover Photo: Sand Martin chicks from the first breeding birds on site.

The History of Pitsford Water Nature Reserve

Pitsford Water Nature Reserve forms part of the larger Pitsford Reservoir. The Reservoir was built in the early 1950s by the then Mid-Northants Water Board to supply Northampton with water. The site chosen was a valley formed by three major streams that joined to form a tributary of the Brampton branch of the River Nene. The three streams account for the complex shape of the nature reserve. There are no flooded villages under the reservoir but there are some roads and bridges that emerge in drought years.

The old road that is submerged beneath the reservoir with a bridge over the stream that appears in severe drought years. © Dave Francis

Prior to the flooding of the valley the land was used for mixed agriculture, typical of the late 1940s and early 1950s. Intensive

use of pesticides and artificial fertilisers were mainly things of the future when the site was enclosed for the reservoir. Most of the area that now forms the site is believed to have been in use for mixed agriculture for at least 600 years. The fields then bordering the streams would have been traditional flood meadows.

The whole site is now owned by Anglian Water but the nature reserve, covering all the area north of the causeway, was leased to the Wildlife Trust in 1969 and is managed jointly for wildlife by both parties. The Lodge and its car park were subsequently removed from the lease. The nature reserve has a perimeter of approximately 10 km and an area just less than 200 hectares. At high water levels, over half of the reserve is open water.

In the nature reserve there is one area of old woodland known as The Cover. This is predominantly Oak and the trees were 100 to 200 years old when the site was enclosed. A number of old field boundaries can still be seen within the reserve, usually distinguished by their ditch and occasional large hedgerow trees. Ridge and furrow formations can be seen in some areas, particularly in the Scaldwell Bay. These cease at the boundary fence as modern ploughing outside the reserve has destroyed them. Significant areas of the site are mixed scrub, typically Blackthorn, Hawthorn and Crab Apple, and there are a number of meadows, managed with a late season hay cut.

During the late 1950s approximately 40 hectares of trees were planted, mainly Conifers and Sycamore, in 33 distinct blocks. The removal of many of these non-native trees forms part of the ongoing management of the site. Where necessary, replanting with native broadleaf trees is carried out; the long-term aim being to produce mixed structure native broadleaf woodland, while still retaining some blocks of conifers. One plantation block, Compartment 21, occupies an area shown on Victorian maps as “Fox Covert” and contains more classic woodland ground cover. This suggests that woodland existed here for

some time before the reservoir was built, although none of the mature trees can be seen there anymore. There are extensive areas of scrub and meadow that are actively managed. The water's edge has areas of willow carr, particularly in the Holcot Bay and off The Point.

In 1970, the whole reservoir was designated a Site of Special Scientific Interest (SSSI) on the strength of the winter wildfowl numbers, particularly Shoveler, and the assemblage of breeding birds. The reservoir was then the largest SSSI in Northamptonshire. From the early 1990s, Anglian Water has funded the employment of permanent nature reserve staff and the management of the site.

The nature reserve has a dedicated team of local specialists who carry out regular survey and monitoring work. Their work covers a huge variety of species including algae, bryophytes, different bird monitoring programmes, moths, diptera and dragonflies. This has built up an extensive dataset, which is important for contributing to national datasets as well as influencing our on-site management activities.

Aurora borealis © Theresa de la Fuente

General Management
Mischa Cross

Structures

The new Lagoon and Willows hides were built with boardwalks that are too short for the excessively wet winters that are being experienced now. Extensions to both boardwalks were made to avoid having to walk through standing water at the start of the boardwalk when water levels come right up after heavy rain. Other minor repairs and maintenance were carried out by painting hides and benches as well as replacing the legs on bench 8. Work was unfortunately not completed on rebuilding Cormorant Screen and Zig-zag bridge, which will roll on to next year's schedule.

Lagoon boardwalk extension.
© Mischa Cross

Paths

During wet conditions, the top of the Scaldwell Bay has always been a trouble area. At numerous times throughout wet winters, a whole circuit of the site is not possible – on foot or in a vehicle – because of the pinch point at the Scaldwell Bridge where there is only one access track. A plan has been created to resolve the problem and ensure the site is accessible during even the wettest winters to come. Work started this year with the installation of a drainage system where broken land drains have been leaking onto the track for years. Staff also hired in an excavator to clear out the ditches in that area to increase their capacity and cleared out culverts to prevent them over topping during floods. Because the work was done in-house, habitat

The drainage system on the west side of Scaldwell Bridge. A series of ponds, ditches and underground French drains were installed, while simultaneously creating temporary wet habitats that do not interfere with the path. © Andrew Cholerton.

features such as riffles, deep pools and leaky dams could be created along the ditches for increased habitat diversity, while still ensuring functionality. Future work will look to create more storage areas for flood water while raising the path above the level of recent floods, while still allowing water to pass underneath so as not to undermine the new track – similar to what was created in Holcot Triangle Meadow – annual report 2021/22.

Unfortunately, due to the excessively wet winter, much of the paths to the west of Christies' Copse were heavily damaged, despite keeping use to the minimum. The east of the reserve however, has held up well thanks to the repairs made last year and effort to minimise use.

Talks and Events

The Pitsford Enewsletter still appears to be well received by visitors and is having the desired effect of creating a community of site users. The annual moth and butterfly event that is run in partnership with the local branch of Butterfly Conservation took place again in July. It was fully booked as usual and despite a very dubious weather forecast for the day and very limited moths and butterflies on the wing in the run up to the event, it went remarkably well and feedback was positive. Dave Jackson also ran a Wildlife Trust photography training workshop, which was well attended and received great reviews – as well as producing some stunning photos.

© Dave Jackson

Archaeology

While working in Christies' Copse at the back end of 2023, Volunteer Issy Clarke discovered some pottery shards, large herbivore teeth and old animal bones. Unfortunately, not an ancient human settlement that would rival the discovery of the 'Rutland Dragon', but interesting nonetheless. With the help of

local archaeologists it was discovered, on a map from 1884, there was a building very close to the spot where the new Christies' Copse ponds were created. This could also explain the Bullace hedge near to there as these were historically planted as windbreaks and kitchen garden features.

Pottery and bone fragments from the newly dug Christies' Copse ponds.
© Mischa Cross

Habitat Management
Mischa Cross

Woodland

This year appeared to be particularly bad for squirrel damage, resulting in a few fallen limbs, but this was minimal compared to the amount of health and safety trees that needed attention. There are a few diseases that are killing the Scots Pine, as well as Sooty Bark Disease that hit the Sycamores hard after the drought, rapidly killing some large trees, plus Acute Oak Decline and Ash Dieback!

Squirrel damage. © Mischa Cross

Felled Sycamore. © Mischa Cross

With help from the wider Northamptonshire Reserves team, thinning of pines was carried out in blocks 4, 5 and 9. Some large Sycamore and Beech were also felled in block 24 to thin out the dense Beech canopy and enlarge the scallops along the back path.

Work continued in block 2 in October, with a relatively large area of Sycamore regrowth and

coppice cut and treated. It is starting to become possible to 'see the wood for the trees' in there, so to speak. The new track will hopefully be marked out and created in the next year or two and we will start looking at deer management to allow the understory to regenerate. The trial quadrats are still, unsurprisingly, showing that deer browsing is suppressing virtually all regeneration. In the deer fenced quadrats, the gorse and broom, as well as other herbaceous and tree species are doing incredibly well. The bat surveys have also continued to monitor the area and there is no evidence of the work affecting the bat population in the area. If anything it has shown an increase in the species and abundance recorded.

Grassland

The ragwort was pulled from all the grasslands before the haycut was taken. As usual, there was very little, but the creeping thistle is starting to increase – it was hand pulled from The Meadows where the heavy goose grazing appears to be encouraging it, and also on the spoil heaps in Christies' Copse. The haycut was taken in late August and the grasslands were very lush, due to the wet year, but very low in flowers.

Wetland

The very small window of opportunity to access the reservoir margins was missed this winter season. Work can only start in September to avoid disturbance to nesting birds. By this time, the water levels had dropped, but only by a very small amount – the reservoir did not get a significant drawdown at all this summer, but just enough was exposed to carry out the marginal work required. However, while Mischa Cross was on two weeks of training, the water levels rose very rapidly, so by the time she returned at the start of October, everything was submerged again.

Scrub and Christies' Copse

The area known as Christies' Copse is being returned back to sparse, open scrub habitat. Another section was thinned out this year and the previously thinned areas are regenerating well and it is still a hotspot for Woodcock. A second bee bank was created and it is planned to dig more, creating niches and microclimates with the increased micro topography in the area thanks to the pond creation. The disturbed ground has created a perfect bed for Creeping Thistle, which the volunteers spent many hours hand pulling. But it also created a wonderful display of Foxgloves.

Spoil heap from the pond creation at Christies' Copse having been cleared of Creeping Thistle. © Mischa Cross

Garden

The gardening volunteers are still developing the garden area around the Fishing Lodge. The boat pond has developed nicely, with plenty of invertebrates now using it as well as numerous bathing birds. Sadly, no frogs or newts as yet. The shrubbery and flower beds are maturing nicely and the bug hotel has numerous hole-nesting bee species using it.

Weather
Kev Rowley

January
January started mild, wet and unsettled with Storm Henk bringing heavy rain and strong winds. This was followed by a dry and sunny period. The cold but dry conditions persisted through the middle of the month until they were brought to an abrupt end with the arrival of storms on the 21st to 24th.

February
February was a mild but wet month with generally unsettled weather and high rainfall at the end of the month.

March
March was overall unsettled, wet and dull. The month began colder than normal and this was replaced with milder weather for much of the rest of the month. The month ended on an unsettled note, with widespread showers and strong winds.

April
April was again unsettled, wet and dull. April showers were present from the beginning of the month with warmer temperatures. The last two weeks of the month were cooler than average.

May
May started with thunderstorms and the weather continued to be unsettled for the first week. However, a high pressure system brought more settled weather. The low pressure systems returned towards the middle of the month, bringing further unsettled weather and more thunderstorms. Rainfall was at times heavy. This pattern of unsettled weather continued for the rest of the month.

June
June was cooler than average with the first two weeks around 2°C below. It was extremely unsettled with sunshine, showers and some thunderstorms. The last week warmed up with some days up to 30°C.

July
The first two weeks of July had low pressure bringing cooler than average temperatures along with the typical month's rainfall falling in that period. The weather then turned hotter with temperatures in the 20s up to 30°C. The month finished milder and occasionally muggy with occasional thunderstorms.

August
August began on a warm note, with temperatures above average across the country but with widespread thunderstorms. It then cooled in the second half of the month and was changeable, with scattered showers as well as dry, fine spells. The winds were often from the west or southwest, bringing moist, sometimes warm air from the Atlantic.

September
September saw unsettled weather that was particularly wet and dull. The first week bought warm air from Europe and showers, however by the 11th, temperatures dropped with air coming from the Arctic. The wet weather continued and during the last ten days of the month, there were heavy showers and thunderstorms that saw widespread flooding across Northamptonshire.

October
October saw a mix of settled conditions as well as wet and windy weather. It started with wet weather followed by a brief interlude of settled weather allowing views of the Aurora. The latter part of the month had wet weather followed by Storm Ashley with high winds and extensive flooding. Over the month temperatures were warmer than average.

November

November was a month of two halves. First half it was mild and dry but very gloomy with hardly any sunshine during that time. In the last two weeks it started to become stormy with rain and snow. Storm Bert bought flooding to Northampton and took the reservoir up to and above maximum capacity.

December

December started with a mix of rain and wintery showers followed by the severe gales and heavy rain bought by Storm Darragh. The temperatures were milder than average with some calmer conditions and unsettled weather returning at the end of the month.

Scaldwell Bay under water, November 2024.
© Mischa Cross

Species Summaries
Kev Rowley

The following chapters are written by members of the Pitsford Water Nature Reserve team, detailing work they carried out in 2024. The full species lists and any survey data are maintained electronically at the Wildlife Trust Pitsford Office at The Fishing Lodge.

The full species list for PWNR, up to the end of 2024 stands at 4152, this is an increase of 74 species from the end of 2023.

These totals take into account any unverified or discounted records that may have been removed from the list and any records missed from previous years that have now been included. Some records may still be awaiting verification at the time of printing and have not been included in this year's report.

Casual Records
Kev Rowley

With the increase in camera trapping at strategic locations around the reserve, there have been many more mammal records submitted this year than normal, with Foxes seen in all areas surveyed. Otters have regularly been recorded in the Holcot Stream and Scaldwell Bay.

The continued surveying of Bats in Block 2 with the help of the Nene Valley Bat Group, is showing that the Bat population in the area is thriving, despite being a very poor year for their invertebrate food sources. The Nene Valley Bat Group also started a bat box monitoring project. They have refurbished

some of the boxes around the reserve and it was great to find roosting pipistrelles in some of the boxes.

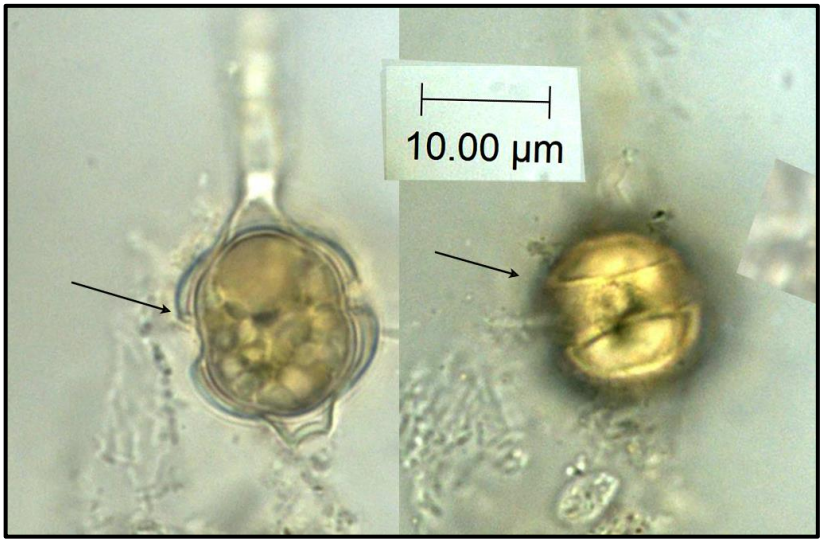
Noticeably, wasps were completely absent from either of the moths traps and only one hornet was recorded from them, much to the relief of the trap checkers! However, it could be an indication of just how poor the year has been for invertebrates, or could be coincidence that there just happened to be no nests for either species anywhere near the traps. But combined with the very low chironomids and caddis hatches, it is unfortunately likely to be the former.

A Scarce Emerald Damselfly, a new species for the site was recorded in early August at Walgrave Square Pond by Neil McMahon. This is also a first for the county.

Scarce Emerald Damselfly © Neil McMahon

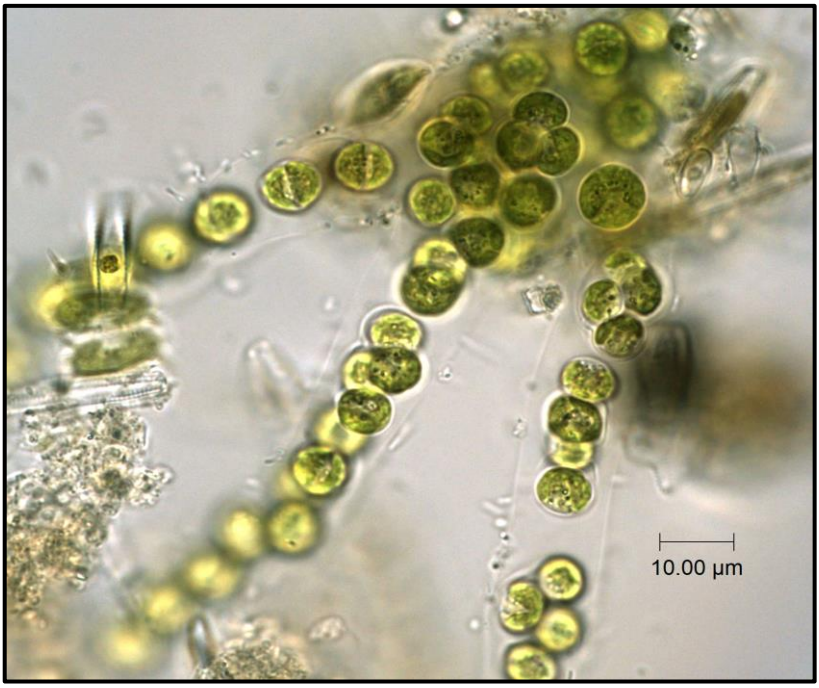
Algae
Chris Carter

The green algal genus *Oedogonium* is often missed in surveys because it superficially resembles much commoner genera such as *Cladophora*. However, if present in a reproductive phase then there is the possibility of identifying rare taxa and obtaining ecological information. Unfortunately, this may not happen very frequently and repeat visits to the site in question are needed unless culture can be carried out. As mentioned in past reports, the new pond at Christies' Copse is in this situation and one of the highlights of the 2024 surveys has been the eventual finding of some fertile *Oedogonium*, which very neatly fitted the taxonomic features of *Oedogonium pusillum (*shown below).



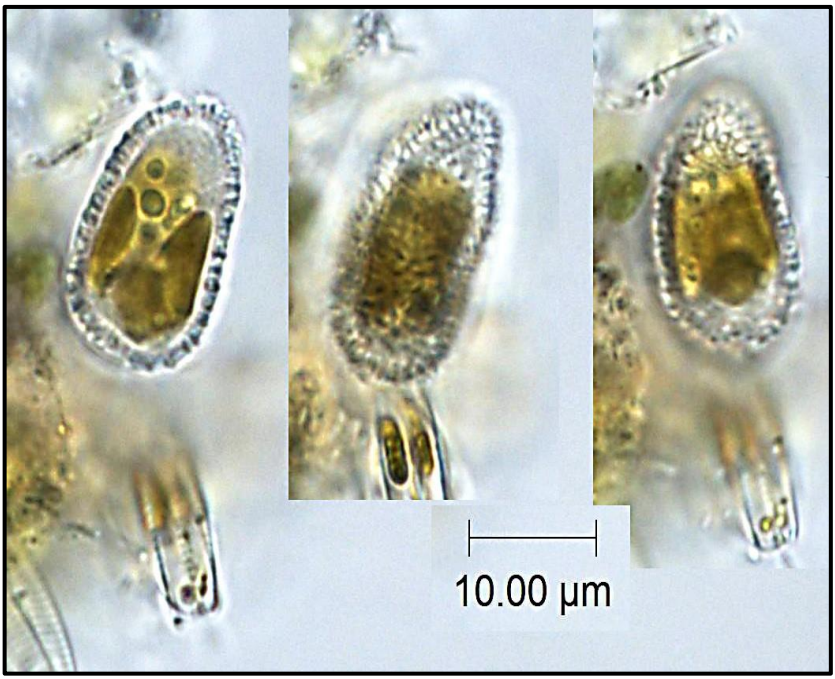
Above: Oedogonium pusillum showing an oogonium in July 2024. A key character is the unusually wide 'operculum' (arrowed). There appear to be very few UK records.

Another interesting green alga (Chlorophyta) was found in shallow water around Lagoon Hide in May 2024: (although heavy rain would have resulted in 'water sharing' with Spring Pond). This was *Palmodictyon varium* (shown below).



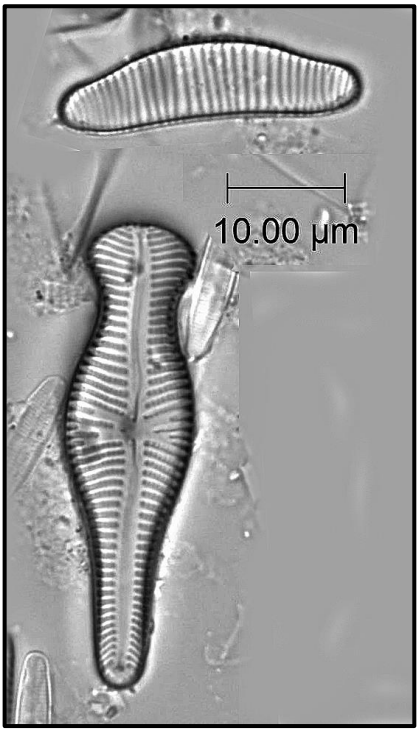
Above: The green alga Palmodictyon varium from shallow water near Lagoon Hide. This is a free-floating colony of grouped spherical cells held within a mucilaginous branched filament. If seen in isolation these spherical cells would be nearly impossible to identify.

In the same area some particularly good examples of the Haptophyte alga *Hymenomonas roseola* were seen (although this is a known taxon for the site).



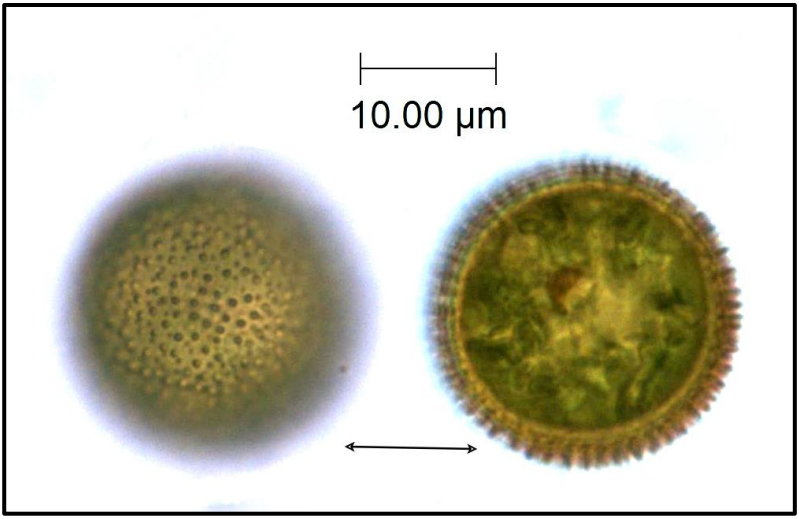
Above: an example of Hymenomonas roseola from shallow water near Lagoon Hide. This is a freshwater example of a mainly marine group of environmentally exceedingly important organisms known as 'coccolithophorids'. The organism is able to process soluble calcium bicarbonate into solid calcium carbonate, which appears as crystalline discs known as coccoliths; these are visible on the outside of the cell. Because the bicarbonate is replenished using atmospheric carbon dioxide, the environmental benefits are obvious. The chalk based 'white cliffs of Dover' will have come from these.

Spring Pond and the Walgrave Ponds have been sampled during the year but not shown many new site taxa; the diversity has been high however and the water and samples were in good condition, perhaps because of high rainfall in the recent past. An image of the newly recorded Euglenophyte alga *Trachelomonas woycickii* is shown opposite and also two diatoms new for the site: *Eunotia soleiirol* and *Gomphonema truncatum.*



Left: The diatoms Eunotia soleiirol (top) and Gomphonema truncatum (bottom), both from Spring Pond. The organic matter has been chemically removed to show the detail of the silica framework and a special diatom mountant is used.

Below: The Euglenoid Trachelomonas woycickii from Walgrave Crescent Pond July 2024. The red 'eye spot' is not an eye but a photosensitive pigment showing the direction of illumination.



The table below shows new records of algal species for Pitsford Water Nature Reserve in 2024. Left columns are new to the section and right columns are new to site.
H= Holcot Pond,
S= Spring Pond,
W,R,C= Walgrave Square, Round and Crescent ponds,
M=main reservoir,
Ch= Christies' Copse main pond

	All Sections	New 2024
CYANOPHYTA (Blue-Green Algae)		
Oscillatoria	S	S
EUGLENOPHYTA		
Trachelomonas woycickii	C	C
XANTHOPHYTA (Yellow-Green Algae)		
Vaucheria sp	S, M	S
CHLOROPHYTA (Green Algae)		
Palmodictyon varium	M	M
Spirogyra communis	S, C	C
Trochiscia reticularis	S, W, C	S
Botryococcus braunii	W, M, C, Ch	Ch
Oedogonium pusillum	Ch	Ch
Desmids (Green Algal Group)		
Closterium parvulum	C	C
Closterium moniliferum	S, M, C	C
BACILLARIOPHYTA (Diatoms)		
Meridion circulare	S, M	S
Diatoma vulgare	M	M
Fragilariforma virescens	S	S
Eunotia soleirolii	S	S
Gomphonema capitatum	S	S

All photographs courtesy of Chris Carter unless otherwise stated.

Bryophytes
Rachel Carter & Frances Higgs

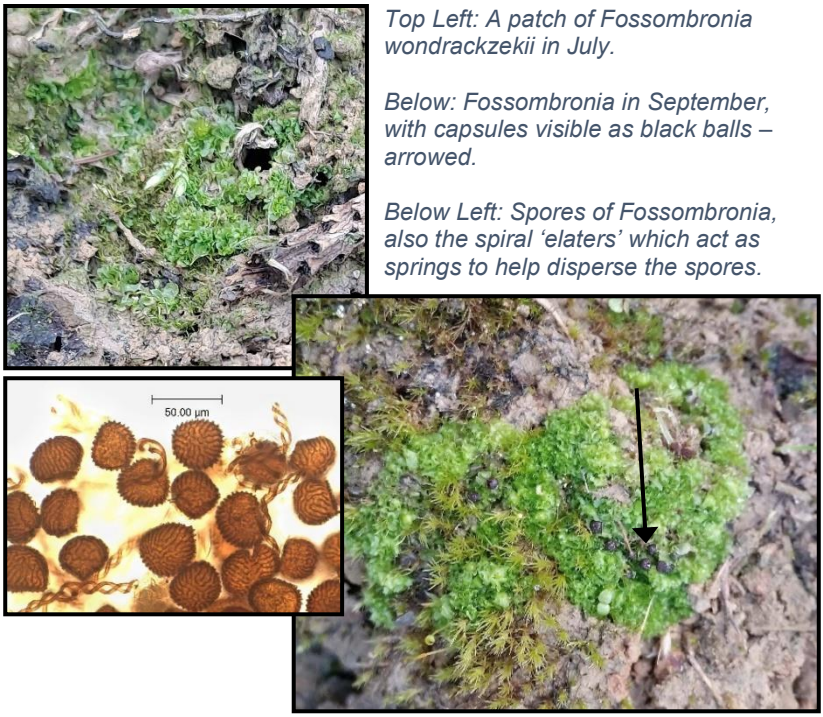
The study days based at the Lagoon Hide provided an opportunity for a thorough search of the Holcot North-West area, adding several more species to its already substantial list.

Hypnum jutlandicum was recorded new to the reserve in Christies' Copse last year so it was good to find it again, on a rotten log. The other notable records (listed below) came from an oak tree. The most significant find was *Ulota crispa* in the strict sense; this is technically new for the reserve, its first confirmed occurrence since the species was split into three. The *Orthotrichum lyelli* was remarkable in having capsules [producing spores] as well as its usual covering of gemmae [for vegetative reproduction].

Above: Metzgeria violacea with lichen and the orange- coloured alga Trentepohlia. ©Alan Rosling

Left: one of the newly dug ponds at Christies' Copse. The area in the foreground was particularly good.

Christies' Copse was revisited twice as a follow-up to the study days in 2023. Newly dug ponds provide bare soil which bryophytes may colonise before vascular plants become established. Some colonisation of the mud surrounding the new ponds had taken place and interesting bryophytes grow there. The most exciting find was *Fossombronia wondraczekii*, a little liverwort which looks rather like tiny lettuce plants. It has only been recorded from two other sites in Northamptonshire.



Top Left: A patch of Fossombronia wondrackzekii in July.

Below: Fossombronia in September, with capsules visible as black balls – arrowed.

Below Left: Spores of Fossombronia, also the spiral 'elaters' which act as springs to help disperse the spores.

Ripe spores are needed to distinguish different species of *Fossombronia*; successful culture of a specimen yielded good capsules, and more were found on-site later in the year. They are densely reticulated with ridges, which give the appearance of numerous spines round the edge, 30 or more (see picture), contrasting with about 20 in the related *F. pusilla*.

There were several ephemeral mosses which colonise bare soil, growing and reproducing quickly while conditions are suitable. *Ephemerum minutissimum* is a tiny moss, locally scarce with fewer than twenty Northamptonshire records, found here for the second time at Pitsford. Even rarer is *Pleuridium subulatum*, listed for only two or three places in the county and a new record for the reserve. It is distinguished from the commoner *Pleuridium acuminatum* by having bud-like male branches in its leaf axils. *Pseudephemerum nitidum*, typical of pond margins; has been found occasionally at Pitsford. It too has very few county records.

Dicranella varia was new for Walgrave North, but this record is also significant for the whole site. It has been realised recently that *Dicranella howei* is widespread. It is extremely similar to *D. varia* and has often been confused with it. The material from Christies' Copse was checked carefully and is certainly true *Dicranella varia* in the strict sense.

Below: Additions to the bryophyte records for Walgrave North (Christies' Copse) and Holcot North-West for 2024. New species for the reserve are indicated by ★.

Walgrave North (Christies' Copse)	**Holcot North-West**
Bryum dichotomum	*Hypnum jutlandicum*
Bryum rubens	*Hypnum resupinatum*
Dicranella schreberiana	*Metzgeria violacea*
Dicranella varia s. str.	*Orthotrichum lyellii*
Ephemerum minutissimum	*Ulota crispa* s. str.
★ *Fossombronia wondraczekii*	
★ *Pleuridium subulatum*	
Pseudephemerum nitidum	
Tortula truncata	

In addition to the plants listed for Walgrave North, plants belonging to the genus *Weissia* were found, recognisable by their long leaves with inrolled edges. They were either *W. brachycarpa* or *W. controversa* but these were sterile, and mature capsules are needed for identification to species. All photographs courtesy of Rachel Carter unless otherwise stated.

Lichen
Rachel Carter

One of the study days based at the Lagoon Hide was devoted to the lichens of the Holcot North-West area. There were good examples of species already recorded for this section, and several more were added to the list. A rather fine oak tree, which had conveniently accessible branches, was particularly productive, and for the sake of a different substrate concrete posts on the periphery were also examined.

Above Left: Punctelia subrudecta, on oak.

Above Right: Melanelia subaurifera on oak.

Bottom Right: A fine specimen of the fruticose (bushy) lichen Ramalina fastigiata on the oak tree, new to the section.

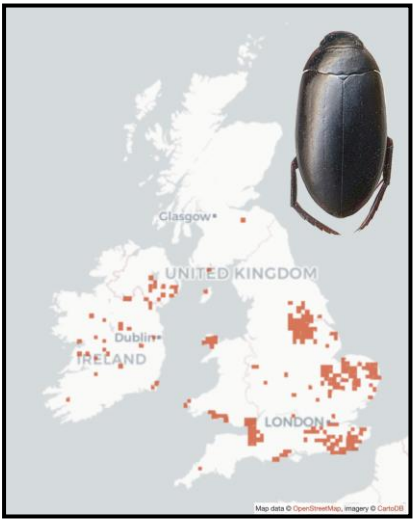
Species	Typical Substrate
Caloplaca citrina s.lat.	Rock, Ca
Cladonia fimbriata	Rotting Wood
Hypotrchyna afrorevoluta	Bark
Hyotrachyna revoluta	Bark
Lecanora campestris	Rock, Ca
Lecidella stigmatea	Rock, Ca
Ramalina fastigiata	Bark

Bottom Left: Additions to the lichen records for Holcot North-West made in 2024.

Aquatic Invertebrates
Kev Rowley

2024 has generated 242 records, 94 different species with 50 being water beetles, 16 water bugs and 28 water invertebrates. Four of these were new for the site, taking the overall site total to 193.

A new record this year was for *Rhantus grapii,* a plain black water beetle. There are quite a few in the *Ilybius/Agabus* group that look very similar, so it is always nice to identify this. It lives in shallow water amongst vegetation, dead leaves or mosses in stagnant water, often partly shaded. It has a restricted distribution in the three fenland areas of Kent, Norfolk and Somerset levels but also in Yorkshire and Anglesey. I expect this has made its way down the Nene Valley and is at the edge of its range here.



National distribution and photo of Rhantus grapii. © NBN Gateway.

The four new records added to the site list this year include *Rhantus grapii* above; Ruddy Darter that was recorded as a nymph rather than an adult, which is recorded frequently; a juvenile Perch, (not an invertebrate, but found while pond dipping), which we know is common around the site but not recorded dipping before and a Signal Crayfish (*Pacifastaceus*

leniusculus). This has been regularly recorded in the south half of the reservoir and is a favourite food of the overwintering Great Northern Diver – see Birds chapter, but this is the first time it has been officially recorded in the nature reserve. There had been possible sightings of Signal Crayfish before, but these were fleeting glimpses or usually half eaten specimens perhaps left by Otters or Herons.

Signal Crayfish. © Kev Rowley

So this year I obtained an Environment Agency license and started to explore possible locations. The traps were set during the year from the causeway all the way into and around Holcot Bay, however, they were only found once just in the lodge side corner of the causeway.

Signal Crayfish are an invasive species. They can not only displace the native White-clawed Crayfish, but also eat Frogs, Toads and many water invertebrates as well as cause significant damage to river banks by burrowing in to them for up to two metres, making them unstable. They do however form part of the food chain and are eaten by birds and mammals. It is illegal to catch them without a license and they must not be transported anywhere alive. The opportunity to reduce their distribution appears now to be missed as they are common across most of England.

There were three main recording efforts on site this year. John Showers and Simon Heywood continued with the Wildlife Trust Ecology Group monitoring of Walgrave Square Pond. I continued with the general recording across the whole site and also ran the Signal Crayfish trapping.

Overall on the site we have now recorded 193 aquatic invertebrate species over the last 11 years; 92 water beetles; 34 water bugs and 64 aquatic invertebrates. We are monitoring the designated species on site and seven of these have been recorded this year.

Species	Status *	Found 2024	Site comments	Habitat	Succession	Management
Agabus chalconatus (Beetle)	NS		Found in Christies' Copse.	In shallow ditches and pools in woods and on heaths, typically in wheel ruts.	Late	Create temporary wet woodland areas.
Aquarius paludum (Bug)	NS	✓	Boat Dock, Holcot Bay.	Large lakes and reservoirs.	Mid	Will expand in habitat.
Cercyon bifenestratus (Beetle)	NS		Recorded once from Holcot Bay.	Flooded and exposed substratum, usually sand or mud.	Early	Keep some bare margins around site.
Enochrus quadri-punctatus (Beetle)	NS		In flooded ephemeral areas at the bottom of the Walgrave Bay.	In open shallow, often clay bottomed pools.	Early	Create temporary wet areas.
Helophorus dorsalis (Beetle)	NT		Recorded once from a new flush in Walgrave Bay.	Small woodland pools, wheel ruts and seeps, often on clay.	Early	Retain wheel ruts and poached areas.
Helophorus nanus (Beetle)	NS	✓	Found in most features.	In Fen conditions amongst grasses and moss.	Early	Create temporary wet areas, maintain Phragmites.
Helophorus strigifrons (Beetle)	NS	✓	Recorded from most features.	Temporary marshes with rush and sedge litter.	Early	Create temporary wet areas.
Hydaticus transversalis (Beetle)	NS		1 found in Walgrave Star Scrape.	Rich fen in lowland ponds and drainage ditches, exposed sites.	Early/ mid	Create exposed and early successional sites.
Hydrochus crenatus (Beetle)	NT	✓	One found in Scaldwell Stream	Fen species associated with fluctuating meres with much moss in their drawdown areas	Early/ Mid	Encourage mossy areas on margins.

Species	Status *	Found 2024	Site comments	Habitat	Succession	Management
Hydrochus elongatus (Beetle)	NT	✓	Healthy population in Walgrave Bay and Holcot ponds.	In base rich fens, often reedbeds in lowland England.	Mid	Any removal of sedge beds in ponds do on a rotational basis, leave them present and leave on banks.
Limnebius papposus (Beetle)	NT		Found next to Scaldwell Stream	Amongst rotting vegetation in shallow water. Fens.	Late	Leave Willow Carr around site.
Microvelia pygmaea (Bug)	NS	✓	Usually found in Spring Pond	Amongst emergent vegetation and litter around still and flowing water.	Late	Leave some shade over ponds.
Rhantus frontalis (Beetle)	NS	✓	Recorded regularly from the ponds.	Lowland pools amongst vegetation over exposed substrata in particular sand.	Early	Manage vegetation on rotation.

** NT= Near Threatened; NS= Nationally Scarce*

Walgrave Square Pond, where many of the notable species have been found over the years. It is one of the best ponds in the county for its diverse species community. © Kev Rowley

Diptera
John Showers

500th Species of Fly Found at Pitsford Water NR

True flies (Order – Diptera) have been recorded at Pitsford Water Nature Reserve since about the year 2000. In 2024, we surpassed 500 species, with the total now standing at 502. Although this is an impressive number, it should be born in mind that there are over 7100 species of true fly in the UK. Along with the Hymenoptera – bees, wasps and ants – the Diptera are the most species-rich order of animals in the UK. Many fly families are tricky to identify to the species level because of lack of readily available identification keys, need to dissect genitalia or need for high powered microscopes. However, many families can be tackled with a low powered microscope or a hand lens and the use of a suitable key.

Apart from the interest in recording as many species as possible at Pitsford, flies are worth recording as they are important contributors to ecosystems and many are very good habitat quality indicators. Fly species occupy every habitat except open sea in the UK. Like the other more advanced insects (Coleoptera, Lepidoptera and Hymenoptera), they undergo a complete metamorphosis during their life-cycle, going from egg to larva to pupa to adult. This cycle often involves different habitat needs at different stages, so a good diversity of flies can indicate a good diversity of habitats. Many fly species have larvae that live in fresh water, others live in plant material, sometimes causing leaf mines or galls. Some species live in rotting wood and many of these can be good indicators of continuity of mature tree cover. Many live in rotting plant or animal matter, recycling it for nutrients for plants and fungi to use. A small group, the blowflies (greenbottles and bluebottles) are important to forensic scientists as they can be the best indicator of time of death of people who have been dead for

more than a few days. There are also some predatory or parasitic flies whose larvae feed on living animals, mainly arthropods, but some higher animals too. The larvae of many species are important in the control of aphids. There are a few fly species whose adult stage feed on the blood of birds and mammals. No doubt some of you will have come across some of these on a warm Summer's day at Pitsford!

Chrysops relictus, one of the bloodsucking species of fly. Very common at Pitsford and (not affectionately) known as the 'Green Eyed Monster' by staff and volunteers at Pitsford. © Dave Jackson.

Another important ecosystem function carried out by many flies, particularly hoverflies, is pollination. It is not just bees that provide this service and in some cases hoverflies can be more important than bees. For example, studies at Bristol University have shown that late-Summer soft fruit are almost exclusively pollinated by hoverflies of the Eristalini tribe.

Most dipterists, as fly enthusiasts are called, start with hoverflies, family Syrphidae. With over 280 species in the UK

they are diverse enough to be interesting but not so many species that they are overwhelming. They are also well covered by identification guides. So far we have found 104 species at Pitsford Water Nature Reserve.

Another diverse group is the Craneflies – families Tipulidae, Limoniidae, Cylindrotomidae and Pediciidae. So far we have recorded 69 species from these families. Many craneflies are attracted to light at dusk or dawn and the Pitsford moth traps have caught a number of these species.

I hope the above gives some insight into why we record flies. If you see someone walking around the reserve swishing a net, they almost certainly are not catching butterflies but looking for the less well-studied invertebrates, like flies. Do have a word with us if you come across us on the reserve. We don't bite – but maybe our catch might!

Article written for the Pitsford Winter 2024 Enewsletter by John Showers, County Recorder for Diptera.

Summary

Again the Spring was characterised by low numbers of species and individuals, probably because of the wet winter and cool, damp May. This would have affected overwintering success, particularly for those species whose larvae develop in the soil. This seems to be becoming a pattern in recent years.

In all, 98 species were recorded with 16 being new to the reserve. This brings the total Diptera species count to 502, a notable milestone for Diptera recording at Pitsford Water Nature Reserve.

New Species for the Site

Two new craneflies were added to the list. The Bottle-brush Splay, *Trimicra pilipes,* gets its name from the long hairs on the male's front and mid tibiae. It is associated with areas that are submerged in winter then exposed but still damp in Summer.

This was caught in one of the moth traps and is a species that is hard to find by sweeping but comes fairly readily to light. The second cranefly was the Pond Strong-mark Foldwing, *Ptychoptera contaminata.* This is a common and widespread species so it is rather surprising that we have not recorded it here before.

Four new species of hoverfly were added, bringing the total hoverfly species count to 104. *Chrysotoxum cautum* is associated with grasslands and woodland edges. It is a southern species, extending its range into Lincolnshire. *Criorhina ranunculi* is an early spring species. It breeds in rotting tree roots. *Meligramma euchromum* is a Nationally Scarce species associated with woodland, where it often basks on sunlit leaves. It is a first record for Northamptonshire. *Platycheirus fulviventris* is a local species associated with wetlands, particularly with Reed Sweet-grass *Glyceria maxima.* Its larvae feed on aphids associated with this and other wetland plants.

Pherbellia dorsata is a snail-killing fly whose larvae parasitise the water snail *Planorbis planorbis.* It prefers sites with fluctuating water levels.

Two new Agromyzids were recorded from larval mines. *Agromyza anthracina* mines the leaves of Stinging Nettles *Urtica dioica. Phytobia cersiferae* mines the young stems of Blackthorn *Prunus spinosa.* This fly was thought to be extinct in the UK until Barry Warrinton, the National Recorder for Agromyzidae, read a European scientific paper describing the larval habitat of the fly. He then collected hundreds of blackthorn stems in South Yorkshire and used them to rear the adult fly. He then published a paper[1] describing how to recognise the larval feeding tracks. Several blackthorn stems were examined from the reserve and the tracks were observed on some and photos were confirmed by Barry.

Left: Blackthorn stem mine caused by the larva of the Agromyzid fly Phytobia cerasiferae , a recently rediscovered species in Britain. The dark pinkish marks in the cut wood show where the larva moved below the bark of an earlier year's growth. © John Showers.

The Timothy Fly, *Nanna tibiella,* has larvae which feed in the flower heads of grasses. It is fairly widespread in the East Midlands and East Anglia.

The other new species are ones we would expect to find at Pitsford.

My thanks go to Kev Rowley and Lisa Rowley for their records and Bob Gill and Mischa Cross for collection of diptera from the moth traps.

John Showers, County Recorder for Diptera.

References

1. Warrington, B.P. 2023. *Phytobia cerasiferae* (Kangas) (Diptera Agromyzidae) rediscovered in Great Britain, with notes on its rearing and larval behaviour. Dipterists Digest 2023 Vol. 30 No. 2, 234-245.

All the species recorded in 2024 at Pitsford Water Nature Reserve. New species for the site are indicated with ★.

NEMATOCERA		
TIPULIDAE (Long-palped Craneflies)		
	Nephrotoma appendiculata	(Pierre, 1919)
	Nephrotoma flavescens	(Linnaeus, 1758)
	Nephrotoma quadrifaria	(Meigen, 1824)
	Tipula lunata	Linnaeus, 1758
	Tipula varipennis	Meigen, 1818
	Tipula oleracea	Linnaeus, 1758
PEDICIIDAE (Hairy-eyed Craneflies)		
	Tricyphona immaculata	(Meigen, 1804)
LIMONIIDAE (Short-palped Craneflies)		
CHIONEINAE		
	Symplecta stictica	(Meigen, 1818)
★	*Trimicra pilipes*	(Fabricius, 1787)
LIMNOPHILINAE		
	Philidorea ferruginea	(Meigen, 1818)
LIMONIINAE		
	Dicranomyia mitis	(Meigen, 1830)
	Limonia nubeculosa	Meigen, 1804)
	Limonia phragmitidis	(Schrank, 1781)
	Rhipidia maculata	(Meigen, 1818)
BIBIONIDAE (St Mark's and Fever Flies)		
	Bibio johannis	(Linnaeus, 1767)
★	*Bibio leucopterus*	(Meigen, 1804)
	Bibio marci	Linnaeus, 1758)
PTYCHO-PTERIDAE (Fold-winged Craneflies)		
★	*Ptychoptera contaminata*	(Linnaeus, 1758)
BRACHYCERA		
TABANIDAE (Horse and Deer Flies)		
	Chrysops relictus	Meigen, 1820
	Haematopota pluvialis	(Linnaeus, 1758)

STRATIOMYIDAE (Soldier Flies)		
SARGINAE		
	Chloromyia formosa	(Scopoli, 1763)
BOMBYLIIDAE (Bee Flies)		
	Bombylius major	Linnaeus, 1758)
ASILIDAE (Robber Flies)		
	Leptogaster cylindrica	(De Geer, 1776)
	Dioctria linearis	(fabricius, 1787)
EMPIDIDAE (Dance Flies)		
EMPIDINAE		
	Empis tessellata	Fabricius, 1794
	Empis livida	Fabricius, 1794
★	*Empis stercorea*	Linnaeus, 1761
	Empis scutellata	Curtis, 1835
★	*Rhamphomyia erythrophthalma*	Meigen, 1830
DOLICHOPOD-IDAE (Long-legged Flies)		
DIAPHORINAE		
	Argyra leucocephala	(Meigen, 1824)
SYRPHIDAE (Hoverflies)		
	Baccha elongata	(Fabricius,1775)
	Cheilosia bergenstammi	Becker, 1894
	Cheilosia illustrata	(Harris,[1780])
	Cheilosia proxima	(Zetterstedt, 1843)
	Cheilosia vernalis	(Fallén, 1817)
	Chrysogaster solstitialis	(Fallén, 1817)
★	*Chrysotoxum cautum*	(Harris, [1776])
★	*Criorhina ranunculi*	(Panzer, [1804])
	Dasysyrphus tricinctus	(Fallén, 1817)
	Epistrophe eligans	(Harris, [1780])
	Episyrphus balteatus	(De Geer, 1776)

	Eristalinus sepulchralis	(Linnaeus, 1758)
	Eristalis arbustorum	(Linnaeus, 1758)
	Eristalis pertinax	(Scopoli, 1763)
	Eristalis tenax	(Linnaeus, 1758)
	Eupeodes luniger	(Meigen, 1822)
	Helophilus pendulus	(Linnaeus, 1758)
	Leucozona lucorum	(Linnaeus, 1758)
	Melangyna cincta	(Fallén, 1817)
	Melangyna umbellatarum	(Fabricius, 1794)
	Melanostoma mellinum	(Linnaeus, 1758)
	Melanostoma scalare	(Fabricius, 1794)
★	*Meligramma euchromum*	(Kowarz, 1885)
	Merodon equestris	(Fabricius, 1794)
	Myathropa florea	(Linnaeus, 1758)
	Pipiza noctiluca	Linnaeus, 1758
	Pipizella viduata	(Linnaeus, 1758)
	Platycheirus albimanus	(Fabricius, 1781)
	Platycheirus angustatus	(Zetterstedt, 1843)
	Platycheirus clypeatus	(Meigen, 1822)
★	*Platycheirus fulviventris*	(Macquart, 1829)
	Platycheirus scutatus	(Meigen, 1822)
	Rhingia campestris	Meigen, 1822
	Sphaerophoria scripta	(Linnaeus, 1758)
	Syrphus ribesii	(Linnaeus, 1758)
	Syrphus vitripennis	Meigen, 1822
	Volucella bombylans	(Linnaeus, 1758)
	Volucella inanis	(Linnaeus, 1758)
	Volucella pellucens	(Linnaeus, 1758)
	Volucella zonaria	(Poda, 1761)
	Xanthogramma pedissequum	(Harris, [1776])
	Xylota segnis	(linnaeus, 1758)

CONOPIDAE (Wasp-grabbers)

	Sicus ferrugineus	(Linnaeus, 1761)

PALLOPTERIDAE

	Palloptera scutellata	(Macquart, 1835)

TEPHRITIDAE (Gall Flies)

	Urophora cardui	(Linnaeus, 1758)
	Urophora stylata	(Fabricius, 1775)
	Terellia ruficauda	(Fabricius, 1794)

SCIOMYZIDAE (Snail-killing Flies)

★	*Pherbellia dorsata*	(Zetterstedt, 1846)
	Tetanocera hyalipennis	Von Roser, 1840

AGROMYZIDAE (Leaf-mining Flies)

★	*Agromyza anthracina*	Meigen, 1830)
	Amauromyza verbasci	(Bouché, 1847)
★	*Phytobia cerasiferae*	(Kangas, 1955)
	Phytomyza aquilegiae	Hardy, 1849
	Phytomyza ilicis	Curtis, 1846
	Phytomyza miniscula	Goureau, 1851

OPOMYZIDAE (Shoot Flies)

	Opomyza florum	(Fabricius, 1794)

HELEOMYZIDAE

★	*Suillia variegata*	(Loew, 1862)

DROSOPHILIDAE (Vinegar Flies)

	Drosophila suzukii	(Matsumura, 1931)

SCATHOPHAGIDAE (Dung Flies)

	Cleigastra apicalis	(Meigen, 1826)
★	*Nanna tibiella*	(Zetterstedt, [1838])
	Scathophaga furcata	(Say, 1823)
	Scathophaga stercoraria	Linnaeus, 1758)

ANTHOMYIIDAE

★	*Botanophila fugax*	(Meigen, 1826)

MUSCIDAE (House Flies etc)

	Lispe tentacula	(De Geer, 1776)
	Hydrotaea cyrtoneurina	(Zetterstedt, 1845)
★	*Muscina levida*	(Harris, [1780])
	Phaonia subventa	(Harris, [1780])

POLLENIIDAE (Cluster Flies)

	Pollenia griseotomentosa	(Jacentkovský, 1944)

Fungi
Kev Rowley

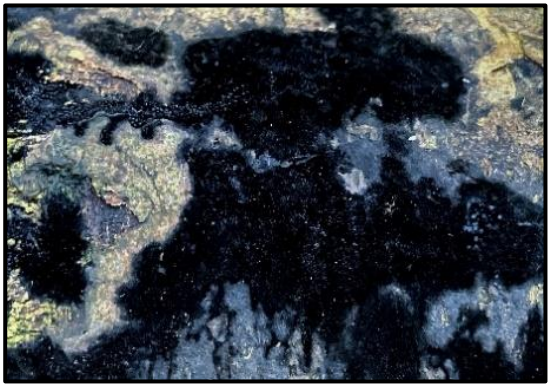
Jeff Blincow surveyed the Holcot Bay, Walgrave Bay and The Meadows and recorded 74 species, 17 of which were new for the site.

Of the new species, *Bjerkandera formosa* (Big Smokey Polypore) causes a white rot in many hardwoods and *Calocera pallidospathulata* (Pale Stagshorn) was only first described from Yorkshire in 1974. It is also a wood-rotting species, typically found on logs and dead wood of both broadleaved trees and conifers.

Above: Bjerkandera formosa - Big Smokey Polypore.

Right: Calocera pallidospathulata - Pale Stagshorn.

Calocera viscosa (Yellow Stagshorn) is a much brighter golden yellow branched Stagshorn, and grows exclusively on logs and dead wood of conifers and is very common around the conifer blocks.



Above: Calocera viscosa - Yellow Stagshorn.

Left: Chaetosphaerella phaeostroma

Chaetosphaerella phaeostroma looks like a black “caviar” that grow crowded together on rotten wood from deciduous trees, including that of Beech, Grey Willow, Sycamore, Field Maple and Ash.

Flammulina velutipes (Velvet Shank) is an edible fungi (although easily confused with other species) that rots dead or dying Elm, as well as Ash, Beech and Oak.

Right: Flammulina velutipes - Velvet Shank.

Helerobasidion annosum (Root Rot) is a common and widespread bracket fungus that attacks the roots, butts and stems (trunks) of conifer trees and can be damaging for the

forestry industry. However, at Pitsford it will increase the saproxylic invertebrate species.

Helerobasidion annosum - Root Rot.

Inonotus hispidus (Shaggy Bracket) is quite rare in the UK and appears on dead or dying broad-leaf trees, notably Ash and Apple. It can also occasionally be found on Poplar, Beech, Oak and Sycamore.

Inonotus hispidus - Shaggy Bracket.

Mycena galeiculata (Common Bonnet) grows mostly in clusters on the well decayed stumps, chipping or logs of coniferous and deciduous trees.

Pluteus philibophorus (Wrinkled Shield) is a beautiful mushroom usually found singularly on fallen hardwood trunks and large branches that have been left to rot and gather moss for several years.

Puccinia glechomatis (Ground Ivy Rust) affects the stem, petiole or underside of the leaf veins causing yellow, brown or black swellings.

Top: Mycena galeiculata - Common Bonnet.

Middle: Pluteus philibophorus - Wrinkled Shield.

Bottom: Puccinia glechomatis - Ground Ivy Rust.

Micro Moths
Kev Rowley

This year 242 records from 69 species were recorded; two of which were new for the site. Most of these were from Bob Gill while he was checking the moth traps, with support from County Recorder for Moths, Mark Hammond for genitalia identification when required.

The two new species were *Orthotaenia undulana* (Dusky Marble), which is found in woodland, moors or dunes, and *Parornix scoticella*, which frequents gardens and woodlands in the south and higher ground in the north.

Orthotaenia undulana - Dusky Marble. © Bob Gill

Palpita vitrealis (Jasmine Moth) was very numerous this year, especially in September and October. It is a migrant species and will have travelled to the UK from Southern Europe. There is no evidence of it breeding here yet as it cannot survive through our winters.

Palpita vitrealis - Jasmine Moth. © Bob Gill

All species recorded at Pitsford Water Nature Reserve in 2024, in alphabetical order. New species are indicated with ★.

Scientific Name	Common Name	First Date
Acleris cristana	Tufted Button	15/02/2024
Acleris ferrugana		03/02/2024
Acleris forsskaleana	Maple Button	10/08/2024
Acleris literana		16/02/2024
Acleris sparsana	Ashy Button	29/11/2024
Agapeta hamana	Common Yellow Conch	22/06/2024
Agonopterix alstromeriana	Brown-spot Flat-body	16/02/2024
Agonopterix arenella	Brindled Flat-body	30/08/2024
Agriphila geniculea		30/08/2024
Agriphila straminella	Straw Grass-veneer	10/08/2024
Agriphila tristella	Common Grass-veneer	10/08/2024
Aleimma loeflingiana		22/06/2024
Anania coronata		22/06/2024
Anania hortulata	Small Magpie	10/04/2024
Anania perlucidalis	Fenland Pearl	27/06/2024
Ancylis badiana	Common Roller	25/06/2024
Aphomia sociella	Bee Moth	26/06/2024
Archips podana	Large Fruit-tree Tortrix	22/06/2024
Archips xylosteana	Varigated Golden Tortrix	25/06/2024
Blastobasis lacticolella	Wakely's Dowd	15/06/2024
Blastobasis adustella	Furness Dowd	10/08/2024
Catoptria falsella	Chequered Grass-veneer	10/08/2024
Celypha lacunana	Common Marble	14/06/2024
Celypha striana	Barred Marble	12/07/2024
Chrysoteuchia culmella	Garden Grass Veneer	14/06/2024
Coleophora peribenanderi		29/06/2024
Coleophora flavipennella		27/06/2024
Crassa unitella	Golden Brown Tubic	25/06/2024
Cydalima perspectalis	Box-tree Moth	13/07/2024
Cydia splendana	Marbled Piercer	25/08/2024
Dioryctria abietella		28/06/2024
Dipleurina lacustrata	Little Grey	25/06/2024
Diurnea fagella	March Tubic	08/03/2024
Emmelina monodactyla	Common Plume	29/11/2024
Endothenia quadrimaculana	Blotched Marble	29/06/2024
Epiphyas postvittana	Light Brown Apple Moth	10/08/2024
Eucosma cana	Hoary Belle	26/06/2024
Eudonia mercurella	Small Grey	07/06/2024
Euzophera pinguis		13/07/2024
Gypsonoma dealbana		25/06/2024
Hedya nubiferana	Marbled Orchard Tortrix	25/06/2024
Hedya salicella	White-backed Marble	26/06/2024
Helcystogramma rufescens	Orange Crest	10/08/2024
Hofmannophila pseudospretella	Brown House Moth	10/08/2024
Hypsopygia glaucinalis	Double-striped Tabby	29/06/2024

Scientific Name	Common Name	First Date
Mompha ochraceella		25/06/2024
Monopis weaverella	Carrion Moth	15/05/2024
Nemophora degeerella	Yellow-barred Long-horn	14/06/2024
Nomophila noctuella	Rush Veneer	30/08/2024
Notocelia uddmanniana	Bramble Shoot Moth	25/06/2024
Notocelia trimaculana		25/06/2024
★ *Orthotaenia undulata*	Dusky Marble	22/06/2024
Palpita vitrealis	Jasmine Moth	23/09/2024
Pammene aurita		10/08/2024
Pammene regiana		22/06/2024
Parapoynx stratiotata	Ringed China-mark	25/06/2024
★ *Parornix scoticella*		26/08/2024
Phycita roborella	Dotted Oak Knot-horn	29/06/2024
Pleuroptya ruralis	Mother Of Pearl	27/06/2024
Plutella xylostella	Diamond-back Moth	29/11/2024
Pterophorus pentadactyla	White Plume Moth	25/06/2024
Rhyacionia pinicolana		28/06/2024
Scoparia ambigualis		14/06/2024
Scythropia crataegella	Hawthorn Moth	26/06/2024
Tortricodes alternella		02/02/2024
Tortrix viridana	Green Oak Tortrix	14/06/2024
Udea ferrugalis	Rusty Dot Pearl	02/11/2024
Udea olivalis	Olive Pearl	25/06/2024
Yponomeuta evonymella	Bird Cherry Ermine	27/06/2024

Macro Moths
Mischa Cross

Summary
Erratum from 2023 report – Barred Umber was a new species for the site. This is classed as 'very local' in the county, mostly confined to the southern woodlands.

This year saw a yield of 5148; the third lowest yield since 2008, with 2016 and 2012 below it (in both data sets – see 2023 annual report for information on changes to moth data management). The summer moths were generally below average again, which has been a long-standing trend, but the autumn was also poor and winter was around average. Only spring appeared to have reasonable numbers. Overall, approximately 40% of the moths recorded were close to their average, 40% were below their average and 20% were above it. The number of species recorded was below average with 265, where the average is 273, but four new species were recorded: Barred Rivulet, Cresent Dart, Cypress Carpet and Kent Black Arches.

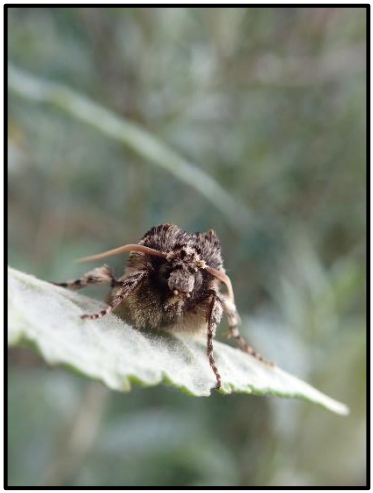
Crescent Dart. © Dave Jackson

Winter 2023/24

The winter was very wet and mild for the most part, with only a couple of short cold snaps. Seventeen species were recorded over the winter season, which is average for the site and a yield of 591 was recorded. This is slightly above the average of 468 for the season. The Red Green Carpet, Pale Brindled Beauty and November Moth are all continuing to do well, as is the December Moth after its numbers slumped for a few years.

Spring

The wet weather continued into spring, along with cool temperatures both day and night. Of the 21 spring species recorded this year, approximately 29% of the species were above their average, 57% were average and 14% were below their average. The overall yield for the season – 757, was above average – 651.



Frosted Green © Mischa Cross

The Oak and Brindled Beauties still appear to be doing well, with strongly increasing trends in recent years and three Frosted Green were seen, which is the highest for the species on site, with only sporadic singletons in 2023, 2016, 2013 and 2011.

The newly establishing population of Lunar Marbled Brown is still on the increase from an occasional single moth to three in 2022, six in 2023 and 30 this year. Another rarely recorded moth for the site this spring was the Mullein. It was recorded most years pre 2008 in very low numbers, but hasn't been recorded recently since 2012. It's most likely the revival of the garden at the lodge that has bought the moth back to the traps

as the Verbascums were decimated by the larvae – but they did all survive and flower again – nature knows best!

None of the rest of the species were drastically down, but the majority of the common species were generally on the lower side of average than in recent years.

Summer

Following on from a poor spring, the summer was cool and still fairly wet, only drying out around the site by mid-summer. The moths did not have a great summer either. Again, the summer season was well below average and the lowest season total on record! Both the old and the new data sets recorded the lowest summer count by a large margin. Only 20% of the summer species were recorded in above average numbers, 40% were around average and 40% were below average. There is no one clear cause for the summer species to be fairing the worst – there are so many factors against them – light pollution, pesticides, habitat loss and fragmentation, intensive agriculture, climate change, extremes of weather and unpredictable seasons. The mild and wet winters could be having a significant impact on the summer species as it affects their overwintering stages – they are more likely to be subject to predation, fungal disease, drowning etc.

Double Lobed
© Mischa Cross

The shockingly low yields of species that were once some of our most abundant on site is concerning. Many species also had short flight seasons with some weeks where they were not trapped at all. Most notable has been the crash in numbers for the Brown Rustic, Buff Arches, Heart and Dart, Rustic Shoulder-knot and Shoulder-striped Wainscot. Dingy Shears has been absent from the traps now for

the second consecutive year. Bright-line Brown-eye, Double Lobed, Flame, Middle-barred Minor, Silver Ground Carpet, Small Fan-footed Wave and Smoky Wainscot have all recorded their lowest yields this summer.

Some positive records were made from the summer trapping. A new species for the site was recorded with the Kent Black Arches. This is a rare species in the county and was only first recorded locally in 2008. Also, an unusual Crescent Dart was trapped. This is only the second record for the county, the first being from 1945. It is usually a coastal species but around the same time as the Pitsford moth, one turned up in Leicestershire, indicating a possible small dispersal event.

Other 'local' species were recorded including the Barred Rivulet, not seen on site since 2002; Blue-bordered Carpet, which has been seen in the last couple of years; and Latticed Heath, which has only previously been seen on site in 2017 and 2023. The Lackey moth is fairly common in the county, but has not been recorded here since 2009.

Lackey © Mischa Cross

Some species that appear to be increasing nationally and have appeared to be establishing populations on site are still doing well, including Scarlet Tiger and Treble Brown-spot.

Autumn

Autumn has been a contradictory season this year. Overall, the yield was the second lowest with 2371, where the previous lowest was in 2012 with 1542. The species count was slightly above average with 88 species, where the average is 85. The

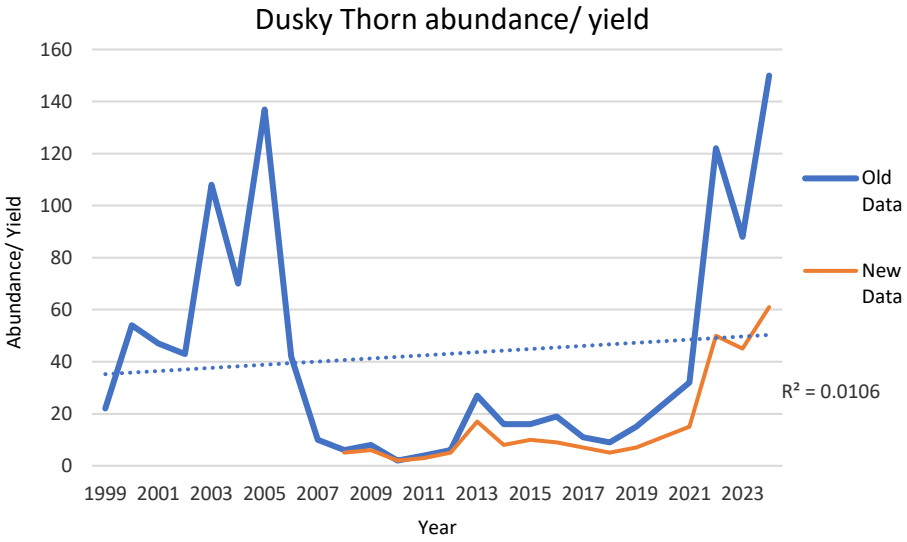
common species were very low in abundance, but new and unusual species were up. Approximately 22% of the autumn species were above their average, 36% were below and 37% were close to their average.

Of the common species, the Barred Sallow, Rosy Rustic, Sallow and Yellow Line Quaker have all recorded their lowest yields. Beaded Chestnut, which has been increasing in recent years, showed a large drop this year and the Small Angleshades has been notable in its absence from the traps since 2019.

Delicate © Mischa Cross

The newly established Dewick's Plusia was recorded again this year, although not in the numbers that it was recorded last year. The Least Carpet, Scarce Umber and White Point are still showing signs of increasing their populations on site. The September Thorn was recorded again this year, having only been recorded previously in 2006, and 2023. A new species was recorded; Cypress Carpet, which is rare in the county having been first recorded in the UK in 1985 and first in the county in 2017. The Delicate had a very good migrant year across the county and was reflected in our traps with a yield of eight, having only previously been recorded before in 2023, 2021 and 2006.

A species that is showing signs of a very interesting comeback is the Dusky Thorn. Overall, the trend (r^2 value) calculates that the population is stable, however, the historical data shows a severe crash after 2006. Several species showed interesting crashes or peaks after 2006 (Derrick Kilsby Stats.) but few appear to have recovered since then. Some have stabilised at a much lower level than pre-2006, and some have not recovered at all. This is very unusual to have eventually recovered to a greater extent than pre-2006.



Graph showing the abundance (old data) and yield (new data for comparison of trends) of the Dusky Thorn. Overall, the trend line shows a stable population on site.

Dusky Thorn. © Mischa Cross

The species recorded at Pitsford Water Nature Reserve in 2024 with the: 2024 total for the county compared as a % difference with the average for the county (2015-2023) and the 2024 yield for Pitsford, compared as a % difference with the average for Pitsford (2015-2023). New species are indicated by ★.

					Diff% 2024 v Av	
Common Name	**County Av 2015-23**	**Pitsford Av 2015-23**	**County total 2024**	**Pitsford Yield 2024**	**County**	**Pitsford**
Alder Moth	-	-	-	2	-	-
Angle Shades	392.4	33.6	391	41	99.6	119.0
★ Barred Rivulet	-	-	-	1	-	-
Barred Sallow	163.6	34.0	57	8	34.9	23.5
Barred Straw	133.8	9.1	90	7	67.3	76.7
Beaded Chestnut	615.4	57.9	154	13	25.0	22.5
Beautiful Golden Y	-	-	-	1	-	-
Beautiful Hook-tip	162.8	7.1	105	3	64.5	42.1
Black Arches	574.9	28.3	510	41	88.7	145.1
Black Rustic	371.4	13.6	291	16	78.3	117.4
Blair's Shoulder-knot	72.2	5.5	57	4	78.9	72.7
Blood-vein	205.9	16.3	102	7	49.5	43.1
Blue-bordered Carpet	17.1	0.3	65	3	379.9	1200.0
Bordered Beauty	-	-	-	3	-	-
Brick	68.1	16.6	18	5	26.4	30.1
Bright-line Brown-eye	424.2	19.6	222	9	52.3	45.9
Brimstone Moth	1649.2	83.5	1910	88	115.8	105.4
Brindled Beauty	172.9	6.8	582	21	336.6	311.1
Brindled Green	60.6	6.5	48	6	79.3	92.3
Brindled Pug	238.0	5.1	372	8	156.3	156.1
Broad-bordered Yellow Underwing	403.9	34.9	199	25	49.3	71.7
Brown Rustic	528.4	59.8	204	20	38.6	33.5
Brown-line Bright-eye	483.2	14.8	131	10	27.1	67.8
Brown-tail	57.8	1.1	39	1	67.5	88.9
Buff Arches	-	-	-	4	-	-
Buff Ermine	847.4	22.0	618	15	72.9	68.2
Buff Footman	167.3	33.0	34	7	20.3	21.2
Buff-tip	493.2	24.6	260	20	52.7	81.2
Bulrush Wainscot	8.0	0.9	6	1	75.0	114.3
Burnished Brass	264.0	23.6	196	18	74.2	76.2
Campion	-	-	-	1	-	-
Canary-shouldered Thorn	102.0	10.4	199	10	195.1	96.4
Centre-barred Sallow	321.9	16.1	309	10	96.0	62.0
Chestnut	511.1	143.8	746	7	146.0	4.9
Chinese Character	136.0	9.5	156	14	114.7	147.4
Chocolate-tip	-	-	-	2	-	-
Cinnabar	350.6	9.3	375	1	107.0	10.8
Clay	251.7	7.9	36	1	14.3	12.7
Clifden Nonpareil	37.8	2.9	18	3	47.6	104.3

Common Name	County Av 2015-23	Pitsford Av 2015-23	County total 2024	Pitsford Yield 2024	Diff% 2024 v Av County	Diff% 2024 v Av Pitsford
Cloaked Minor	245.0	10.4	138	4	56.3	38.6
Clouded Border	493.0	8.9	189	2	38.3	22.5
Clouded Brindle	41.3	3.1	51	1	123.4	32.0
Clouded Drab	834.7	75.8	1041	112	124.7	147.9
Clouded Silver	189.8	6.8	49	3	25.8	44.4
Clouded-bordered Brindle	42.6	5.1	14	3	32.9	58.5
Common Carpet	312.6	8.9	497	10	159.0	112.7
Common Emerald	131.7	6.5	237	10	180.0	153.8
Common Footman	2342.6	112.8	2327	133	99.3	118.0
Common Marbled Carpet	446.0	12.1	307	5	68.8	41.2
Common Pug	425.0	3.4	375	2	88.2	59.3
Common Quaker	2050.3	149.6	2283	126	111.3	84.2
Common Swift	935.3	14.8	438	10	46.8	67.8
Common Wainscot	4172.9	195.4	2768	109	66.3	55.8
Common Wave	110.2	8.9	66	2	59.9	22.5
Common White Wave	183.2	4.0	131	2	71.5	50.0
Common/Lesser Common Rustic agg.	2525.4	142.9	2345	92	92.9	64.4
Copper Underwing	191.1	28.1	79	27	41.3	96.0
Coronet	378.9	15.3	202	10	53.3	65.6
Coxcomb Prominent	164.0	4.4	120	5	73.2	114.3
Crescent	28.8	6.8	10	1	34.7	14.8
★ Crescent Dart	-	-	-	1	-	-
★ Cypress Carpet	-	-	-	1	-	-
Dark Arches	3303.1	149.3	2726	170	82.5	113.9
Dark Chestnut	29.2	6.5	13	2	44.5	30.8
Dark Spectacle	8.5	0.4	53	2	623.5	533.3
Dark Sword-grass	33.0	6.3	27	5	81.8	80.0
Dark Umber	31.2	0.3	31	1	99.3	400.0
Dark/Grey Dagger agg.	129.1	1.5	102	5	79.0	333.3
December Moth	293.4	63.6	284	32	96.8	48.7
Deep Brown Dart	-	-	-	8	-	-
Delicate	10.4	0.4	122	8	1173.1	2133.3
Dewick's Plusia	19.2	1.3	8	1	41.7	80.0
Dingy Footman	895.2	56.9	1261	61	140.9	107.3
Dot Moth	-	-	-	1	-	-
Dotted Border	172.1	18.1	86	17	50.0	93.8
Double Lobed	38.2	12.5	3	2	7.8	16.0
Double Square-spot	496.2	63.4	167	20	33.7	31.6
Double-striped Pug	447.9	5.1	313	3	69.9	58.5
Drinker	295.0	8.0	208	6	70.5	75.0
Dun-bar	1058.1	117.0	631	63	59.6	53.8
Dusky Sallow	112.6	12.8	104	16	92.4	125.5
Dusky Thorn	351.8	18.5	885	61	251.6	329.7

Common Name	County Av 2015-23	Pitsford Av 2015-23	County total 2024	Pitsford Yield 2024	Diff% 2024 v Av	
					County	Pitsford
Dwarf Cream Wave	115.8	1.9	116	4	100.2	213.3
Early Thorn	181.8	10.9	126	11	69.3	101.1
Elephant Hawk-moth	713.3	23.8	750	20	105.1	84.2
Engrailed	315.7	1.0	119	1	37.7	100.0
Eyed Hawk-moth	51.9	9.6	46	6	88.7	62.3
Fan-foot	-	-	-	1	-	-
Feathered Gothic	62.3	1.4	17	1	27.3	72.7
Feathered Thorn	202.9	37.0	1066	30	525.4	81.1
Figure of Eighty	38.7	3.3	21	2	54.3	61.5
Flame	379.3	12.3	74	3	19.5	24.5
Flame Carpet	34.8	3.1	44	2	126.5	64.0
Flame Shoulder	1420.3	140.3	1051	60	74.0	42.8
Flounced Rustic	1887.2	119.3	1856	56	98.3	47.0
Four-dotted Footman	97.8	2.3	89	1	91.0	44.4
Frosted Green	49.9	0.3	223	3	447.0	1200.0
Frosted Orange	50.1	5.9	54	7	107.8	119.1
Garden Carpet	390.1	1.9	353	2	90.5	106.7
Ghost Moth	35.2	6.8	10	2	28.4	29.6
Green Carpet	704.0	29.1	1435	37	203.8	127.0
Green Pug	176.4	3.5	160	3	90.7	85.7
Green Silver-lines	-	-	-	4	-	-
Green-brindled Crescent	214.4	18.4	280	13	130.6	70.7
Grey Pine Carpet	78.6	17.4	85	14	108.2	80.6
Grey Pug	-	-	-	1	-	-
Heart and Club	511.0	7.6	646	5	126.4	65.6
Heart and Dart	5655.1	87.5	1823	18	32.2	20.6
Hebrew Character	1898.9	136.9	2032	135	107.0	98.6
Herald	50.1	6.0	43	10	85.8	166.7
Ingrailed Clay	284.4	30.5	100	17	35.2	55.7
Iron Prominent	136.4	12.0	125	13	91.6	108.3
July Highflyer	614.8	12.0	180	6	29.3	50.0
★ Kent Black Arches	-	-	-	3	-	-
Knot Grass	66.3	4.5	48	3	72.4	66.7
Lackey	-	-	-	1	-	-
Large Nutmeg	353.3	9.4	153	3	43.3	32.0
Large Twin-spot Carpet	-	-	-	1	-	-
Large Wainscot	35.4	4.8	10	4	28.2	84.2
Large Yellow Underwing	9908.6	558.9	9590	502	96.8	89.8
Latticed Heath	44.1	0.3	110	1	249.4	400.0
Least Black Arches	41.9	5.9	62	2	148.0	34.0
Least Carpet	424.3	5.8	896	20	211.2	347.8
Least Yellow Underwing	98.1	6.0	32	4	32.6	66.7
Leopard Moth	54.1	3.1	57	1	105.3	32.0
Lesser Broad-bordered Yellow Underwing	1599.2	64.3	1257	40	78.6	62.3

Common Name	County Av 2015-23	Pitsford Av 2015-23	County total 2024	Pitsford Yield 2024	Diff% 2024 v Av	
					County	Pitsford
Lesser Swallow Prominent	206.8	9.3	131	11	63.4	118.9
Lesser Yellow Underwing	1578.4	66.9	1015	37	64.3	55.3
Light Arches	191.2	14.6	114	10	59.6	68.4
Light Emerald	902.6	46.8	1431	44	158.5	94.1
Lime Hawk-moth	58.9	4.5	112	6	190.2	133.3
Lime-speck Pug	237.0	6.6	78	6	32.9	90.6
Lunar Marbled Brown	55.4	1.5	216	30	389.6	2000.0
Lunar Underwing	2839.1	182.3	1776	94	62.6	51.6
Lychnis	25.3	0.8	15	2	59.2	266.7
Magpie	-	-	-	3	-	-
Maiden's Blush	143.6	7.9	140	7	97.5	88.9
Maple Prominent	14.3	4.9	32	4	223.3	82.1
Marbled Beauty	427.9	4.3	357	2	83.4	47.1
Marbled Minor agg.	972.9	59.6	568	33	58.4	55.3
Marbled White Spot	123.4	2.4	119	3	96.4	126.3
March Moth	115.3	17.0	99	18	85.8	105.9
Merveille du Jour	90.4	14.4	106	11	117.2	76.5
Middle-barred Minor	370.9	55.9	84	12	22.6	21.5
Mottled Beauty	589.8	19.0	393	4	66.6	21.1
Mottled Rustic	319.9	21.4	148	7	46.3	32.7
Mottled Umber	260.0	76.1	514	52	197.7	35.5
Mouse Moth	157.0	4.4	42	1	26.8	22.9
Mullein	-	-	-	1	-	-
Muslin Footman	-	-	-	1	-	-
Muslin Moth	261.6	20.0	370	20	141.5	100.0
November Moth agg.	592.3	101.5	1409	69	237.9	68.0
Nutmeg	44.9	1.9	14	1	31.2	53.3
Oak Beauty	136.0	22.9	253	40	186.0	174.9
Oak Hook-tip	31.3	1.9	13	5	41.5	266.7
Oak Processionary	-	-	-	1	-	-
Oak-tree Pug	-	-	-	1	-	-
Olive	-	-	-	1	-	-
Orange Footman	509.9	43.0	346	21	67.9	48.8
Orange Sallow	25.9	1.4	37	1	142.9	72.7
Orange Swift	286.1	6.1	255	5	89.1	81.6
Pale Brindled Beauty	-	-	-	94	-	-
Pale Eggar	95.3	1.6	152	2	159.4	123.1
Pale Mottled Willow	269.4	2.1	263	3	97.6	141.2
Pale Prominent	170.8	11.9	137	13	80.2	109.5
Pale Tussock	346.2	19.1	200	12	57.8	62.7
Peach Blossom	54.2	2.8	30	2	55.3	72.7
Pebble Hook-tip	159.1	6.6	88	4	55.3	60.4
Pebble Prominent	168.9	16.9	163	17	96.5	100.7
Peppered Moth	175.8	14.9	79	13	44.9	87.4

Common Name	County Av 2015-23	Pitsford Av 2015-23	County total 2024	Pitsford Yield 2024	Diff% 2024 v Av	
					County	Pitsford
Pine Beauty	23.2	8.9	13	6	56.0	67.6
Pine Carpet	2.9	0.1	2	1	70.0	800.0
Pine Hawk-moth	73.2	15.3	50	13	68.3	85.2
Pink-barred Sallow	60.0	10.4	11	1	18.3	9.6
Poplar Grey	94.2	2.8	44	1	46.7	36.4
Poplar Hawk-moth	558.4	56.1	583	43	104.4	76.6
Powdered Quaker	87.4	10.3	98	11	112.1	107.3
Privet Hawk-moth	165.9	15.5	136	6	82.0	38.7
Purple Thorn	114.8	6.4	150	3	130.7	47.1
Red Chestnut	50.8	4.8	74	7	145.7	147.4
Red Underwing	34.0	7.3	14	2	41.2	27.6
Red-Green Carpet	218.3	34.3	364	39	166.7	105.1
Red-line Quaker	126.0	23.5	72	11	57.1	46.8
Riband Wave	2210.1	41.9	2303	50	104.2	119.4
Rosy Rustic	183.6	24.8	98	10	53.4	40.4
Round-winged Muslin	52.2	10.5	8	3	15.3	28.6
Ruby Tiger	563.4	55.0	395	29	70.1	52.7
Rustic	600.4	29.0	242	22	40.3	75.9
Rustic Shoulder-knot	290.3	19.5	112	4	38.6	20.5
Sallow	154.9	22.4	50	5	32.3	22.3
Sallow Kitten	52.4	5.0	34	4	64.8	80.0
Sandy Carpet	9.0	0.6	8	1	88.9	160.0
Satellite	159.7	35.1	105	42	65.8	14.2
Scalloped Oak	192.1	4.9	139	4	72.4	82.1
Scarce Bordered Straw	-	-	-	2	-	-
Scarce Footman	719.9	36.1	487	40	67.6	110.7
Scarce Silver-lines	12.7	2.6	9	2	71.1	76.2
Scarce Umber	20.2	5.5	114	13	563.7	236.4
Scarlet Tiger	137.1	3.4	308	9	224.6	266.7
Scorched Wing	189.2	8.1	163	4	86.1	49.2
September Thorn	50.0	0.1	60	2	120.0	1600.0
Setaceous Hebrew Character	8348.0	404.4	5663	288	67.8	71.2
Shaded Broad-bar	156.8	2.3	165	2	105.2	88.9
Short-cloaked Moth	95.8	5.4	168	6	175.4	111.6
Shoulder Stripe	95.0	2.8	33	1	34.7	36.4
Shoulder-striped Wainscot	230.8	14.3	51	2	22.1	14.0
Shuttle-shaped Dart	1235.7	16.3	697	7	56.4	43.1
Silver Y	772.9	28.8	622	23	80.5	80.0
Silver-ground Carpet	189.8	9.3	143	3	75.4	32.4
Single-dotted Wave	370.6	28.8	527	27	142.2	93.9
Six-striped Rustic	219.4	12.5	56	5	25.5	40.0
Slender Brindle	59.3	9.4	20	4	33.7	42.7
Small Clouded Brindle	44.7	13.0	20	6	44.8	46.2

Common Name	County Av 2015-23	Pitsford Av 2015-23	County total 2024	Pitsford Yield 2024	Diff% 2024 v Av	
					County	Pitsford
Small Dotted Buff	318.6	2.4	341	1	107.0	42.1
Small Elephant Hawkmoth	58.3	1.4	47	1	80.6	72.7
Small Fan-footed Wave	503.2	30.8	351	10	69.8	32.5
Small Phoenix	162.4	5.5	146	2	89.9	36.4
Small Quaker	1439.3	126.4	2041	168	141.8	132.9
Small Rivulet	20.2	2.0	22	1	108.8	50.0
Small Scallop	26.8	2.6	7	1	26.1	38.1
Small Square-spot	631.9	81.5	750	62	118.7	76.1
Small Wainscot	79.6	4.5	156	1	196.1	22.2
Smoky Wainscot	1065.1	89.8	426	26	40.0	29.0
Snout	717.9	93.6	1017	120	141.7	128.2
Southern Wainscot	17.9	5.4	8	3	44.7	55.8
Spectacle	285.2	15.0	354	13	124.1	86.7
Sprawler	141.4	30.5	455	21	321.7	68.9
Spruce Carpet	86.3	19.9	91	21	105.4	105.7
Square-spot Rustic	2525.2	139.1	1884	60	74.6	43.1
Straw Dot	1225.7	113.3	1107	94	90.3	83.0
Straw Underwing	528.9	21.4	402	29	76.0	135.7
Swallow Prominent	239.4	13.5	173	13	72.3	96.3
Swallow-tailed Moth	233.1	7.8	257	9	110.2	116.1
Tawny Speckled Pug	-	-	-	1	-	-
Tawny-barred Angle	34.3	4.9	18	4	52.4	82.1
Treble Brown Spot	79.1	3.9	121	12	152.9	309.7
Treble Lines	1188.7	23.1	660	31	55.5	134.1
Tree-lichen Beauty	95.3	3.6	95	8	99.7	220.7
Turnip Moth	330.8	17.8	285	10	86.2	56.3
Twin-spotted Quaker	186.0	25.4	267	29	143.5	114.3
Uncertain	1753.2	110.5	1452	56	82.8	50.7
Vapourer	33.3	5.0	41	7	123.0	140.0
Vine's Rustic	1791.7	36.0	1919	18	107.1	50.0
Water Carpet	30.4	1.5	12	2	39.4	133.3
Waved Black	-	-	-	1	-	-
Waved Umber	70.9	3.0	78	1	110.0	33.3
White Ermine	422.0	43.1	330	22	78.2	51.0
White Satin	74.9	6.4	55	2	73.4	31.4
White-point	162.1	7.5	516	22	318.3	293.3
White-spotted Pug	40.8	1.3	48	2	117.7	160.0
Willow Beauty	1816.9	22.8	1861	24	102.4	105.5
Winter Moth	258.6	67.4	295	39	114.1	23.7
Yellow Horned	-	-	-	1	-	-
Yellow Shell	203.4	2.3	284	2	139.6	88.9
Yellow-barred Brindle	65.1	3.4	81	2	124.4	59.3
Yellow-line Quaker	230.6	57.6	67	19	29.1	31.2
Yellow-tail	456.8	36.3	506	46	110.8	126.9

Key

- If the 2024 value is equal to the average, then the percentage value will be 100
- If the 2024 value is greater than the average, then the percentage value will be greater than 100.
- If the 2024 value is lower than the average, then the percentage value will be less than 100.

<20%
20-40%
40-60%
60-80%
80-100%
>120%

Birds
Mischa Cross

There are two formal bird surveys that take place each year at Pitsford Water Nature Reserve: Common Bird Census (CBC) and Wetland Bird Survey (WeBS). This is as well as casual observations and ringing sessions and some small and large nest box checks on an ad-hoc basis. The results from all of these surveys and observations are used to monitor each bird species and the overall health of the bird populations on site.

Summary

Overall, not a great birding year, with few rarities and the common breeding and wintering species were pretty poor on the whole.

Methodologies

Nest Box Scheme – There were 110 small-holed nest boxes on the nature reserve plus 11 Treecreeper boxes that were checked weekly throughout the breeding season. This stopped in 2023. From then a smaller proportion of the boxes are checked when licenced volunteers are available. There are also 22 large nest boxes of various designs to suit different species including Tawny Owl, Barn Owl, Little Owl and Kestrels. When resources allow, these are checked approximately every third week by licenced bird ringers. Also included in the Pitsford Nest Box Scheme are the tern rafts and sand martin bank with 48 artificial holes, as they are also classed as artificial nesting sites.

Common Bird Census (CBC) – The survey method is based on the Common Bird Census (CBC) where six visits are made to the site between March and July and the surveyors walk the entire circuit of the reserve. Using one map per visit, every bird that is seen or heard is plotted in the relevant location.

The surveys start at dawn and are made alternately clockwise and anti-clockwise to avoid timing bias. After the six visits, each species is re-mapped individually to establish breeding territories. There will be some bias towards highly vocal and visible birds, but this remains consistent through the years and the numbers produced cannot be taken as definitive counts of territories or breeding success, but used as a valuable comparative tool to establish long-term trends. This year the field surveys were carried out by Neil McMahon and Jonathon Sanders. Territory analysis carried out by Mischa Cross.

General Ringing – The nature reserve is used for casual ringing sessions. These sessions run when weather is suitable and subject to ringer availability. There are two main areas that are used for ringing sessions: Christies' Copse, which has a winter feeding station and target species here are Marsh and Willow Tits, and the feeding station in The Meadows where the target species are Tree Sparrows and Yellowhammers. There is also the duck trap at The Meadows feeding station that is set from time to time to target water birds. As well as providing important data to support the formal survey work and input into national databases, the ringing sessions also provide an opportunity to train new ringers and demonstrate bird ringing to reserve visitors.

Wetland Bird Survey (WeBS) – The waterbirds and waders at Pitsford Reservoir are counted across the whole reservoir on a single day once a month, starting in August and continuing throughout the winter until March. A separate count of the gull roost on the southern half of the reservoir is also taken each month. A minimum of two surveyors will walk simultaneously around the north and south half of the reservoir counting all birds seen on the water or using the habitat, for example, grazing on the banks. Birds seen flying overhead are not counted.

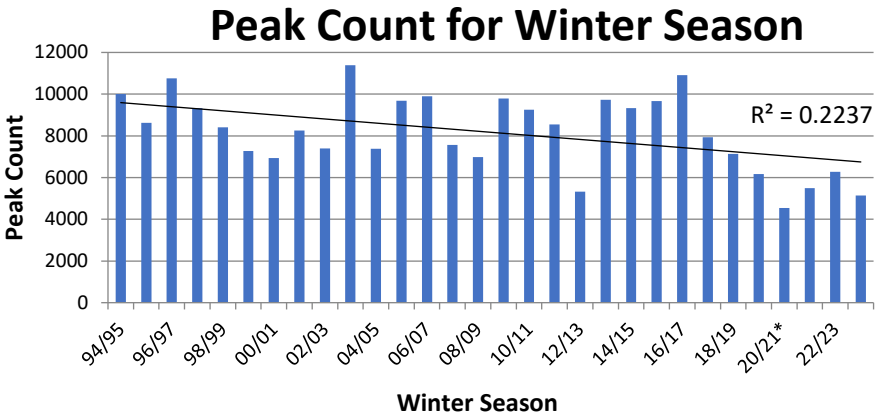
The data collected influences the management of the nature reserve and reservoir as a whole, as well as monitoring its condition for the SSSI designation. It also contributes to the WeBS scheme, which aims to identify population sizes, determine trends in numbers and distribution and identify important sites for non-breeding waterbirds in the UK. WeBS data is also collected for hundreds of other wetland sites across the UK. Pitsford Reservoir is recognised for regularly supporting nationally important numbers of Gadwall, Shoveler, Pochard, Smew, and Great Crested Grebe. Threshold values used in this report are the most up to date available at the time of going to print unless otherwise stated.

Results

Common Bird Census (CBC) – overall, the breeding season was below average for the site; 553 territories were recorded from 38 species. This will be in part because species like Mute Swan, Greylag Geese etc were not recorded on the CBC this year but would have bred on site.

General Ringing – a total of 1151 birds were ringed on site, and including retraps there were over 1300 captures. Overall, most birds were below average, but it is not clear how much of this is due to reduced ringing activity. Greenfinches and Goldfinches were particularly abundant, but Tree Sparrows and Yellowhammers noticeably low.

Wetland Bird Survey (WeBS) – The winter of 2023/24 has recorded the second lowest overall peak count – the lowest was 2020/21 and that was most likely because there were three months of missing data. Therefore, this winter was most likely the lowest count the reservoir has recorded since on site records start in 1994, with a peak of only 5136 birds. – the long-term average is 7981. The percentage of birds using the nature reserve was still above average – (see annual report 2023) and the gull roost is still significantly below average but up a fraction from last year.



*The peak counts for all birds, excluding the Gull Roost. *Three months missing data.*

Species Summaries

The following species summaries take into account all the relevant surveys and casual observations to summarise the status for each bird recorded on site this year. The ringing total is for all birds ringed; the territories are the number of breeding territories recorded during the CBC; the wintering number is the peak number for that species between August 2023 and March 2024 from the WeBS counts. The species are ordered as per The British List, 14/01/2013 (http://www.bou.org.uk/british-list/) and colour coded depending on their status according to the BTO UK Birds of Conservation Concern list (Publication 5 December 2021).

Red List – birds of high conservation concern
Amber List – birds of moderate conservation concern
Green List – birds of least conservation concern
Black List – Former breeding species
Blue – not on list

The status given with the name is for Pitsford Reservoir and does not represent their national status.

Mute Swan *Cygnus olor*: Present all year in varying numbers. The winter of 2023/24 recorded a peak of 159 wintering birds, 71% of which were recorded in the nature reserve. This is slightly above the long-term average for the site. No nests were recorded on the CBC, but breeding did occur on site. The pair that usually breed in the reeds by the moth trap started to build but stopped before finishing the nest and did not appear to try again.
Wintering: 159

Whooper Swan *Cygnus cygnus*: Occasional winter visitor.
No birds were recorded on the 2023/24 WeBS, but two birds were observed flying south over the dam on the 17th January 2024. Later in the year, one was recorded on the 28th October and on the 1st November, one flew north in the Walgrave Bay.

Pink-footed Goose *Anser brachyrhynchus:* Rare winter visitor. On the 2nd November, there was a flock of 20 seen flying north. From the 27th November there was a single bird amongst a Greylag flock where it remained into the first week of December.

Greylag Goose *Anser anser*: Resident with increasing breeding numbers. No nests were recorded on the CBC surveys but breeding on site did occur. A peak of 235 was recorded in the winter of 2023/24, which is average for the site.
Wintering: 235

Canada Goose *Branta canadensis*: Present all year.
One pair successfully bred on the tern raft in the Holcot Bay, but more are likely but weren't recorded. Wintering numbers were slightly below the long-term average for the site but stable for recent years.
Territories: 1 **Wintering: 432**

Barnacle Goose *Branta leucopsis*: Vagrant or possibly feral.
Two birds were observed in the Scaldwell Bay on the 28th March.

Barnacle Goose © Robin Gossage

Egyptian Goose *Alopochen aegyptiaca*:
Occasional visitor/ feral.
One bird was observed flying over the reservoir on the 9th June.

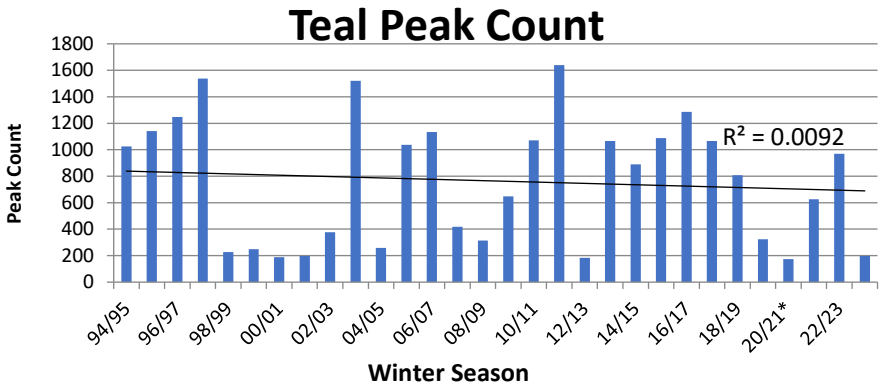
Mandarin Duck *Aix galericulata*: Rare visitor/ escapes.
A drake flew south over the dam on the 14th March.

Wigeon *Anas penelope*: Common winter visitor, occasional summer birds. Winter 2023/24 numbers peaked at 1255 birds, which is a bit below average for the site but overall wintering numbers appear very stable.
Wintering: 1255

Gadwall *Anas strepera*: Present all year, but only low numbers in summer. A couple of pairs were seen on the reserve during the breeding season but breeding was not confirmed on site. A peak of 354 birds was recorded in the winter of 2023/24. This is below the long-term average for the site but still above the nationally significant threshold value.
Wintering: 354

Teal *Anas crecca*: Common winter visitor, occasional summer birds, has bred once. Pairs were observed around the site but breeding is not confirmed. Five birds were seen in the Walgrave Bay on the 26th March. Wintering numbers peaked at 199 in the winter of 2023/24. This is significantly below the long-term site average of 727. Although this appears a dramatic drop, the wintering population follows a pattern of quite extreme lows and

highs and the overall wintering population on site appears stable.



*The long-term wintering trends of Teal on the reservoir. The wintering population appears to have extreme lows and highs, but overall appears stable. *3 months missing data.*

Wintering: 199

Mallard *Anas platyrhynchos*: Resident.
Ducklings were seen around the site and one nest was confirmed in Christies' Copse. Twelve birds were ringed, which is half the long-term average and wintering numbers were also around half the average.
Ringed: 12 **Territories: 1** **Wintering: 375**

Pintail *Anas acuta*: Scarce winter visitor.
The winter of 2023/24 peaked at 15 birds. Birds started to arrive the following winter with two birds seen on the 31st October and by the start of November, six birds were recorded.
Wintering: 15

Garganey *Anas querquedula*: Scarce passage migrant.
One bird was recorded on the winter 2023/24 WeBS count, but only stayed a short time.
Wintering: 1

Shoveler *Anas clypeata*: Winter and summer visitor in low numbers, occasionally breeds. The winter of 2023/24 peaked at 95 birds, which is less than half the long-term average for the site but is in line with recent years.
Wintering: 95

Red-crested Pochard *Netta rufina*: Regular visitor in low numbers. Wintering numbers in 2023/24 peaked at just two, which is very low for the site, but the wintering population on site is still showing an increasing trend. Returning birds were seen from the 28th June.
Wintering: 2

Pochard *Aythya farina*: Present all year, small numbers in summer. The winter of 2023/24 recorded another new lowest peak count for the site since on-site records start in 1994. This species is in severe decline nationally.
Wintering: 58

Tufted Duck *Aythya fuligula*: Present all year, annual breeder in small numbers. The winter of 2023/24 recorded another new lowest peak count for the site since on-site records start in 1994.
Wintering: 760

Scaup *Aythya marila*: Occasional winter visitor.
One bird was recorded on the 2023/24 WeBS counts.
Wintering: 1

Common Scoter *Melanitta nigra*: Irregular passage migrant.
One bird was recorded on the winter 2023/24 WeBS surveys.
Wintering: 1

Goldeneye *Bucephala clangula*: Common winter visitor.
The winter 2023/24 season peaked at 78 birds, which is average for the site. Up to 60 birds were still being recorded by March. Birds were recorded again from the 11th November, with numbers rising to 40 by the end of the year.
Wintering: 78

Smew *Mergellus albellus*: Winter visitor in small numbers. No birds were recorded on the 2023/24 WeBS surveys, but a 'redhead' was seen in the Scaldwell Bay on the 18th March and the Walgrave Bay on the 23rd March. A returning drake was observed south of the causeway on the 2nd December.

Goosander *Mergus merganser*: Regular but decreasing winter visitor in small numbers. One bird was recorded on the 26th November.

Ruddy Duck *Oxyura jamaicensis*: Following DEFRA cull now a very rare winter visitor.

Red-legged Partridge *Alectoris rufa*: Released from adjacent shoot and are not monitored on site.

Grey Partridge *Perdix perdix*: Occasional visitor and possibly released from nearby breeding programme.

Pheasant *Phasianus colchicus*: Released from adjacent shoot and are not monitored on site.

Great Northern Diver *Gavia immer*: Rare winter visitor. The juvenile from last year was seen again on the 1st January until it was last recorded on the 31st. A juvenile was observed from the 26th November and stayed all the way through December feeding on crayfish on the south side of the reservoir.

Great Northern Diver feeding on a Signal Crayfish. © Neil Hasdell

Wintering: 1

Cormorant *Phalacrocorax carbo*: Present all year with a breeding colony. A peak of 192 was recorded n the 2023/24 WeBS counts, which is above average for the site. The breeding colony recorded the lowest count since 2012, although nests have spread out around much of the site now and are harder to spot.
Territories: 32 **Wintering: 192**

Little Egret *Egretta garzetta*: Low numbers through much of the year. Seen throughout the year, with winter numbers peaking at 15 in the winter of 2023/24.
Wintering: 15

Great White Egret *Ardea alba*: Regular winter visitor, occasional summer. Numbers peaked at just five in the winter of 2023/24, which is much lower than in recent years, but still Nationally Significant. Sightings were only absent from the months of March and April, and numbers rose to three again by the end of the year.
Wintering: 5

Grey Heron *Ardea cinerea*: Present all year with small breeding colony. Winter numbers for 2023/24 peaked at 13, which is below average for the site. Nests were recorded in all three bays and some young had already fledged by the 13th May. The total nest count was eight, which is around average, but they are harder to spot now, so the total may be higher.
Territories: 8 **Wintering: 13**

Little Grebe *Tachybaptus ruficollis*: Present all year, small breeding population. Breeding is likely but not confirmed and the wintering population still appears to show a strongly increasing trend on site.
Wintering: 93

Great Crested Grebe *Podiceps cristatus*: Present all year. Winter 2023/24 numbers peaked at 279, which is above average for the site and the Nationally Significant threshold value of 170. Four nests were counted on the CBC survey, although more are likely.
Territories: 4 **Wintering: 279**

Red Kite *Milvus milvus*: Common visitor after reintroduction in Northants. No nests were recorded but breeding is likely.

Marsh Harrier *Circus aeruginosus*: Scarce passage migrant. One bird was observed regularly between the 4th and 20th August and on the 11th and 28th September.

Marsh Harrier. © Dave Jackson

Sparrowhawk *Accipiter nisus*: Present all year.
No territories were picked up on the CBC surveys, but breeding is likely. One bird was ringed in October.
Ringed: 1

Buzzard *Buteo buteo*: Present all year with confirmed breeding. One territory was recorded on the CBC surveys around The Point, but more are possible.
Territories: 1

Osprey *Pandion haliaetus*: Regular visitor.
First recorded on the 5th April, flying south over the dam. From then, up to three birds were recorded either perched, flying or fishing on the reservoir all the way through to the end of September.

Kestrel *Falco tinnunculus*: Resident.
Observed on site, but less frequently. Breeding is possible.

Merlin *Falco columbarius*: Occasional winter visitor.
An immature/ female bird was recorded north of the causeway on the 16th February. A second calendar year male was seen over Walgrave Bay on the 16th March after pursuing a Pied Wagtail, it then had a go at an unknown passerine before making a sustained attack on a Sand Martin before giving up and moving on.

Hobby *Falco subbuteo*: Summer and passage migrant.
One bird was seen flying over the dam on the 2nd June and another in the Scaldwell Bay on the 7th and 26th. Regular sightings of birds hunting dragonflies were made through August and early September.

Peregrine *Falco peregrinus*: Occasional winter visitor.
Regularly observed from the 19th July through to early November.

Water Rail *Rallus aquaticus*: Scarce winter visitor.
No reports but likely present on site.

Moorhen *Gallinula chloropus*: Resident.
Wintering numbers were back down to average after last year's high count. One nest was observed on the CBC survey in the

Walgrave Bay. It is unusual to spot the nests of this secretive bird and more breeding pairs are likely. Only three birds were ringed, which is below average, most likely due to reduced ringing activity.
Ringed: 3 **Territories: 1** **Wintering: 173**

Coot *Fulica atra*: Large numbers all year.
Winter 2023/24 numbers were up from the last couple of very poor years, but still well below average for the site. Seven nests were recorded during the CBC surveys, but more were likely.
Territories: 7 **Wintering: 1125**

Oystercatcher *Haematopus ostralegus*: Annual visitor, recently breeding. First recorded on the 20th March, but breeding did not occur this year.

Lapwing *Vanellus vanellus*: Common passage migrant and winter visitor. Wintering numbers peaked at 237 on the 2023/24 WeBS count, which is around average for recent years but significantly reduced from historical numbers for the site.
Wintering: 237

Little Ringed Plover *Charadrius dubius*: Scarce passage migrant. One bird was observed on the 22nd August.

Ringed Plover *Charadrius hiaticula*: Scarce passage migrant. No birds were recorded on the WeBS surveys but up to two birds were seen in August and Sepetmber.

Whimbrel *Numenius phaeopus*: Annual passage migrant.
One bird was recorded while flying south on the 5th August and another seen on the 2nd September.

Black-tailed Godwit *Limosa limosa*: Annual passage migrant.
One bird was recorded on the 14th April and one on the 5th July, both in the Scaldwell Bay.

Dunlin *Calidris alpine*: Regular passage migrant.
One bird was observed north of the causeway on the 21st January and one by the dam on the 2nd April. Other sightings were made on the 25th June, 19th September and the 13th November.

Common Sandpiper *Actitis hypoleucos*: Passage migrant, occasionally winters. A peak of six birds were recorded on the 2023/24 WeBS surveys. Up to three were regularly seen in April and a couple of birds were on the dam in July and returning birds regularly seen from August through to October.
Wintering: 6

Green Sandpiper *Tringa ochropus*: Passage migrant, occasionally winters. A peak of one bird was recorded on the 2023/24 WeBS counts. Returning birds were recorded from August into November, with five birds in the Scaldwell Bay on the 12th September.
Wintering: 1

Wood Sandpiper *Tringa glareola*: Rare passage migrant.
Unfortunately no sign of it on site this year with the reservoir at almost full capacity by mid-September.

Redshank *Tringa tetanus*: Passage migrant and winter visitor.
A peak of one bird was recorded on the 2023/24 WeBS counts with returning birds observed near the dam between the 15th and 21st November.
Wintering: 1

Jack Snipe *Lymnocryptes minimus*: Rare winter visitor.
A peak of two birds were recorded on the 2023/24 WeBS count, with birds being recorded right through until March.
Wintering: 2

Jack Snipe © Neil McMahon

Woodcock *Scolopax rusticola*: Winter visitor.
Up to two birds were occasionally recorded in Christies' Copse between January and March and again from the 31st October to the end of the year.

Snipe *Gallinago gallinago*: Winter visitor and passage migrant. The wintering population on site appears to be strongly increasing, with the WeBS count recording the second highest peak since on site records start in 1994. Returning birds were recorded from the 13th September with 158 recorded on the 16th December. Two birds were ringed in March, which is average for the site
Ringed: 2 **Wintering: 97**

Black Tern *Childonias niger*: Scarce passage migrant.
One bird was recorded on the 1st September and another on the 14th and 15th October.

Common Tern *Sterna hirundo*: Summer breeding and passage migrant. The breeding colony has not bounced back as well as the Black-headed Gulls have after the bird flu last year. Six nests were recorded on the rafts in the Walgrave Bay and one on the raft on the Holcot Bay and from these, 14 young birds were ringed.
Ringed: 14 **Territories: 7**

Kittiwake *Rissa tridactyla*: Rare passage migrant.
Seven birds were observed flying around the dam on the 18th November, with some settling briefly on the water.

The Pitsford Kittiwakes. © Neil McMahon

Black-headed Gull *Chroicocephalus ridibundus*: Present all year, increasing in winter. The winter 2023/24 WeBS count peaked at 3000 birds, which is around average for recent years. The breeding colony recovered well after the awful bird flu outbreak last year. Due to the deterioration of the rafts, they were unsafe to walk on and therefore an accurate count of nests could not be made, but 47 young were ringed, mainly from the three rafts in the Scaldwell Bay.
Ringed: 47 Territories: unknown Wintering: 3000

Little Gull *Hydrocoloeus minutus*: Occasional passage migrant. Up to three birds were occasionally recorded between March and early April.

Mediterranean Gull *Larus melanocephalus*: Occasional visitor all year. A peak of one bird was recorded on the 2023/24 gull roost count. The following winter saw one bird in the roost on the 15th and 16th December.
Wintering: 1

Common Gull *Larus canus*: Common winter visitor and passage migrant. A peak of 500 birds was recorded on the 2023/24 gull roost survey, which is relatively good for recent years.
Wintering: 500

Lesser Black-backed Gull *Larus fuscus*: Common passage migrant, with occasional pairs possibly intent on breeding. A peak of 465 birds was recorded on the 2023/24 gull roost survey, which is relatively good for recent years.
Wintering: 465

Herring Gull *Larus argentatus*: Fairly common, mainly winter visitor. A peak of 130 birds was recorded on the 2023/24 gull roost count, which is one of the highest counts for the species on site.
Wintering: 130

Yellow-legged Gull *Larus michahellis*: Regular visitor.
The winter 2023/24 roost count peaked at nine birds. Sightings were also made in early April, one on the 30th June and regularly from August to the end of the year.
Wintering: 9

Caspian Gull *Larus cachinnans*: Occasional winter visitor.
A peak of two birds was recorded on the 2023/24 gull roost survey. One bird was recorded in November.
Wintering: 2

Great Black-backed Gull *Larus marinus*: Winter visitor and passage migrant. A peak of three birds was recorded on the 2023/24 gull roost survey, which is quite low for the site.
Wintering: 3

Stock Dove *Columba oenas*: Present all year in low numbers. Two territories were established on the CBC surveys, but at least one more was possible. Two birds were ringed, which is average for the site.
Ringed: 2 **Territories: 2**

Wood Pigeon *Columba palumbus*: A very common bird which breeds throughout the year. It is consciously omitted from the CBC surveys because of its abundance and difficulty in mapping territories.

Collared Dove *Streptopelia decaocto*: Present all year in surrounding area.

Cuckoo *Cuculus canorus*: Occasional summer visitor, declining. One heard on the 13th May and 7th June.

Barn Owl *Tyto alba*: Present all year in surrounding area.
Evidence of birds on site through trail camera footage and potentially roosting in Goosander and Maytrees hides.

Little Owl *Athene noctua* : Present all year in surrounding area and occasionally on site but unrecorded this year.

Tawny Owl *Strix aluco*: Present all year.
The nest boxes were checked when resources allowed and four birds were ringed from them – three nestlings and one adult.
Ringed: 4 **Territories: 1**

Swift *Apus apus*: Common summer visitor.
Present on site through the breeding season, but using the site for feeding, with spectacles of low feeding birds over The Meadows.

Kingfisher *Alcedo atthis*: Present for much of the year.
A peak of three birds was recorded on the 2023/24 WeBS survey. Foraging behaviour was observed in all three feeder streams, indicating possible breeding in each of the stream banks, but likely off the reserve. On the 13th July they were showing well by the Kingfisher Screen.
Wintering: 3

Kingfisher. © Dave Jackson

Green Woodpecker *Picus viridis*: Resident.
No territories were established on the CBC surveys although breeding is likely.

Great Spotted Woodpecker *Dendrocopos major*: Resident.
Two territories were established on the CBC surveys, one in The Point, one in Block 20 and one was likely in the Holcot Bay.
Territories: 2

Lesser Spotted Woodpecker *Dendrocopos minor*: Scarce resident, declining. A calling bird was heard on the 26th and 27th March.

Magpie *Pica pica*: Present all year.
Only one territory was established on the CBC surveys but one or two more were likely.
Territories: 1

Jay *Garrulus glandarius*: Present all year with some winter visitors. Two territories were established on the CBC surveys, but a third was possible. Although no new birds were ringed, a regular visitor to the nets was caught again this year. It was first ringed as an adult in the Scaldwell Bay in 2014 so is now over eleven years old. The national longevity record for the species is 16 years. As mentioned in previous reports, this is testament to these long-lived species having large, safe habitats to thrive in.
Territories: 2

Jackdaw *Corvus monedula*: Present all year with large roosting numbers. One territory was established in the Holcot Bay, although the actual nest was most likely just off the reserve in a hollow tree that is regularly used by them. Three birds were ringed, which is above average.
Ringed: 3 **Territories: 1**

Rook *Corvus frugilegus*: Present all year with large roosting numbers. A count of 62 nests was made from the rookery, which is around average for recent years.
Territories: 62

Carrion Crow *Corvus corone*: Present all year, often in established pairs. Three territories were established on the CBC but more were likely.
Territories: 3

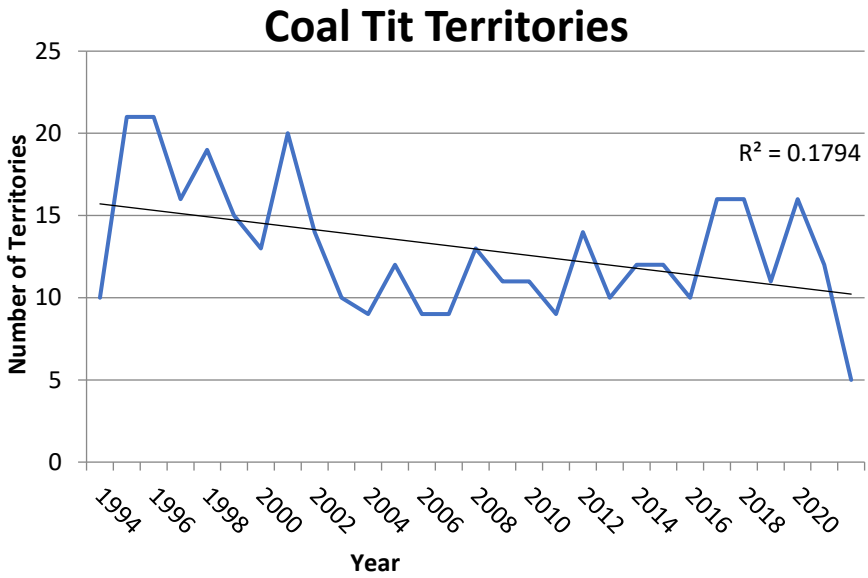
Raven *Corvus corax*: Recent breeder.
A pair nested again in the same location as last year and fledged young by the 13th May.
Territories: 1

Goldcrest *Regulus regulus*: Present all year with autumn influxes. Although the number of territories dropped from last year's record high, the breeding population still appear to be doing well on site since they crashed in 2008. Despite the good breeding numbers, ringing numbers were down significantly from last year.
Ringed: 4 **Territories: 19**

Blue Tit *Cyanistes caeruleus*: Present all year.
The breeding population, according to the CBC survey, appears to be steadily increasing. Although down from last year's record high count, numbers are still above average. The nest boxes were not fully surveyed this year although some young were ringed from them.
Ringed: 143 **Territories: 42**

Great Tit *Parus major*: Present all year.
The overall trend for the breeding population of Great Tits is not showing as strong an increasing trend as the Blue Tits, but is very stable and has been doing well in recent years. The nest boxes were not fully surveyed this year although some young were ringed from them.
Ringed: 141 **Territories: 27**

Coal Tit *Periparus ater*: Present all year.
The breeding population appears to have dropped significantly this year with only five territories where the average is 13. Overall it is showing a declining trend, but did level off in the early 2000s, albeit much lower than previously recorded. Analysis methods changed slightly this year, so it is yet to be established if this is representative of actual breeding numbers or due to the change of analysis.



Coal Tit CBC territories at Pitsford Water Nature Reserve.

Territories: 5

Willow Tit *Poecile montana*: Former breeding resident.
No birds recorded again this year.

Marsh Tit *Poecile palustris*: Scarce resident.
Two territories were established in the CBC surveys with a possible third in the Holcot Bay.
Territories: 2

Skylark *Alauda arvensis*: Resident and passage migrant.
No confirmed territories on the reserve, although several were recorded in the adjacent farmland.

Sand Martin *Riparia riparia*: Breeding and passage migrant.
First record by the dam on the 16th March, rising up to eight by the 28th. This year was the first year that the artificial nesting bank was used, with 12 confirmed nests. From these, 29 young

and four adults were ringed. One adult bird that hatched in 2023 in East Sussex was already ringed and was caught around the artificial bank.

Sand Martins at the artificial nesting bank. © Kev Rowley

Ringed: 33 **Territories: 12**

Swallow *Hirundo rustica*: Summer visitor and passage migrant. First recorded on site on the 20th March.

House Martin *Delichon urbicum*: Summer visitor and passage migrant. First recorded on site on the 7th April with four birds observed. Breeding is not confirmed or likely on site, but one bird was ringed. A flock of 150 birds was recorded on the 3rd August.
Ringed: 1

Cetti's Warbler *Cettia cetti*: Recent breeding species.
Unfortunately not recorded on site this year.

Long-tailed Tit *Aegithalos caudatus*: Present all year.
The breeding population has shown an overall declining trend, but levelled off in recent years at a lower number of territories. The last couple of years has seen an increase again, with this

year being back to average for the species on site. The ringing numbers were ,however, significantly lower than last year.
Ringed: 14 Territories: 10

Chiffchaff *Phylloscopus collybita*: Summer visitor and passage migrant. The number of territories established on the CBC surveys was above average and the breeding population is showing a strong increasing trend on site. The ringing numbers were very good, being above the long-term average even with the reduced ringing activity.
Ringed: 89 Territories: 35

Willow Warbler *Phylloscopus trochilus*: Summer visitor and passage migrant, declining. This species has been on a declining trend since the 1990s when numbers of around 35 territories were recorded. Since 2017, there has been between two and four territories, sadly this year, that has now reduced to just one. The strongholds in recent years were Block 33, Christies' Copse and occasionally the Scaldwell Bay, but the territory this year was in front of Block 4 in the Walgrave Bay. There were very few other registrations in other locations, indicating that there was unlikely any other territories that might not have quite met the CBC criteria. Ringing numbers were also down from last year, with only six birds ringed.
Ringed: 6 Territories: 1

Blackcap *Sylvia atricapilla*: Summer visitor and passage migrant. The breeding population on site has been on a steadily increasing trend since recording started in 1994. Recently numbers peaked at 58, but over the last two years have dropped back down to average. The ringing numbers were very good, being above the long-term average even with the reduced ringing activity.
Ringed: 129 Territories: 36

Garden Warbler *Sylvia borin*: Summer visitor and passage migrant. The breeding population on the site has large peaks and troughs, but overall appears very stable. This year

recorded 25 territories on the CBC surveys, which is average for the site. Ringing numbers were good with 22 birds ringed between July and August, which is up from last year.
Ringed: 22 Territories: 25

Lesser Whitethroat *Sylvia curruca*: Summer visitor and passage migrant. Nine birds were ringed throughout June to September, which is average for the site.
Ringed: 9

Whitethroat *Sylvia communis*: Summer visitor and passage migrant. Occasional birds were recorded during the CBC surveys in the hedgerows around the reserve but breeding on site is not confirmed. The autumn passage was good with 44 birds ringed between July and September.
Ringed: 44

Sedge Warbler *Acrocephalus schoenobaenus*: Declining summer visitor and regular passage migrant. Breeding was not confirmed or likely on site this year although some late arrivals on 21st July were singing and looking intent on breeding. Late summer ringing numbers are still high but down from last year.
Ringed: 53

Reed Warbler *Acrocephalus scirpaceus*: Summer visitor and passage migrant. Sine 2014, the breeding population has stabilised at between two and five. This year recorded four territories, which is good for recent years. Two were recorded in the reedbed by the lodge and two in the Scaldwell Bay, both of which are strongholds for the species. Late summer ringing numbers are still high but down from last year.
Ringed: 78 Territories: 4

Nuthatch *Sitta europaea*: Resident.
Three territories were recorded on the CBC surveys. This is the most ever recorded and the breeding population on site appears to be establishing well.
Territories: 3

Treecreeper *Certhia familiaris*: Present all year.
The breeding population trend on site is quite erratic, with irregular peaks and troughs, but this year was average and overall the breeding population appears stable on site. Only one bird was ringed, which is similar to last year.
Ringed: 1 **Territories: 7**

Wren *Troglodytes troglodytes*: Present all year.
The breeding population appears very stable on site. This year saw the number of territories slightly below the long-term average. The low ringing numbers will most likely be from reduced ringing activity, but is lower than last year.
Ringed: 20 **Territories: 64**

Starling *Sturnus vulgaris*: Present all year in low numbers.
Breeding not confirmed or likely on site, but six birds were ringed between June and August. Large flocks of approximately 500 birds were seen off the dam at dusk on the 15th November.
Ringed: 6

Blackbird *Turdus merula*: Present all year.
Numbers of territories were relatively low this year, despite the ground being fairly wet through spring and most of the summer. This could potentially be a knock on from recent drought years. Only five birds were ringed, which is significantly down from last year.
Ringed: 5 **Territories: 26**

Fieldfare *Turdus pilaris*: Common winter visitor.
Three birds were ringed in January and small numbers were still present by the 26th March. No records of returning birds were received later in the year.
Ringed: 3

Song Thrush *Turdus philomelos*: Present all year.
The overall breeding population is showing a relatively strong increasing trend – a recovery from the national crash in

numbers in the 1990s. This year has recorded the second highest count since the population peaked in 2007 with 19 territories. Only three birds were ringed, which is down from last year.
Ringed: 3 **Territories: 16**

Redwing *Turdus iliacus*: Common winter visitor.
There were still low numbers present by the 26th March and returning birds were recorded from the 14th October. Four birds were ringed between October and November.
Ringed: 4

Mistle Thrush *Turdus viscivorus*: Present all year in low numbers. No territories were established, but one bird was recorded singing in adjacent farmland in the Holcot Bay.

Spotted Flycatcher *Muscicapa striata*: Scarce summer visitor and passage migrant. Breeding was not confirmed again this year although there were sightings on the 26th to the 28th July.

Robin *Erithacus rubecula*: Present all year.
The overall breeding population appears stable on site and this year saw an average number of territories. The ringing numbers are down from last year.
Ringed: 24 **Territories: 47**

Redstart *Phoenicurus phoenicurus*: Scarce passage migrant. A male bird was observed in the Scaldwell Bay on the 5th April and a female on the 13th. Occasional birds were again seen from the 4th July onwards with one bird ringed in October. This is only the seventh bird to be ringed on site.
Ringed: 1

Whinchat *Saxicola rubetra*: Occasional passage migrant.
One bird was recorded on the 13th April and another on the 15th July. Sightings were made frequently through August and early September.

Stonechat *Saxicola rubicola*: Scarce winter visitor.
Up to two pairs of birds were recorded throughout January. One bird was ringed in June and returning birds were regularly recorded from September onwards. Another bird was ringed in November, bringing the site ringing total up to 15.
Ringed: 2

Wheatear *Oenanthe oenanthe*: Scarce passage migrant.
One bird was oberserved north of the causeway on the 4th and 9th September.

Dunnock *Prunella modularis*: Present all year.
Despite the number of territories being up from last year's low, they are still below the long-term average for the site and overall, the breeding population is showing a declining trend. The ringing numbers were, however, relatively good despite the reduced ringing activity.
Ringed: 29 **Territories: 10**

House Sparrow *Passer domesticus*: Resident in immediate neighbourhood with occasional birds on the reserve.

Tree Sparrow *Passer montanus*: Present all year with a localised population. Breeding was confirmed for the first time in many years with one nest in the cluster boxes near The Feeding Station in The Meadows. It produced at least two broods of young. However, by the end of the year, sightings were very reduced with none during November but one was seen on 31st December. Only seven birds were ringed between July and August, the peak ringing for this species is usually later in the year.
Ringed: 7 **Territories: 1**

Yellow Wagtail *Motacilla flava*: Summer visitor and passage migrant. Up to seven birds were seen near the dam in early April.

Grey Wagtail *Motacilla cinerea*: Scarce resident and passage migrant. Regular sightings were made between January and April. On the 14th May, two adults and a juvenile were observed on the dam and more sightings were made from September onwards.

Pied Wagtail *Motacilla alba*: Present all year.
Although breeding was not confirmed this year, a pair were recorded in The Meadows. A White wagtail was recorded very briefly on the dam on the 27th March and again on the 2nd April. Four birds were ringed, which is average for the site.
Ringed: 4

Meadow Pipit *Anthus pratensis*: Common passage migrant, occasional breeder on adjacent land. This species appears to have had a good year on site. Fourteen birds were ringed, all in the autumn passage, which is more than double the average.
Ringed: 14

Meadow Pipit © Neil McMahon

Chaffinch *Fringilla coelebs*: Present all year in small numbers, recently declining. A significant decline in breeding numbers on site started in 2014 and recent years have seen between approximately 13 to 20 territories. Only five birds were ringed, which is significantly down from last year.
Ringed: 5 **Territories: 13**

Brambling *Fringilla montifringilla*: Occasional variable winter visitor. At least one bird was in amongst a flock of approximately 150 Chaffinches near The Cover on the 15th January, with regular sightings into March. Returning birds were seen from November.

Greenfinch *Chloris chloris*: Present all year in low numbers. Breeding was not confirmed and no registrations were recorded on the CBC surveys. Ringing numbers were significantly up from last year and bucked the recent trend of low autumn catches.
Ringed: 76

Goldfinch *Carduelis carduelis*: Present all year in low numbers. Although numbers of territories peaked at seven in 2016, recently the site appears to be averaging between two and four and the breeding population appears stable. Ringing numbers were very good, with numbers exceeding even the long-term average despite the reduced ringing activity.
Ringed: 59 Territories: 2

Siskin *Carduelis spinus*: Winter and spring visitor. Approximately 45 birds were recorded on the 15th January and approximately 20 south of the causeway on the 26th February. Birds were regularly seen through March, including a singing bird on the 14th. Regular sightings were made from October through to the end of the year.

Linnet *Carduelis cannabina*: Present for much of the year in low numbers. Breeding on site was not confirmed but several registrations were recorded around the adjacent land and one in the Holcot Bay. Two birds were ringed in January, which is average.
Ringed: 2

Lesser (common) Redpoll *Carduelis cabaret*: Common winter visitor. Flocks of up to 14 birds were recorded in January and February, with a sighting of two birds on the 26th November.
Crossbill *Loxia curvirostra*: Irruptive and nomadic summer visitor. One bird heard calling over Pitsford village on the 8th August.

Bullfinch *Pyrrhula pyrrhula*: Present all year with a diminishing population. Another finch that has declined on site

since around 2015 and now averages between three and no territories. No territories were recorded this year on the CBC surveys, but birds were present during the breeding season.

Yellowhammer *Emberiza citrinella*: Present all year, increasing in winter. Breeding was not confirmed on site this year, but several registrations were made on the CBC surveys in hedgerows adjacent to the nature reserve. Ringing numbers were again low this year.
Ringed: 11

Reed Bunting *Emberiza schoeniclus*: Irruptive and nomadic but present all year. The long-term average number of territories on site is 13, but since 2018, is between six and eight. This year was around average for recent years with six territories recorded but unusually two of those were in the Walgrave Bay. Good numbers were ringed throughout the year
Ringed: 21 **Territories: 6**

Map of Pitsford Water Nature Reserve

Map of Pitsford Reservoir

Map of Management Compartments