



Thorpe Marshes Wildlife Report 2013

Norfolk Wildlife Trust's Thorpe St Andrew Marshes nature reserve – NWT Thorpe Marshes for short in this report and elsewhere – was established in 2011. It's NWT's first nature reserve in Norwich, recognising the wildlife value of the marshes and protecting the area as an asset for people in Thorpe St Andrew and beyond.

This is the second annual wildlife report, and this summarises some of the observations of wildlife during 2013. It includes records from the monthly wildlife walks, plus records made by me or provided by several naturalists (see acknowledgements). For anyone who reads this and has additional records, we'll be glad to have them. We hope this report may encourage more recording, especially of under-recorded groups.

The report is far from a full wildlife survey. Plants are excluded, partly for reasons of space, and partly as they vary less from year to year. Mammals are under-recorded: these are again some casual records. The invertebrates list is mostly more showy, terrestrial species. Aquatic invertebrates were surveyed in 2012 by Norfolk Wildlife Services Ltd, commissioned by NWT, and I have added a note of two scarce species that they found.

Chris Durdin, January 2014 (with update in May 2014)

Acknowledgements

Records from Mike Burrows, Ricky Cleverley, Paul Davidson, Chris Durdin, James Emerson, Justin Lansdell, Ian Lovering, Pam Taylor and Julia Weaver, plus some from the Yare Valley Wildlife website <http://yarevalleywildlife.synthasite.com/>

Photos by Chris Durdin, unless otherwise noted.

Initials used in this report:

NWT: Norfolk Wildlife Trust. CP: Country Park (Whitlingham).

References

Durdin, Chris (January 2013). *Thorpe Marshes Wildlife Report 2012*.

Emerson, James (January 2014). *Whitlingham Bird Report 2013*.

Norfolk Wildlife Services Ltd (2012). *Survey of Aquatic Invertebrates in ditches at Thorpe Marshes, Yare Valley*.

Websites for NWT Thorpe Marshes

NWT: www.norfolkwildlifetrust.org.uk/Wildlife-in-Norfolk/Reserves/Thorpe-Marshes.aspx
www.honeyguide.co.uk/thorpemarshes.htm



A glorious late summer: purple loosestrife, migrant hawker, marsh ragwort, close-up of peacock's wing.

Key habitats and management

The gravel pit: since gravel extraction ceased, this is full of water and is now known as St Andrew's Broad. It attracts wintering ducks and other waterfowl, though few breeding birds.

A gravel spit, from which you can view the open water, and gravel banks adjacent to and opposite the spit, are used by loafing ducks, gulls and waders, and little ringed plovers come and go from these in spring.

Grazed marshes: to the east and north of the broad, running up to the railway line, are open grazing marshes on which there are cattle between May and October. Within this is the 'flood', often under water but also drying out partially or completely, around and within which are clumps of rushes and yellow flag iris.

Near to the railway bridge the grazing marshes grade into grazed fen with taller vegetation, mostly reed and reed sweet-grass *Glyceria maxima*. There are also a few trees and scrub.

Ungrazed marsh: ranker vegetation around the broad, dominated by greater willowherb. A large amount of scrub was cleared by the NWT's Broads team in late autumn.

Ditches: most obvious running through the grazing marshes, where the vegetation community indicates good water quality, but also in the ungrazed marsh, including between the broad and the river.

Management: NWT has a 10 year Higher Level Stewardship agreement which started on 1st March 2013. The agreement provides funding to support wetland grazing, ditch and scrub management, fen maintenance and support for educational access. In 2013, this included clearance of willows and buddleia on much of the southern fringe of the broad, to prevent marsh here from turning to scrub and opening up the view over the broad from the riverside footpath.



View over St Andrews Broad, opened up after scrub management.

Guided walks

There were monthly NWT guided walks led by Chris Durdin, promoted through the Town Council Newsletter, the two websites, posters and newspaper 'what's ons'. The 12 walks attracted 104 people through the year (90 in 2012).

Review of the year

Snipe are plentiful in winter on Thorpe Marshes, but it took the visit of two peregrines on 9th **January** to push about 200 into the air – one of which was in the claws of one falcon as it headed towards the cathedral. Cold weather and snow later in the month brought in ducks: two male goldeneyes on 11th January and 178 gadwall on 20th January. On 4th **February**, with much of the marsh under water, c120 teal included 20 swimming across the path. Diving ducks peaked in early **March**: 134 tufted ducks and 73 pochards on 2nd March. There were deep floods again on 14 March.



Snow scenes, 15th January 2013.

It was an exceptionally cold spring, with the first singing chiffchaff on 7th **April**, when there were also four green sandpipers on the flood. Winter ducks lingered late, including 61 tufted ducks on 30 April. One, occasionally two, Cetti's warbler sang, the harsh winter having reduced their numbers from the regular four and peak count of six in 2012. Swifts in late April were a nice surprise in contrast to the generally late spring, though the Yare valley often has early arrivals. A lesser whitethroat in riverside scrub on the guided walk on 28th April was notable. Other warblers sang well in late April and **May** with whitethroats and sedge warblers most prominent. Inclement weather brought in a flock of 50 house martins over the Broad on 29th May.

The late season meant the yellow flag irises were at their best in **June**. Warblers kept singing throughout the month, including a garden warbler in scrub by the river. Grasshopper warblers seemed to be absent, which was sad as two singing birds were a highlight in 2012, though later we received reports of a bird occasionally heard. Tree bumblebee, a very recent colonist in Norfolk, was found on the reserve. Dragonflies and damselflies were late emerging: Norfolk hawkers were common on 30 June and through much of **July**. A brood of six tufted ducks were on the Broad on several occasions. It was a good year for small tortoiseshells: 17 were noted on 16th July and their caterpillars were on stinging nettles by the cattle corral. Large skippers also showed well.

As everywhere, **August** was a glorious month for butterflies with up to 100 peacocks among 10 species, most of which were on the buddleias by the path near the railway bridge, part of the strikingly pink and purple phase of high summer. Two species of odonata, emerald damselfly and ruddy darter, were additions to the reserve list. The ruddy darter was seen on 29th July and a pair of ruddy darters was seen well on the guided walk on 9th **September**.

Large numbers of caddis flies emerged in **October**. Migrant hawkers and common darters were still much in evidence. The mild autumn continued, in sharp contrast to the cold spring, and the group on 7th **November** found 32 flower species (see www.honeyguide.co.uk/documents/November2013Flowers.pdf).

The reserve completely flooded on the night of 5/6th **December**, at the time much of coastal Norfolk was so badly affected by storms. The impact here was brief, with the water back to normal winter levels in two days. December continued very mild, albeit often wet and windy, so ducks were in low numbers. In contrast, snipe were in excellent numbers again at this other end of the calendar year with a count of 110 on 29th December.

Birds

Mute swan <i>Cygnus olor</i>	Resident, 2 pairs, one on the Broad and one on the marshes. One nest was by the broad and a juvenile was still with the pair at the year-end. Two juveniles in big ditch near Bungalow Lane, 30 th Sept. No young fledged from the pair on the marshes. Some of the local non-breeding herd was often on the river.
Pink-footed goose <i>Anser brachyrhynchus</i>	A distant flock of c70 geese on 9th Jan were probably pinkfeet.
Greylag goose <i>Anser anser</i>	Breeds at Whitlingham CP. At Thorpe fairly regularly in small numbers, no evidence of breeding. Noisily flying around Thorpe St Andrew in summer and autumn.
Canada goose <i>Branta canadensis</i>	Breeds at Whitlingham CP and at Thorpe off and on throughout the year. No evidence of breeding.
Egyptian goose <i>Alopochen aegyptiaca</i>	Breeds at Whitlingham CP and erratically present at Thorpe.
Shelduck <i>Tadorna tadorna</i>	2, 30 th January. 1 reported in early June.
Wigeon <i>Anas penelope</i>	Occasional winter visitor. One on 23 rd Jan; 2♂ on 30 th January.
Gadwall <i>Anas strepera</i>	Winter visitor, formerly bred. Peak count in early 2013 of 178, 20 th Jan, but double figures was more typical. Low numbers in the mild autumn and December, e.g. 16 on 19 th Dec.
Teal <i>Anas crecca</i>	Winter visitor, especially in cold weather, and lingering into the spring e.g. 14 on 7 th April, 5 on 14 th April and present on 25 th April. Often in the vegetation on the edge of St Andrew's Broad but also on the flood, and likely to be overlooked. Notable counts: 70 on 11 th Jan, 120 on 4 th Feb; 25 on 1 st Dec.
Mallard <i>Anas platyrhynchos</i>	Spring and summer visitor, to the dykes and broad, with breeding pairs present. Nine on the flooded marsh on 14 th March. Usually absent from the broad during the winter, though often on the river at this time, these sometimes the semi-domestic mallards from River Green.
Shoveler <i>Anas clypeata</i>	Two males and 2 females on St Andrew's Broad on 17 th April.

Pochard <i>Aythya farina</i>	Winter visitor, with occasional birds in spring and summer. Numbers tend to increase in cold weather, but quite variable as they move to and fro from Whitlingham CP e.g. none on 4 th Feb, 75 on 21 st Feb, 83 on 23 rd Feb, 73 on 2 nd March. Largely absent in the autumn.
Tufted duck <i>Aythya fuligula</i>	Winter visitor and appears to have bred. 134 tufted ducks on 2 nd March; 42 on 14 th March, 88 on 7 th April; 61 on 30 th April. In second winter period, generally fewer in mild weather: high count of 132 on 23 rd Dec. On 7 th July, 6 juveniles on the Broad with 2 females, the family party (sometimes with a male) until at least 8 th August.
Goldeneye <i>Bucephala clangula</i>	 Two males on 11 th January.
Pheasant <i>Phasianus colchicus</i>	Seen throughout the year, though whether they are always present is difficult to say as when they are silent they are surprisingly unobtrusive.
Cormorant <i>Phalacrocorax carbo</i>	Present in low numbers: it's usual to see 1-3 birds on the broad or flying over, but rarely more. Studies at Whitlingham CP and concluded that there is a mix of <i>P c carbo</i> and <i>P c sinensis</i> present with a majority of <i>carbo</i> , and the same is presumably true at Thorpe.
Little egret <i>Egretta garzetta</i>	Occasional. Single bird on the river on 29 th July. Also reported in December (undated).
Grey heron <i>Ardea cinerea</i>	Occasional during the winter, but 1-3 regularly during spring and summer.
Little grebe <i>Podiceps auritus</i>	On Thorpe Broad 10 th and 28 th March (JE & RC).
Great crested grebe <i>Podiceps cristatus</i>	Resident, seen on both St Andrew's Broad and the river, and there was a pair on each for a time in spring. The pair on the broad appeared not to breed. Three big young seen with the pair on the river, then in summer a full-sized juvenile was with this pair.
Marsh harrier <i>Circus aeruginosus</i>	Spring/summer visitor, but seen much less this year than last year. Male (the same one?) on 28 th March and 25 th April.
Hen harrier <i>Circus cyaneus</i>	Rare winter visitor or migrant, with a ringtail on 20 th January (RC) and another flying over on 27 th April.
Sparrowhawk <i>Accipiter nisus</i>	Resident, fairly often seen hunting or moving over the marshes from nearby wooded areas.
Buzzard <i>Buteo buteo</i>	One over the woods across the river on 18 th September and over the reserve on 23 rd September. Also reported in December (undated).
Kestrel <i>Falco tinnunculus</i>	Resident, fairly often hovering over the grazing marshes.
Hobby <i>Falco subbuteo</i>	Singles on 21 st and 29 th April.
Peregrine <i>Falco peregrinus</i>	Two hassling the snipe on 9 th January; 2 on 14 th December. Perhaps fewer records than might be expected as they nested successful again on the cathedral.
Water rail <i>Rallus aquaticus</i>	Winter visitor, one or two present November to March, often vocal, later record on 1 by the Broad on 10 th April. Certainly 2 in separate areas seen in the snow on 21 st Jan, then 3 on ice 23 rd Jan. Two calling 1 st December.
Moorhen <i>Gallinula chloropus</i>	Resident, presumably breeds, though often quite secretive.
Coot <i>Fulica atra</i>	Winter visitor in small numbers.
Oystercatcher <i>Haematopus ostralegus</i>	Springtime visitor, erratically present, but did not breed. Recorded on the spit at Thorpe on 19 th Feb and 4 th March. A pair was seen to commute between Thorpe Marsh and Whitlingham sewage works on 28 th March; 1 on 29 th May; and two were again present in July.
Little ringed plover <i>Charadrius dubius</i>	Sporadic spring visitor, with 2 on 10 th April and 1 on 21 st and 30 th April. Probably not attempting to breed this year.
Lapwing <i>Vanellus vanellus</i>	Non-breeding birds through much of the year; formerly bred. Winter numbers very variable, with more coming in during hard weather; quite often absent, also flocks moving through. First late summer bird on 13 th June, and regular from late June. Some counts: 16, 30 th June; 18, 18 th August; 28, 24 th August, 55, 18 th September, 14, 25 th December, though often none.
Woodcock <i>Scolopax rusticola</i>	Reported in January, undated.

Snipe <i>Gallinago gallinago</i>	Winter visitor, with numbers peaking in hard weather; formerly bred. A flock of 200 took to the air, disturbed by two hunting peregrines – until that moment nine was the most seen, showing how many birds can be hidden here. Minimum of 25 on 12 th Dec, and 110 disturbed by a sparrowhawk on 29 th December.
Common sandpiper <i>Actitis hypoleucos</i>	Passage migrant, scarce this year: 1 on 9 th May and 24 th August.
Green sandpiper <i>Tringa ochropus</i>	Passage migrant and occasional winter visitor. Peak count of 4 on the flood on 7 th April; 2; 10 th April; singles in February (undated); on 11 th , 13 th & 20 th April; 2, 8 th August.
Redshank <i>Tringa totanus</i>	Uncommon spring migrant. One on 4 th March, and another in early June.
Black-headed gull <i>Chroicocephalus ridibundus</i>	Winter visitor, sometimes in large numbers, with birds loafing around or washing on the Broad. High count of 525 on ice in mid-February, declining to 110, 25 th March. On 6 th October, c.50 seemed to be feeding on recently emerged caddis flies. 80 on 17 th Dec, 160 on 19 th Dec are typical winter numbers. Ringed birds seen at Whitlingham CP came from Finland, Latvia, Denmark, Netherlands and Norway.
Common gull <i>Larus canus</i>	Winter visitor, in smaller numbers mixed in with black-headed gulls. Count of 30, 19 th Feb.
Lesser black-backed gull <i>Larus fuscus</i>	In single figures with other gulls. Largely absent in the second winter period. Large numbers fly over at dusk going to night roosts
Herring gull <i>Larus argentatus</i>	In single figures with other gulls. A larger <i>argentatus</i> race birds was present with <i>argenteus</i> birds on Thorpe Broad on 8 th December (JE).
Great black-backed gull <i>Larus marinus</i>	One on the broad on 23 rd Feb and 8 th Dec (JE).
Common tern <i>Sterna hirundo</i>	2-3 often present in June and July.
Feral pigeon <i>Columba livia</i>	Not usually on the reserve, though the feral pigeons/white doves on River Green can sometimes be seen flying over, especially from the railway bridge.
Stock dove <i>Columba oenas</i>	Resident, though more obvious in spring and summer, when 2-6 would be typical. 8 on 29 th June.
Woodpigeon <i>Columba palumbus</i>	Resident, often outnumbering stock doves. No doubt breeding in trees adjacent to the reserve.
Collared dove <i>Streptopelia decaocto</i>	Resident, in Whitlingham Lane, rather than on the reserve.
Cuckoo <i>Cuculus canorus</i>	One on 25 th and 29 th April, 6 th May (possibly two) and 29 th May, the first and last including a sightings. Less in evidence this spring than last year.
Barn owl <i>Tyto alba</i>	Reported in January, undated. A disappointing year after the regular summer evening views in 2012.
Tawny owl <i>Strix aluco</i>	Resident, occasionally heard from trees adjacent to the reserve.
Swift <i>Apus apus</i>	Summer visitor, nesting locally, so often over the reserve. Recorded on 25 th April and 10 swifts over the river on 28 th April.
Kingfisher <i>Alcedo atthis</i>	Resident in the area, but you need good luck to see one. Two on the guided walk of 14 th October, one of which perched briefly on the gate by the stile. On the River Yare, 9 th Sept.
Green woodpecker <i>Picus viridis</i>	Resident, in the trees adjacent to the reserve and across the river. Seen less often than great spotted woodpecker.
Great spotted woodpecker <i>Dendrocopos major</i>	Resident, often flying over the reserve and in the trees adjacent to the reserve, especially those adjacent to the railway bridge.
Magpie <i>Pica pica</i>	Resident, often on the marshes.
Jay <i>Garrulus glandarius</i>	Resident in adjacent wooded areas, but often over or on the marshes during the autumn.
Jackdaw <i>Corvus monedula</i>	Resident. Often small groups moving over the reserve.
Carrion crow <i>Corvus corone</i>	Resident. One with a lot of white in its wings, 13 th October. The regular presence of crows and jackdaws may discourage lapwings and snipe from returning to breed, and may affect the success of little ringed plovers.
Goldcrest <i>Regulus regulus</i>	Resident. Often heard in the cypress tree by the railway bridge. Occasionally on the reserve: 1 on 26 th Jan.
Blue tit <i>Cyanistes caeruleus</i>	Resident, often in mixed tit flocks out of the breeding season
Great tit <i>Parus major</i>	Resident, often in mixed tit flocks out of the breeding season

Coal tit <i>Parus ater</i>	Not on the reserve, heard in the cypress tree by the railway bridge.
Skylark <i>Alauda arvensis</i>	Birds flying over e.g. 14 th October, but none singing this year in summer.
Sand martin <i>Riparia riparia</i>	A few migrants reported from 10 th April.
Swallow <i>Hirundo rustica</i>	Birds moving through in spring and autumn, including many on 29 th April, but not breeding.
House martin <i>Delichon urbicum</i>	Some 50 over the broad on 29 th May, and seen at other times during spring and summer.
Cetti's warbler <i>Cettia cetti</i>	Resident, and singing through most of the autumn and winter especially, but not only, on bright days. However maximum of two heard in spring (cf. peak count of six last year, and minimum of four clear territories within the reserve and a fifth centred just off the reserve to the west) suggesting numbers were hit by the hard winter. Very close views enjoyed near the railway bridge by a group on 29 th April.
Long-tailed tit <i>Aegithalos caudatus</i>	Resident. Groups are seen year-round, often in mixed flocks with blue tits and great tits. The riverside trees are a favoured location, but also in the sallows by the permissive path.
Chiffchaff <i>Phylloscopus collybita</i>	One on 17 th March (a wintering bird?) and first heard singing on the unusually late date of 7 th April. After a midsummer silence, heard again in September, presumably migrants on temporary territories.
Willow warbler <i>Phylloscopus trochilus</i>	Summer visitor/passage migrant. Absent from fenced area, where one had been so obvious in 2012. Heard from sallows near Bungalow Lane. Migrant on 9 th Sept.
Blackcap <i>Sylvia atricapilla</i>	Summer visitor, also winter visitor in nearby gardens. First heard in mid-April. Often singing in adjacent scrub and also near the permissive path.
Garden warbler <i>Sylvia borin</i>	Sang prominently in early June by the permissive path.
Lesser whitethroat <i>Sylvia curruca</i>	One singing in riverside scrub on the guided walk on 29 th April, and another across the river on the edge of Whitlingham CP. Absent on 30 th April and not heard or found again. Birds singing on passage?
Whitethroat <i>Sylvia communis</i>	The most prominent and numerous warbler, especially in the unmanaged marsh between the river and the broad. Not surveyed precisely but likely to be in similar numbers to last year (when at least four territories on the reserve, plus three immediately adjacent.) Also in the bramble field by Whitlingham Lane.
Grasshopper warbler <i>Locustella naevia</i>	Apparently a noticeable absentee, though there were later reports of one heard reeling on two occasions in May.



A good year for seeing and hearing many warbler species.
Left, blackcap; right, whitethroat (Paul Davidson).

Sedge warbler <i>Acrocephalus schoenobaenus</i>	Summer visitor. Fairly common, probably similar numbers to last year (when minimum of six singing males on the reserve, plus two more immediately adjacent.)
Reed warbler <i>Acrocephalus scirpaceus</i>	Summer visitor, probably similar numbers to last year (when 4 singing males).
Wren <i>Troglodytes troglodytes</i>	Resident. At least three territories, all in the rank marsh close to the river, plus an additional territory just west of the footpath.
Treecreeper <i>Certhia familiaris</i>	One with mixed tit flock in Whitlingham Lane, 14 th October.

Starling <i>Sturnus vulgaris</i>	Astonishingly infrequent. They seem to have disappeared from Thorpe St Andrew as breeding birds in recent years, and are scarce in winter. Some groups moving over the reserve in autumn.
Blackbird <i>Turdus merula</i>	Resident, often in song and presumably breeding.
Fieldfare <i>Turdus pilaris</i>	Flock on the guided walk on 9 th November. The Yare valley flyway seemed to be quieter than last year.
Song thrush <i>Turdus philomelos</i>	Often singing from trees adjacent to the reserve.
Redwing <i>Turdus iliacus</i>	Noted in flight on 13 th and 14 th October. No doubt many unrecorded groups moved through.
Mistle thrush <i>Turdus viscivorus</i>	Occasionally overflying the reserve, or heard singing in the distance.
Robin <i>Erithacus rubecula</i>	Resident, most often seen in the hawthorns by the river.
Nightingale <i>Luscinia megarhynchos</i>	One singing at Whitlingham CP for about a week from 15 th April could be heard from Thorpe, it was reported.
Wheatear <i>Oenanthe oenanthe</i>	Migrant. One reported on 27 th April.
Dunnock <i>Prunella modularis</i>	Resident. Frequently in and out of the hawthorns and willowherb by the riverside footpath, and the buddleias and the path between the railway bridge and the mooring basin.
Yellow wagtail <i>Motacilla flava</i>	One in flight in mid-May.
Grey wagtail <i>Motacilla cinerea</i>	One on the exposed margins of the river, 16 th Jan.
Pied wagtail <i>Motacilla alba</i>	Resident. Fairly regular, often in flight, with no particular pattern.
Meadow pipit <i>Anthus pratensis</i>	Possibly breeding, with a different wintering population. One on 7 th April, but not seen in song flight this year. They reappear in autumn and a small group seems to winter on the grazing marshes. The winter records depend partly on them being disturbed and flying up, and they are probably under-recorded as they feed in among the thick grass in wet, inaccessible areas,
Chaffinch <i>Fringilla coelebs</i>	Resident in areas adjacent to the reserve.
Greenfinch <i>Chloris chloris</i>	Resident in areas adjacent to the reserve, often singing from the cypress tree by the railway bridge and overflying the reserve.
Goldfinch <i>Carduelis carduelis</i>	Resident, often overflying the reserve, or in small groups in riverside trees. About 30 around the railway bridge, 14 th October.
Siskin <i>Carduelis spinus</i>	Winter visitor, usually in small numbers. On 20 th Jan, 6 siskins with goldfinches in alders over the railway, 5 on 27 th Jan. Apparently none in the mild second winter period.
Linnet <i>Carduelis cannabina</i>	A pair seemed be based, presumably nesting, in the dry bramble field adjacent to the reserve and were regularly on or over the reserve in spring and summer.
Lesser redpoll <i>Carduelis cabaret</i>	Winter visitor, including odd birds picked up on flight call as they fly over, but also birds feeding on seeds of mugwort and greater willowherb. Numbers thin this year: 1 on 30 th Jan, 1-2 around on several dates in December.
Bullfinch <i>Pyrrhula pyrrhula</i>	4 in Bungalow Lane on 27 th Jan (RC).
Reed bunting <i>Emberiza schoeniclus</i>	Resident, though may leave the reserve to feed in local gardens in late winter. Minimum of 3 males singing on 14 th April.

Appendix 1 – Escapes
None this year
Appendix 2 – List of birds recorded 2012 but not in 2013
Ferruginous duck, smew, goosander, red kite, Slavonian grebe, avocet, grey plover, dunlin, ruff, black-tailed godwit, wood sandpiper, little gull, whinchat.
Appendix 3 – List of birds recorded in previous years (including flying over, no doubt incomplete).
Whooper swan, pink-footed goose, brent goose, scaup, pintail, mandarin, bittern, crane, whimbrel, curlew, greenshank, black tern, turtle dove, short-eared owl, rook, golden oriole, marsh tit, stonechat.

Mammals

Limited bat detector work confirmed soprano pipistrelles, but it's likely that there is a bigger range of bats here. Similarly, no small mammal trapping was done and it's highly likely that there are other rodents to be recorded. No records confirmed in 2013 for muntjac, noctule, water vole or roe deer.

Bank vole	Dead bank voles found on 4 th Feb and 2 nd September.
Mole	Molehills in the rough grass near the tidal flap and the mooring basin.
Soprano pipistrelle	Bat detector readings of 55kHz on 4 th and 5 th September showed that the small bats at both Whitlingham Lane (from where emerging from a roost) and Bungalow Lane ends of the reserve are this species.
Fox	29 th May on guided walk.
Otter	One in January, undated.
Stoat	A mustelid in snow on 21 st Jan – but an infuriatingly poor view – was probably a stoat.
Chinese water deer	2 in snow on at the back of the broad on 21 st Jan; also 1 on 19 th Feb.

Damselflies and Dragonflies

Flight periods noted.

There are four species additional to those listed in 2012: southern hawker, emerald damselfly, ruddy darter and azure damselfly. The last is an additional record and added to this updated version of the report. Norfolk dragonfly recorder Pam Taylor found adult and larval azure damselflies on 2 June (and they were present in the same area in May 2014.)

Four-spotted chaser and large red damselfly were not seen this year. Large red damselfly was seen twice in 2012 and it showed once in my garden in Thunder Lane in 2013, so it's in the area but appears to be an early species that gets at Thorpe Marshes. Combining both years gives a total of 15 odonata species for the reserve.

James Emerson found ruddy darter on 29th July and then emerald damselfly on 21st August. The latter wasn't seen again, but ruddy darters were seen again in August, on a guided walk on 9th September and last seen on 18th September.

Generally, reflecting the poor weather in spring and early summer, earlier species (hairy dragonfly, emperor) were few in number or rarely seen; that may account for the absence of records of four-spot chaser and fewer black-tailed skimmers than last year. An exception is Norfolk hawker: it's thought of as an early species but it was numerous and very obvious during most of July. In contrast, common darter and migrant hawker, rather later emerging species, were very much in evidence in late summer.

Banded demoiselle (Banded agrion)	<i>Calopteryx splendens</i>	June-August
Common blue damselfly	<i>Enallagma cyathigerum</i>	June-Sept, often abundant.
Azure damselfly	<i>Coenagrion puella</i>	June.
Emerald damselfly	<i>Lestes sponsa</i>	21 st August.
Hairy dragonfly	<i>Brachytron pratense</i>	June
Migrant hawker	<i>Aeshna mixta</i>	September-October
Brown hawker	<i>Aeshna grandis</i>	July-August
Norfolk hawker	<i>Aeshna isosceles</i>	June-August
Southern hawker	<i>Aeshna cyanea</i>	August-September
Emperor dragonfly	<i>Anax imperator</i>	June-July
Black-tailed skimmer	<i>Orthetrum cancellatum</i>	June-Aug
Common darter	<i>Sympetrum striolatum</i>	August-October and 1 st Nov
Ruddy darter	<i>Sympetrum sanguineum</i>	29 th July-September



Southern hawker
8th August



Emerald damselfly
(James Emerson), 21st August



Ruddy darters
9th September

Butterflies

The spring was poor for butterflies, as elsewhere, but here as everywhere we had an excellent late summer. Missing in 2013: ringlet.

Large skipper – several in July.

Large white

Small white

Green-veined white – quite common over the grazing marsh in late summer.

Orange-tip

Brimstone

Clouded yellow 21st August, RC.

Small tortoiseshell – common in July, including 17 on 16th July, and caterpillars on stinging nettles.

Comma – up to 5 on buddleia on 4th August.

Painted lady – up to 5 on buddleia on 4th August.

Red admiral

Peacock – up to 100 on buddleia on 4th August.

Meadow brown

Gatekeeper

Speckled wood

Common blue 18th August.

Small copper 4th August.

Holly blue



Peacock with comma and painted lady.

Moths

No moth trapping has been done: these are casual records, mostly from James Emerson. For macro-moths, the number is the British checklist number for macro-moths as given in *Field Guide to the Moths of Great Britain and Ireland* by Paul Waring & Martin Townsend.

2441 Silver Y *Autographa gamma* 8th Aug

1738 Common carpet *Epirrhoe alternata* 21st August (JE) *

1991 Elephant Hawk Moth *Deilephila elpenor* caterpillar 29th July (JE/RC)

Micro-moths

Small China-mark *Cataclysta lemnata* 29th June (JE)

Nettle-tap *Anthophila fabriciana*

Other notable invertebrates

Ad hoc records: concentrated effort by specialists would add many more species.

Buff-tailed bumblebee <i>Bombus terrestris</i>	
Red-tailed bumblebee <i>Bombus lapidarius</i>	
Tree bumblebee <i>Bombus pascorum</i>	First recorded in the UK in 2001 and in Norfolk in 2007. Also common in nearby gardens.
Common carder bee <i>Bombus pascuorum</i>	
7-spot ladybird <i>Coccinella septempunctata</i>	
Flea beetle, probably <i>Altica lythri</i>	On hoary willowherb (JE).
Common hoverfly <i>Syrphus ribesii</i>	On hemp agrimony, July.
A hoverfly <i>Eristalis arbustorum</i>	(JE)
Common red soldier beetle <i>Rhagonycha fulva</i>	Mating pairs on Canadian goldenrod, July.
Lesser marsh grasshopper	(JE)

<i>Chorthippus albomarginatus</i>	
Common green shield bug <i>Palomena prasina</i>	5th instar (larval form), on a stinging nettle, 14 October.
Mayfly <i>Ephemeroptera</i>	Species unknown.
Twin-lobed deer fly (a horse-fly) <i>Chrysops relictus</i>	8 th August (same date as last year!)
A caddis fly <i>Limnephilus lunatus</i>	6 th October
Another caddis fly, probably <i>Limnephilus flavicornis</i>	One of the species known by anglers as 'cinnamon sedges'. 13 th October, so emerging a few days after <i>L. lunatus</i> , favouring late flowers of hogweed.



Tree bumblebee,
Bombus hypnorum
on valerian, 30th June.



Caddis fly, *Limnephilus lunatus*
6th October.

Photos not to scale



Common green shield bug,
Palomena prasina
5th instar (larval form)
on a stinging nettle, 14 October.

Aquatic invertebrates: a survey of aquatic invertebrates by Norfolk Wildlife Services Ltd for NWT in 2012 found a range of common aquatic invertebrates and two species of note. These were shining ram's-horn snail *Segmentina nitida*, present in one ditch, and the nationally scarce beetle *Noterus crassicornis*

Amphibians and reptiles: none recorded in 2013.

Fungi

Very incomplete!

Blackfoot polypore <i>Polyporus leptcephalus</i>	Growing on a willow in the wooden area between Bungalow Lane and the river (JE).
Meadowsweet rust <i>Triphragmium ulmariae</i>	Bright orange rust on meadowsweet.
<i>Erysiphe ulmariae</i>	A white mildew on meadowsweet.



Blackfoot polypore (James Emerson).



Triphragmium ulmariae,
an orange rust growing on
meadowsweet.