



# National Trust

## Wicken Fen Wildlife

### Newsletter 2016

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**Wicken Fen Nature Reserve, Lode Lane, Wicken, Ely, Cambs. CB7 5XP**

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## Introduction

Wicken Fen nature reserve is owned and managed by the National Trust. At its heart is the famous Wicken Fen National Nature Reserve (NNR) which is 255 ha and this includes high quality open fen habitat on deeper peat soils that have not been drained for agriculture. This is the officially designated area which is a Site of Special Scientific Interest (SSSI), a Special Area of Conservation (SAC, a European designation), and a Ramsar wetland (an international designation).

In the last 20 years, the area of the nature reserve has increased by more than two-and-a-half-times to 785 hectares (almost 8 square kilometres) as the Trust has purchased several parcels of farmland, each of which are in the process of restoration to create a much larger nature reserve for wildlife and people, a project called the Wicken Fen Vision.

The aim of this Newsletter is keep you informed of what wildlife is being recorded here at Wicken Fen nature reserve and what research and surveys have been taking place. We hope you find the contents interesting and that you might be encouraged to get involved, come and visit and tell us what you find.

Wicken Fen is managed by a professional team guided by advisors and a highly experienced and knowledgeable Local Committee. The 'Research and Recording Group' at Wicken Fen helps to organise and co-ordinate the various scientific, recording and natural history activities on the property.

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# Site Management in 2016

A detailed Site Management Report is produced quarterly by Martin Lester (Wicken Countryside Manager) for the Wicken Local Committee. The key document is the Wicken Fen Management Plan which was reviewed and updated for the period 2016-2020 in discussion with Natural England.

2016 was a fairly normal year for temperatures and total rainfall. However, June was very wet with more than twice the average rainfall for that month and the paths on the old Fen had to remain closed to protect the fen plants and peat soil from trampling damage. July and August had slightly below average rainfall and then September was very dry. This allowed the perimeter path around the Sedge Fen to be opened and the ranger staff to get underway with the rotational cutting and removal of vegetation on the Sedge Fen on which many of the classic old fen habitats are dependent.

The traditional rotational cutting of the sedge areas, litter fields and droves of the Sedge Fen has proved to be very difficult since 2011 due to a run of years with high water tables in summer and autumn. The vegetation is damaged if cutting machinery is taken on to the Fen in these conditions, even if it is technically possible (which it may not be in wet conditions). Some management of the scrub on the old fen was also undertaken, in 2016 especially some 'facing-up' when the spread of scrub bushes into open fen areas is cut back (for example along Spinney Bank, Mitchell's and Thomson's Drovers). One final area where scrub was knocked back was adjacent to the Godwin Plots.

The extensive grazing of the wider nature reserve is a crucial part of the site's management. The early part of the year was a fairly quiet time for the grazing programme at Wicken Fen. A long term pattern has developed when we get intense activity within the groups of animals and new challenges arise and then we get periods of quiet when the entire thing settles down. As is now normal, there was a series of new births of Konik ponies and Highland cattle spread out over several months.

There is an ongoing cycle of replacing the fencing across the land as well as control of vegetation alongside the key paths and access routes. This is a considerable amount of work, as there are many kilometres of fences and 45 km of paths across the nature reserve.



Highland cow Gale, with the first calf born in 2016 at Wicken, on Baker's Fen. This male was named **Winfred**, after Sir Norman Winfrid Moore, who had been associated with Wicken Fen for many years.

# Birds

## Wicken Fen Group Report of 2016 activities

Chris Thorne

The Wicken Fen (Bird Ringing) Group has been in continuous operation for 49 years, having been founded in 1968. By the end of the year 2016 the overall ringing total was 120,535. Of this total, about 675 birds have subsequently been reported away from the Fen (92 of them abroad).

The Group, at 31 December 2016, numbered 38 members and 20 registered Friends or Associates. Additionally there were, at any one moment, about a dozen would-be ringers/trainees/visitors on the Group's books. Coverage at the Fen, measured in hours, was roughly similar to that in 2014 and 2015. Ringing operations with nets were conducted on 155 different days, involving 3154 member-hours. These netting sessions were held in every month, with the majority of sessions, 76, being carried out on St. Edmund's Fen (Cmpts 30-35) while 44 sessions were at the Reedbed (Cmpts 51-53). The ringing hut at North Field/Gallops (Cmpts 20-23) was also used regularly with 35 sessions being conducted there. In the summer/autumn there were also 10 sessions in the more remote areas (9 of these to Burwell Fen, Cmpts 201-205). In addition, many days (estimated as 450 hours) were spent in nest-finding and the subsequent ringing of nestling birds (329 in all), these involved both nest boxes and open nests, the latter involving almost all areas of the "old" and "new" (vision) Fen.

The 2016 ringing total was 4761 birds of 59 different species. In addition to the 4761 "new" birds in 2016, 692 "retraps" (birds already bearing rings) had been originally ringed at the Fen in years earlier than 2016, and a further 34 were "controls" (birds originally ringed away from the Fen, but captured at Wicken), thus a total of 5487 different birds were handled. Several species topped the 100 mark, the highest scores being Reed Bunting 720, Reed Warbler 449, Blue Tit 425, Blackcap 338, Meadow Pipit 255, Redwing 208, Chiffchaff 223, Great Tit 165, Swallow 147, Greenfinch 146, Wren 141, Sedge Warbler 140, Blackbird 139, Goldfinch 127, Robin 112, House Sparrow 102; the next most numerous were Long-tailed Tit 97, Bearded Tit 93, Goldcrest 74, Yellow Wagtail 73, Chaffinch 71, Dunnock 69, Bullfinch 54 and Cetti's Warbler 51.

The Reed Bunting, Redwing, Bearded Tit and Yellow Wagtail totals are all-time Wicken records, while the Grasshopper Warbler ringing total (14) is the highest since the "miracle year" of 1973 when 23 were ringed (along with 17 Snipe, 22 Kingfishers, 111 Willow Warblers and 258 Song Thrushes)!

The more unusual species, normally ringed in small numbers, remained much the same as in recent years – Sparrowhawk 1, Kestrel 1, Water Rail 1, Collared Dove 1, Cuckoo 5, Kingfisher 8, Green Woodpecker 1, Jay 1, Magpie 3, Firecrest 1, Redstart 2, Whinchat 1, Spotted Flycatcher 1. The single Marsh Tit and Marsh Warbler were particularly unusual. No new species was added to the Group's ringing list in year 2016, which thus remains at 106 species.

The overall ringing total (4761) is the fourth-highest total ever (behind the 5608 of 2011, the 4969 of 2014 and the 4868 of 1973). However a simple look at the annual ringing totals does not allow more than the sketchiest interpretation of the year, in comparison with former years (the Group's Standard Sites and now Constant Effort Sites provide these data more accurately). Nevertheless, the 2016 totals suggest that, while many species remained at recent average levels (Wren, Robin, Dunnock, Blackbird, Song Thrush, Blackcap, Chiffchaff and Long-tailed Tit), there were only few significant gains (Cetti's Warbler), while several species showed continuing retreats (Whitethroat, Garden Warbler and Willow Warbler) or more surprising (Chaffinch and Bullfinch). Blue and Great Tits recovered from the disastrous 2015 nesting season (see Nesters Report) – it is interesting that the nest box ringing totals showed that Great Tits exceeded Blue Tits in all years up to about 2009, but that the situation has been reversed every year since.

Two of the species caught in significant numbers were those repaying the effort put in by a small number of dedicated Group members, using lure calls in the autumn (after the end of the Constant Effort Sites sessions) at Burwell Fen. These efforts produced almost all (250) of the 255 Meadow Pipits and over 70% (520) of the 720 Reed Buntings.

During 2016 we received news of the origins of some ringed birds recently trapped at Wicken Fen; Reed Warblers from Belgium, Netherland, Suffolk, Sussex and Essex; Blackcaps from Spain and Norfolk; Chiffchaff from Hertfordshire; Willow Warbler and Goldcrest both from Norfolk; Meadow Pipits from Yorkshire and Norfolk; Robin from Northampton; Reed Bunting from Nottingham and Barn Owl from Norfolk. The total of ringed imports to Wicken Fen during the lifetime of the Group so far, stands at about 340, with 26 of these coming from abroad.

A large number (56) of Wicken-ringed birds were reported from elsewhere in 2016. The most distant travellers were a Reed Warbler, a Sedge Warbler and a Song Thrush, all to France. Other travellers were a Goldfinch to Northern Ireland; Reed Warblers to Tyne & Wear, Kent, Suffolk and Sussex; Chiffchaffs to Surrey and Sussex; a Blackcap to Suffolk; a Lesser Whitethroat to Lincolnshire; a Robin to Sussex; a Blackbird to Suffolk; Greenfinches to Lincolnshire and Berkshire; a Lesser Redpoll to Lincolnshire and Reed Buntings to Rutland and Suffolk. Further birds moved lesser distances, mainly to our neighbour, Kingfishers Bridge, where a ringing site was newly established, but some to other parts of Cambridgeshire.

Recapturing our own birds showed some longevity, the oldest birds (strictly just the interval between first ringing, and last recapture) being a Long-tailed Tit and a Chaffinch both at 8 years 6 months (the former a WFG record), a House Sparrow at 7 years 11 months (also a WFG record), a Great Tit at 7 years 6 months, a Blue Tit at 7 years 5 months, a Robin at 6 years 6 months, a Reed Bunting, a Blackbird and a Chiffchaff each at 5 years 10 months (the last-named another WFG record), a Cetti's Warbler at 5 years 9 months, a Blackcap at 5 years 1 month and a Reed Warbler at 5 years 0 months.

In 2016, for the sixth successive year, Constant Effort Sites monitoring of the birds at the Reedbed (REECES) was carried out. The second CES, at St. Edmunds Fen (STECES), following the same pattern as REECES, with twelve 8-hour sessions at approximately 10-day intervals, was also completed in its third year. These CES efforts are organized, and analysed, by WFG members Michael Holdsworth and Peter Bircham/Chris Quy respectively.

The task of digitizing the backlog of the Group's ringing and retrap data (going back to 1968) was, at last, completed. This mammoth task was master-minded by Neil Larner, to whom great thanks are due. Neil and Chris Quy are now involved in testing, and no doubt soon implementing, the BTO's new online computerisation scheme.

The Group remains most grateful to the National Trust for granting permission for ringing on the Reserve, and for assisting with expenses. In turn, the Group in 2016 assisted the National Trust staff by putting on some ringing demonstrations. The University of Cambridge, in their turn, made a financial contribution to the National Trust, to assist with scientific studies at the Fen (the Ringing Group qualifies under this heading). Group members also collaborated with Anglia Ruskin University for the fifth year by demonstrating ringing to its MSc (Animal Behaviour) students. Some Group members assisted with bird-ringing away from the Fen where they were able both to gain more experience, and to contribute expertise. Specific scientific support was also given by Group members to the University of Cambridge studies on Great and Blue Tits under the leadership of Dr. Hannah Rowland in Madingley Wood.

The Secretary has maintained his production of regular Bulletins (8 in year 2016), keeping Members and Friends informed, not only of ringing activities, but also of general bird observations at Wicken Fen. He also produced monthly summaries of the Group's activities, which are displayed in the Thorpe Building at the Fen. Anyone interested in joining the Group is welcome to contact him, Dr. Chris Thorne, at St. Catharine's College, Cambridge, CB2 1RL (phone 01954 210566, email [cjrt@cam.ac.uk](mailto:cjrt@cam.ac.uk)).

## **Report on Wicken Fen nests 2016**

### **(a) Small Nest Boxes (Carole Davis)**

Of the 84 nest boxes monitored across the Fen in 2016 (12 at the reedbed, 13 at Gallops, 59 at St Edmunds), 47 reached the egg laying stage of which 33 were Blue Tit nests and 14 Great Tit nests, producing 278 and 94 eggs respectively. This was a marked departure from previous years in terms of the relative proportions of

the two species using the boxes (see Tables below). In the first three years of monitoring (2009-11), there were slightly more Great Tit pairs using the boxes than Blue Tits. However, Blue Tits have been in the lead since 2012 (with the exception of 2015). 2016 had the largest number of Blue Tits using the boxes in the eight years of monitoring with Great Tits at 14, the lowest. It will be interesting to see whether these results are reflected in the national figures from the BTO. Survival rates (egg to fledging) were well above average for both species, at 74.1% for Blue Tits and 64.9% for Great Tits.

Thanks to Bernard Siddle for his help and company when undertaking the monitoring and for his practical skills in repairing boxes and making new ones.

#### Species Summary with Survival Rates – Blue Tit

P/E = survival rate from eggs to pulli. F/P = survival rate from pulli to fledged young. F/E = survival rate from egg to fledged young.

Year	Nest Count	Eggs	Pulli	Fledged	P/E	F/P	F/E
2009	18	95	55	43	57.9%	78.2%	45.3%
2010	19	132	104	93	78.8%	89.4%	70.5%
2011	20	171	138	119	80.7%	86.2%	69.6%
2012	26	187	90	55	48.1%	61.1%	29.4%
2013	25	170	107	85	62.9%	79.4%	50.0%
2014	29	250	223	219	89.2%	98.2%	87.6%
2015	23	153	60	44	39.2%	73.3%	28.8%
2016	33	278	231	206	83.1%	89.2%	74.1%
<b>Totals:</b>	<b>193</b>	<b>1436</b>	<b>1008</b>	<b>864</b>	<b>70.2%</b>	<b>85.7%</b>	<b>60.2%</b>

#### Species Summary with Survival Rates – Great Tit

Year	Nest Count	Eggs	Pulli	Fledged	P/E	F/P	F/E
2009	22	109	75	75	68.8%	100.0%	68.8%
2010	23	157	94	76	59.9%	80.9%	48.4%
2011	21	170	91	71	53.5%	78.0%	41.8%
2012	23	160	57	36	35.6%	63.2%	22.5%
2013	18	88	38	28	43.2%	73.7%	31.8%
2014	21	168	134	131	79.8%	97.8%	78.0%
2015	27	142	48	29	33.8%	60.4%	20.4%
2016	14	94	69	61	73.4%	88.4%	64.9%
<b>Totals:</b>	<b>169</b>	<b>1088</b>	<b>606</b>	<b>507</b>	<b>55.7%</b>	<b>83.7%</b>	<b>46.6%</b>

#### (b) Large boxes (Neil Larner)

After some changes, fourteen boxes were monitored, plus the Pout Hall corner tern raft, where Common Terns fledged three chicks for the fifth consecutive year. Nesting was protracted in 2016 later than the Autumn equinox, but Barn Owls fared well, much improved compared to 2015. Between them, Stock Doves and Barn Owls had eleven chicks in four nests late in September. Most were close to fledging, but the fluffy owlets in one box were so small that their survival was questionable.

Elsewhere on Burwell Fen, Jackdaws acquired any empty box, personalising it with their odour and sticks aplenty. This habit seems to claim the box for their use year after year, though one was so crammed, the chicks tumbled out long before they were large enough to survive. Another pair lost their chicks similarly, nesting on an open ledge. Eight of the nine Burwell Fen boxes were occupied, successfully fledging 5 Barn Owls, 12 Jackdaws and 2 Stock Doves.

Only one of the two boxes on Oily Hall was used, where a Barn Owl nest was predated. Moving the box to simplify monitoring had inadvertently allowed access by an egg thief of some sort. Barn Owls returned to the Tubney Fen box for the first time since 2012, raising two chicks successfully before starting their very late brood. Nearby, two Stock Dove nests raised two youngsters each. A single Barn Owl fledged from the new Bog Oak field box whilst there were two broods, each of four chicks, in the Guinea Hall box.

Kestrel nests were again notable by their absence, having last used a Burwell Fen box in 2010. However, this has allowed the open-fronted box to be successfully used by Stock Doves.



**(c) Open nests (Ann Beeby)**

This year has once again shown a good range and number of open nests at Wicken Fen, with the usual combination of watching and searching, and monitoring with some successful outcomes. The time spent searching for nests was limited by various factors. Most notable of these was the time spent on the trial year of observing colour-ringed Chiffchaffs and we are very grateful to the ringers for help with this. Flooded paths restricted some access, and searching on the Guinea Hall ‘scrub patch’ was hampered by the herd of ponies which with foals are very feisty.

The weather through spring 2016 was variable, with northerly winds in March, which may have delayed the arrival of some migrants. April and May were mostly fine and dry (if cool), but June gave a cold wet spell which adversely affected chick growth. Predation was generally lower than 2015. A few pulli were ringed, but less than last year, and it is interesting for chiffchaffs during a cold spell that despite good clutch sizes (5-6), most of the broods were of 2-3 chicks which were of good weight, so it seems that it makes sense to give the available food to fewer young with a better chance of fledging, which most of them did.

Below are the totals by species, for 2014-16. Notable by their absence are Swallows and Sylvia warblers. Two nests that I would have loved to add to the total were a Willow Warbler and a Yellowhammer, both feeding young but I couldn’t find the actual nests, and gave up for fear of further disturbance (\*).

	2014	2015	2016	Notes for 2016.
Mute Swan	1			
Little Grebe		1	1	Chicks seen near nest.
Moorhen	2	2	1	
Coot	2	2		
Wood Pigeon	8	2	2	
Collared Dove	2	1	2	
Cuckoo		1	1	
Swallow	4	5		
Wren	3	12	4	
Duncock		6	3	1 pullus ringed.
Robin	2	6	2	
Blackbird	6	12	5	
Song Thrush	2	4	2	
Sedge Warbler	1			
Reed Warbler	4	2	1	Cuckoo chick.
Blackcap	5	3		
Whitethroat	2			
Chiffchaff	18	30	21	16 pulli ringed, from 5 nests
Willow Warbler	2	2	*	
Long-Tailed Tit	3	6	2	
Chaffinch	2	3	2	
Goldfinch	2	5	3	
Bullfinch	2	1		
Linnet	10	3	2	
Yellowhammer	1		*	
Reed Bunting	1	4		



# Reach 24 Bioblitz, 2<sup>nd</sup> and 3<sup>rd</sup> July 2016.

Maddie Downes

Reach24 is a parcel of land on the north edge of the village of Reach, of about 24 acres (10 ha) in area, hence the name! The National Trust purchased it as part of the Wicken Fen Vision Project in 2011. The southern 12 acres is being leased to the Reach community, who have created a steering group to drive the village's ideas for the site. The aim is that the area will be used by local people as an area to enjoy being outdoors. They have already established a cricket pitch which they use for matches against other local village teams, planted an orchard made up of native varieties of apple, pear and plum trees, and have also planted a woodland that should develop nicely over the next few years. The north part of the field is managed as a hay meadow and there is a species-rich hedge and ditch through the centre of that part of the field.

The Reach24 Bioblitz was an exciting opportunity to get some baseline species data for this site, as well as getting people out looking for wildlife on their local patch. Saturday evening started off with setting out small mammal traps in the orchard and down some of the paths ready to be checked the next morning. Then John Rawle arrived to help us track down some bats. We had to wait a little while and wander down closer to the village to hear anything on our bat detectors, but we saw a good amount of pipistrelles and then by the time we got back to Reach24 we managed to hear one on site so it could be recorded as our first mammal species. By this time, Bill Mansfield had set up some moth traps and they were coming in thick and fast. By the end of the night and after a few close encounters with the macro moths, we had recorded 48 moth species, including a Reed Leopard Moth which is nationally scarce.



The moth trap was set up next to a white sheet, on which many moths settled which helped to show their colours and features.



A base camp was set up in this tent, with our nets, trays, books and signs. Sunday was warm and sunny, so it helped us all keep cool.

We were then up early on Sunday to check the mammal traps and we found 3 common shrews, one of which was a very pregnant female. There was no rest from then on as we hunted down birds, bugs and butterflies through the morning. We then finished with a wander around the site checking off all the plant species we could identify. By Sunday lunchtime, the species count had reached 231. Some more results have come in since, as some of the experts took some insects away to have a closer look at and we finally totalled 291 species!

Thank you to all the experts who came and shared their knowledge, and to everyone who came along to have a good time too exploring the wildlife in their local patch.



Golden-bloomed Grey Longhorn beetle, *Agapanthia villosoviridescens*.

This individual was swept from tall vegetation and kindly posed for photos.

This species often develops in the stems of hogweed plants, of which there were many around the edges of the field.

One of the three common shrews (*Sorex araneus*), caught in a Longworth trap. After photos, these were released back into the tall grass habitat where they were found.

Other mammals recorded were rabbit, muntjac deer, roe deer, brown hare, common pipistrelle bat, and mole (fresh molehills were found across the site).



Field Scabious (*Knautia arvensis*), a relatively uncommon wildflower in the main area of Wicken Fen nature reserve, but found widely across Reach24, especially by the hedges and fence-lines.





# Notable species records at Wicken Fen in 2016

Wicken Fen is a well-known and well recorded site, however, there are always discoveries to be made. For example, new species can be found, species re-discovered after many years, and new locations spotted for fen or wetland specialities. Also, as the area of habitats at Wicken Fen is expanded through the Vision project and new habitats develop, we are always interested in finding out what is taking up residence across all places in the nature reserve.

For example, hundreds of cowslips *Primula veris* appeared in spring two years ago on Guinea Hall across a large area of restored grassland, in places where they had not been noted before. Also on Guinea Hall, the chalk-loving plant Yellow-wort *Blackstonia perfoliata* appeared where a ditch edge had been scraped, exposing bare ground. Here are a selection of interesting observations of species from 2016.

In 2016, Natural England commissioned two professional surveys at Wicken, as part of a wider project investigating the fauna of fenland sites. One survey investigated aquatic habitats and the other scrub edge habitats and these found both rare fen species and some new for the NNR. Such special surveys, as well as general records and observations, all help add to the core knowledge of our site.

Overall, in 2016 at least 37 species were added to the species list for Wicken Fen nature reserve, both scarce species and more common, widespread species, perhaps spreading to the much larger area and range of habitats offered by the National Trust at Wicken. Given that we have a species list of over 9,000 species, adding 37 more is quite an achievement.



## Mammals

A surprising addition of a new mammal species for our official records was the sighting of a Common Seal by Caroline Delph on 1<sup>st</sup> January 2016 in Drainer's Dyke on the north side of the Fen. It was seen again a few days later in Burwell Lode. Wicken is about 30 miles from the sea at Kings Lynn!

## Diptera (Flies), Coleoptera (Beetles) and Hemiptera (True Bugs)

*Cerodontha capitata* (Diptera: Agromyzidae): Wicken Adventurers' Fen (TL553693), 2 males swept on 26/05/2016. Recorded by A. Dutton. New to Wicken.

*Dolichopus caligatus* (Diptera: Dolichopodidae): Wicken Sedge Fen (TL554700), adult from scrub / tall fen edge habitat on 19/05/2016. Recorded by Andy Jukes. A nationally scarce species. New to Wicken.

*Dolichopus lepidus* (Diptera: Dolichopodidae): Wicken Sedge Fen (TL554705), adult from scrub / tall fen edge habitat on 10/07/2016. Recorded by Andy Jukes. New to Wicken.

*Dolichopus wahlbergi* (Diptera: Dolichopodidae): Wicken Sedge Fen (TL554700), adult from scrub / tall fen edge habitat on 19/05/2016. Recorded by Andy Jukes. New to Wicken.

*Bradysia pectoralis* (Diptera: Sciaridae): Wicken Adventurers' Fen (TL553693 and TL554693), on 26/05/2016, each time a male in a suction trap. A little recorded fly family and very few records nationally of this species. Recorded by A. Dutton, determined P.J. Chandler. New to Wicken.

*Bradysia placida* (Diptera: Sciaridae): Wicken Sedge Fen (TL553700) on 26/05/2016, a male swept. Recorded by A. Dutton, determined P.J. Chandler. New to Wicken.

*Platycheirus podagratus* (Diptera: Syrphidae): A hoverfly species new to the Wicken list, an adult, from scrub / tall fen edge habitat. Wicken Sedge Fen (TL554705) on 10/07/2016. Recorded by Andy Jukes.

*Aphodius pedellus* (Coleoptera, Aphodiidae): Wicken Adventurers' Fen (TL5569), in pony dung, by S.A. Lane 03/06/2016. A dung beetle. New to Wicken. This addition brings the number of *Aphodius* dung beetle species to 18 for Wicken and this decent total is indicative of the quality of this resource for beetles at Wicken Fen due to the number of ponies and cattle.

*Platyrhinus resinosus* (Coleoptera, Anthribidae): Wicken Verrall's Fen (TL551701), this relatively scarce saproxylic (dead wood associated) species was new to Wicken when found by A. Dutton on 26/05/2016.

*Corticaria alleni* (Coleoptera, Latridiidae): Wicken Sedge Fen (TL558707 and TL558708), from samples of Ganoderma fungi collected on 05/08/2016 by Mark G. Telfer from veteran willow pollards. A relatively scarce saproxylic species, with a scatter of records across southern England, and new to Wicken.

*Ptenidium formicetorum* (Coleoptera, Ptiliidae): Wicken Sedge Fen (TL5570), by Mark G. Telfer at two locations, on 31/03/2016 with 2 specimens from sieving deeper and damper stuff from large sedge heap in open and on 10/06/2016 from aerial netting while walking through fen. New to Wicken.

*Involvulus caeruleus* (Coleoptera, Rhynchitidae): A twig-cutting weevil. Two records. Wicken Adventurers' Fen (TL5569) by S.A. Lane 03/06/2016. Wicken Sedge Fen (TL559707), 10/07/2016 by Andy Jukes. New to Wicken Fen.

*Zacladus exiguous* (Coleoptera, Curculionidae): A nationally scarce (Nb) weevil, found on 26/05/2016 from a ditch edge at Wicken Fen: Adventurers' Fen (TL555695) by A. Dutton. The larva of this species feeds on species of *Geranium*. New to Wicken.

*Longitarsus nasturtii* (Coleoptera, Chrysomelidae): First records for 75 years at Wicken of this nationally scarce leaf beetle, taken from comfrey *Symphytum* leaves at the north end of Wicken Sedge Fen (TL5670) on 03/06/2016 by S.A. Lane and 10/06/2016 by Mark Telfer.

*Longitarsus kutscherae* (Coleoptera, Chrysomelidae): Leaf beetle, found at Wicken Sedge Fen (TL5570) on 11/04/2016 by S.A. Lane. New to Wicken.

*Ptenidium formicetorum* (Coleoptera, Ptiliidae): 2 specimens from sieving deeper and damper stuff from large sedge heap in open of the Wicken Sedge Fen (TL559704) on 31/03/2016 and also 1 from aerial netting 10/06/2016 on the fen. Recorded by Mark Telfer. New to Wicken.

*Mordellistena pumila* (Coleoptera, Ptiliidae): Swept from a ditch edge on 26/05/2016 at Wicken Fen: Adventurers' Fen (TL555695) by A. Dutton. A Tumbling Flower Beetle, New to Wicken.

*Gyrophana lucidula* and *Microdota aegra* (Coleoptera, Staphylinidae): Both of these scarce rove beetles were discovered by aerial netting by Mark Telfer whilst walking through Wicken Sedge Fen (TL5570). Both are new to Wicken Fen.

*Eucinetus meridionalis* (Coleoptera, Staphylinidae): 9 specimens of this very uncommonly recorded species was found by S.A. Lane, in sedge litter at the base of a willow, Wicken Fen: Sedge Fen Drove (TL553705) on 11/04/2016. New to Wicken.

*Atheta triangulum* (Coleoptera, Staphylinidae): First record for over 100 years for this rove beetle, 1 female found in a soggy old Birch Polypore, lying on the ground in Wicken Sedge Fen (TL559702) on 08/04/2016 by Mark Telfer.

*Cryptophagus denticulatus* (Coleoptera, Cryptophagidae): 1 male in a suction sample from a sedge heap by corner of boardwalk. Wicken Sedge Fen (TL559704) on 05/08/2016 by Mark Telfer. New to Wicken Fen.

*Corticaria alleni* (Coleoptera, Latridiidae): Found in samples of Ganoderma bracket fungus taken from a willow on Wicken Sedge Fen (TL5570) on 05/08/2016 by Mark Telfer. New to Wicken Fen.

*Cis fagi* (Coleoptera, Ciidae): From sample of Ganoderma bracket fungus collected 05/08/2016 off a veteran willow pollard. Wicken Sedge Fen (TL558707) by Mark Telfer. A local saproxylic species, new to Wicken Fen.

*Harpocera thoracica* (Hemiptera, Miridae): A widespread mirid bug, but new to Wicken Fen when recorded from scrub edge, tall herb habitat by Andy Jukes (det. S.A. Lane) on Wicken Sedge Fen (TL554700), on 19/05/2016.

*Cixius similis* (Hemiptera, Cixiidae): An uncommon bug species, taken in a suction sample from Wicken Fen: Brickpit Ponds (TL560707) on 26/05/2016 by A. Dutton. New to Wicken Fen.

*Miris striatus* (Hemiptera, Miridae): A widespread mirid bug, with the lovely common name of 'Fine Streaked Bugkin', but surprisingly this is new to the Wicken Fen lists. S.A. Lane recorded it on 03/06/2016 in Wicken Sedge Fen (TL561704) and Alex Dittrich swept it at during the Reach24 Bioblitz (TL569663), also on 03/07/2016. [photo, below right]



## Moths

Visits by micro-moth experts S.D. Beavan and R.J. Heckford provided a number of valuable records, including two species new to the Fen and two re-discoveries after decades, amongst several other interesting observations.

*Ancyliis mitterbacheriana* (Tortricidae): larva in podded Oak *Quercus* leaf. Wicken Fen: Little Breed Fen (TL559708) on 24/09/2016. A new species for the site. [Photo of the adult moth, above left]

*Stigmella hybnerella* (Nepticulidae): vacated mines on hawthorn *Crataegus*. A new species for the site. 24/09/2016. Wicken Fen: Little Breed Fen (TL560708).

*Caloptilia elongella* (Gracillariidae): a few vacated larval folds and old early upper surface mines on alder *Alnus glutinosa*. This is apparently the first site record since 1878. Found on 24/09/2016, in Wicken Fen: Little Breed Fen (TL559708).

*Parornix betulae* (Gracillariidae): a few tenanted and vacated folds on *Betula*, first record since A.M. Emmet in 1971. On 24/09/2016 in Wicken Sedge Fen (TL556707).

## Spider

*Argiope bruennichi* (Wasp Spider):

At last we have recorded this species at Wicken, on Burwell Fen (TL565683), 3 found in a small area of tall ungrazed grass on 15/09/2016, by S. Warrington [photo, right, by SW].

It is not surprising to find this distinctive species which is spreading across southern England and East Anglia.



## Plant Galls.

Jerry Clough and Keith Palmer of the British Plant Gall Society visited Wicken Fen on 30<sup>th</sup> September 2016. A gall is an abnormal growth produced by a plant or other host under the influence of another organism and most galls are caused by fungi or invertebrates. Most naturalists are familiar with galls such as 'Robin's pin-cushion' on dog rose, or spangle galls on the underside of oak leaves. However, their study and identification requires some specialisation and the BPGS aims to encourage and co-ordinate the study of plant galls.

Jerry and Keith re-discovered several species for which there were relatively old data for Wicken Fen, however, they also added at least 14 (possibly more, after checks) species new to the nature reserve, a wonderful result from a single day visit. These new species included:

*Acalitus brevitarsus* (gall mite, Eriophyidae): Several locations. Gall on *Alnus* (alder).

*Acalitus rudis* (gall mite, Eriophyidae): Gall on *Betula* (birch).

*Aculus tetanothrix* (gall mite, Eriophyidae): Gall on *Salix* (willow).

*Cecidophyopsis betulae* (gall mite, Eriophyidae): Gall on *Betula* (birch).

*Taphrina sadebeckii* (Ascophyte fungus, Taphrinaceae): Gall on *Alnus* (alder).

*Andricus lignicola* f. *agamic* (gall wasp, Hymenoptera, Cynipidae): Cola-nut Causer, on *Quercus* (oak).

*Euura testaceipes* (Hymenoptera, Tenthredinidae): Gall on *Salix* (willow). Rarely recorded with only a handful of records on the NBN Atlas across the UK.

*Pontania viminalis* (Hymenoptera, Tenthredinidae): Gall on *Salix* (willow).

*Trioxa rhamni* (a plant bug, Hemiptera, Triozidae): causes gall of leaf of *Rhamnus cathartica* (Buckthorn). Rarely recorded with only a handful of records on the NBN Atlas across the UK.



*Cystiphora sonchi* (a fly, Diptera, Cecidomyiidae): larva causes gall of leaf of *Sonchus* (sow-thistle), found in many places across the Fen.

*Dasineura kiefferi* (a fly, Diptera, Cecidomyiidae): Hedge along north side of fen. Uncommon.

*Dasineura plicatrix* (a fly, Diptera, Cecidomyiidae): causes leaf gall of *Rubus*, found along Lode Lane.

*Semudobia betulae*, *Semudobia skuhravae*, *Semudobia tarda* (fly, Diptera, Cecidomyiidae): Galls of all of these three species were found in *Betula* (birch) catkins.

### Plants

The addition of a new species to the site's lists is much more common with the invertebrate groups, as shown by the lists above. However, it is still possible to add a few plant species to our lists, as the two records below show. Both of these common species are new to the Wicken Fen vascular plant list!

Red Campion (*Silene dioica*): This very common species was added to our lists when a few dozen plants were found by Stuart Warrington on 16/06/2016 on the south-facing bank of Wicken Lode near Verrall's Fen (TL545696). [photo, left]

Hoary Plantain. (*Plantago media*): This species was discovered by Maddie Downes at the Reach24 site (TL569663) during the Bioblitz on 3<sup>rd</sup> July 2016. It prefers the calcareous soils and open grassland habitat which are prevalent at Reach. [photo, right]



# Research

## The latest research papers about Wicken Fen

Boreham, S. (2017) Variations in groundwater chemistry and hydrology at Wicken Fen, Cambridgeshire, UK. *Wetlands Ecology and Management*, **25**: 1-19.

Full article available from <https://link.springer.com/article/10.1007/s11273-017-9550-2>

### Abstract

This paper presents the results of a project in which the seasonal changes in the chemistry of groundwater in dipwells at Wicken Fen National Nature Reserve were investigated for the first time. Thirteen dipwells arranged in two roughly perpendicular transects across Wicken Fen were sampled for groundwater on a monthly basis between April 2010 and April 2011. Surface water from a drainage ditch (Gardiner's Drain) and groundwater from a further location (dipwell 17) were also sampled at the same interval. The water samples were analysed for pH, electrical conductivity (EC), major solutes (Ca, Na, Mg, S), nutrients (N, P, K) and trace elements (Al, Fe, Mn) in the laboratory. Measurements of pH and electrical conductivity were also taken from the soil at the fourteen dipwell locations. The results of these analyses are compared to borehole data, groundwater levels and precipitation data to form a new conceptual model of the spatial and temporal variations in groundwater chemistry at Wicken Fen, which have important implications for future hydrological and vegetation management regimes.

Ultimately, knowledge of how a system works is vital for the successful management of that system, and for spotting long-term trends that might be deleterious to that system if left unchecked. Understanding how Wicken Fen 'works' through time and in every dimension from the water supply to the soil, the vegetation and fauna, from the microscopic to the large scale, and from the physical to the chemical should be the eventual goal of any management strategy.

Peacock, Mike, Luke M. Ridley, Chris D. Evans and Vincent Gauci (2016) Management effects on greenhouse gas dynamics in fen ditches. *Science of the Total Environment* **578**: 501-512.

[Wicken Fen is one of the field sites]

<http://www.sciencedirect.com/science/article/pii/S0048969716324366>

### Abstract

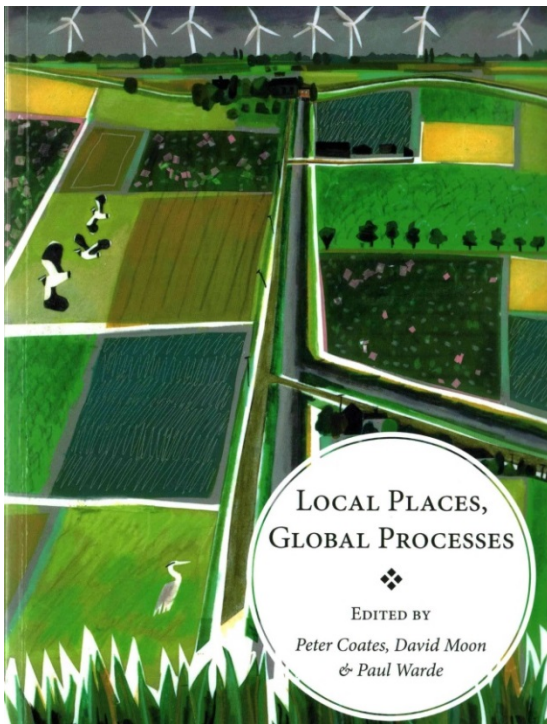
Globally, large areas of peatland have been drained through the digging of ditches, generally to increase agricultural production. By lowering the water table it is often assumed that drainage reduces landscape-scale emissions of methane (CH<sub>4</sub>) into the atmosphere to negligible levels. However, drainage ditches themselves are known to be sources of CH<sub>4</sub> and other greenhouse gases (GHGs), but emissions data are scarce, particularly for carbon dioxide (CO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O), and show high spatial and temporal variability. Here, we report dissolved GHGs and diffusive fluxes of CH<sub>4</sub> and CO<sub>2</sub> from ditches at three UK lowland fens under different management; semi-natural fen, cropland, and cropland restored to low-intensity grassland. Ditches at all three fens emitted GHGs to the atmosphere, but both fluxes and dissolved GHGs showed extensive variation both seasonally and within-site. CH<sub>4</sub> fluxes were particularly large, with medians peaking at all three sites in August at 120 to 230 mg m<sup>-2</sup> d<sup>-1</sup>. Significant between site differences were detected between the cropland and the other two sites for CO<sub>2</sub> flux and all three dissolved GHGs, suggesting that intensive agriculture has major effects on ditch biogeochemistry. Multiple regression models using environmental and water chemistry data were able to explain 29–59% of observed variation in dissolved GHGs. Annual CH<sub>4</sub> fluxes from the ditches were 37.8, 18.3 and 27.2 g CH<sub>4</sub> m<sup>-2</sup> yr<sup>-1</sup> for the semi-natural, grassland and cropland, and annual CO<sub>2</sub> fluxes were similar (1100 to 1440 g CO<sub>2</sub> m<sup>-2</sup> yr<sup>-1</sup>) among sites. We suggest that fen ditches are important contributors to landscape-scale GHG emissions, particularly for CH<sub>4</sub>. Ditch emissions should be included in GHG budgets of human modified fens, particularly where drainage has removed the original terrestrial CH<sub>4</sub> source, e.g. agricultural peatlands.

### Other Publications

Ryan, R.P. and Warrington, S. (2017) New county records of Hemiptera-Heteroptera from National Trust sites in East Anglia. *The Hemipterist* **4**: 144-145. [includes several Wicken Fen records]

<https://sites.google.com/site/thehemipterist/>

Jenkins, L. and Downes, M. (2016) Using green bridges to graze a landscape-scale nature reserve. *NT Views* 2016: 94-96. [gives an account of the extensive grazing regime and the new bridge across Harrison's Drove]



Coates, P., Moon, D. & Warde, P. (2016)  
*Local Places, Global Processes: Histories of Environmental Change in Britain and Beyond.*  
Windgather Press.

We live in an age of unprecedented environmental change: global, interconnected and universal. Yet though our lives are inextricably connected to global processes, and increasingly mobile, we still live in particular places. Our perceptions of change, and what kind of change might be for good or ill, are shaped by the interaction of localised experience and the wider forces of transformation. *Local Places, Global Processes* examines how these relationships have been shaped in Britain over time in three ways. First, through essays addressing influential ways of understanding and debating questions of 'the state of nature'. These are complemented by case studies on conservation, landscape change and management, and how perceptions of environmental change have emerged or been discarded over time. Chapters also draw on a series of site-based workshops that brought together historians, landscape managers and artists to discuss and reflect on particular sites: **Wicken Fen** in Cambridgeshire, owned by the National Trust and the first British nature reserve; the Quantock Hills Area of Outstanding Natural Beauty in Somerset, England's first AONB and a landscape enriched by Romantic association; and the landscape of Kielder Water and Forest, a land of superlatives in Northumberland in north-eastern England - the largest planted forest and artificial lake in northern Europe.

The multi-disciplinary approach draws together the exchanges, artworks and writing assembled at these workshops and afterwards. This opens up how being in a place, and engaging with ideas attached to it, shape perceptions of the environment. It provides resources with which landscape managers can think about their tasks and engage various publics in discussion about future environments in light of these histories of place. Rather than a history of these three places, this is history written from them.

## Carrying out a Research Project at Wicken Fen

If you wish to carry out research at Wicken Fen, you will need to have the support of the Wicken Research and Recording Group and you must get a permit.

**For research proposals**, please ask for the form: email: [wfresearch@nationaltrust.org.uk](mailto:wfresearch@nationaltrust.org.uk)

The R&R Group will consider the research proposal and get back to you as soon as we can. We like to have the site used for research (there have been 24 students projects (BSc, MSc, PhD) at Wicken in the last 6 years). However, we do need to co-ordinate and manage the research work. We also have ideas for useful projects and can guide you to good sites on the property, provide maps etc. We have risk assessments available if you wish to work on areas where we have grazing animals.



# Recording Species at Wicken Fen.

Please do come to Wicken Fen to observe and record its flora and fauna. Don't assume that because the site has such a long history of recording that nothing new or unusual can be found. This Newsletter has highlighted a number of species found new to the property or the first record for many decades. Also, the Reserve is getting larger and it is very interesting to find out what species occur on the restoration land, so do look at the new land as well as the classic fen.

We can send you a Map of the site too, to help you get around and find the new areas of habitat to survey.

## Please get a Permit

You will need a permit to use a trap, net or collect specimens, but these are readily obtained with the understanding that you will send us your records. To get a Recording Permit, email (or write) with your address and what you want to do study (eg 'Moth trapping', 'collect Coleoptera and Hemiptera using nets'), to: Email [wickenfen@nationaltrust.org.uk](mailto:wickenfen@nationaltrust.org.uk) or Email [stuart.warrington@nationaltrust.org.uk](mailto:stuart.warrington@nationaltrust.org.uk)

## **Sending in your Records: The key information we need is: Species Name, Location, OS Grid Ref., Date, Recorder.**

It is also useful to add Comments (exactly where found, the habitat, notes on the behaviour etc.), Determiner (if different to the recorder) and Abundance (how many). The ideal Format for us is an Excel Spreadsheet, with each individual record on a separate line, with separate columns for Species Name, Location, Grid Ref., Date, etc. This can then be emailed to [wickenfen@nationaltrust.org.uk](mailto:wickenfen@nationaltrust.org.uk) or to [stuart.warrington@nationaltrust.org.uk](mailto:stuart.warrington@nationaltrust.org.uk)

If you don't have access to email and computers, than a typed or hand-written list is perfectly acceptable.

Small Copper	Compartment 22	TL562706	10/06/2015	John Smith	Basking on path	4
Gatekeeper	Sedge Fen Drove	TL556706	10/06/2015	John Smith	15 over 100 metres	15
Speckled Wood	St Edmunds Fen	TL564702	10/06/2015	J. Jones	A few noted	
Peacock	Burwell Fen: Cmpt 208	TL563689	10/06/2015	J. Jones	5 around thistles	5

## **Wicken Fen Species data on the NBN Atlas**

The NBN Atlas is the country's largest collection of biodiversity information <https://nbnatlas.org/>

An updated dataset was provided by Wicken to the NBN Atlas in February 2017. We do this to make sure our data are widely available and in the last 12 months over 600 downloads of these data have been made from the NBN, with research and education being the stated purpose for the majority of these downloads.

The Wicken dataset statistics are here: <https://registry.nbnatlas.org/public/showDataResource/dr1397>

There are now 103,317 records (up 45% from the 73,514 records we first put on the NBN in 2012) of **9,175 taxa** (species and subspecies), up **432** species (+ 5%) from 8,743 in 2012. Flies (2020 species), beetles (1587) and moths (1220) are the most species-rich groups. We think that this makes Wicken Fen the most species-rich nature reserve in England (unless you know different?).

If anyone would like a **full list** of the Wicken records for any taxon group, such as Moths, Beetles, Vascular Plants, Bryophytes, True Flies etc. with species names, dates, locations, notes, this can be supplied as an **Excel** file. Just contact Stuart Warrington by email (p1).