

THORNE MOORS VERTEBRATES REPORT 2013

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2014

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INTRODUCTION

1. Scope of the report. The *Thorne Moors Vertebrates Report 2013* is an unusually long report, not least because it continues the process of making Thorne Moors vertebrates recording as up-to-date as possible. Thus the *Report* contains elements beyond the routine 2013 components. Also, notice is given of a working paper on the deer of Thorne Moors, published separately in May 2014.

Ever since 2012, an attempt has been made to catch up with backlogs of records and monitoring. This overall process began in the *Thorne Moors Vertebrates Report 2012*, and continues in the current *Report*. The last *Report* to include reptile data was that for 2008. The *Thorne Moors Vertebrates Report 2013* catches up by detailing additional reptile records for 2007–08 and all reptile records 2009–12. The recorder is Steve Hiner. The present *Report* otherwise contains accounts of birds, mammals, herptiles and fish in 2013. Also, available additions and corrections to the *Reports* for 2008–12 (excluding reptiles) are listed in full. The additions include Bean Goose, new to the Thorne Moors list in 2008 and published belatedly here. Finally, and regrettably, the bird ringing report for 2013 has not been released by the Thorne Moors ringer for inclusion here.

The contents at the rear of the *Thorne Moors Vertebrates Report 2013* partly reflect the catching up that is underway. They commence with a paper summarizing the establishment of Black-necked Grebe on Thorne Moors during the 15 year period 1998–2012. The second paper gives annual digests of Marsh Harrier records 1990–2003. This completes yearly summaries for the overall period 1990–2013. It thereby allows Thorne Moors to form a usable case-study in any wider documentation to demonstrate the transformed status of Marsh Harrier in Yorkshire and/or Lincolnshire. Thirdly, there is a first instalment of the results of Black-headed Gull ringing on Thorne Moors. Over the years, this has involved the ringing of juveniles (*pulli*) at the breeding colonies. Also, corpses of ringed Black-headed Gulls have occasionally been found on Thorne Moors, thereby extending the information available. The fourth paper puts on record all available information on the fish of Swinefleet Warping Drain. This includes significant new material from local anglers, gathered together by Peter Hinks of the Goole & District Natural History Society. Partly because of the inclusion of these summary

papers, printed copies of the *Thorne Moors Vertebrates Report 2013* are available alongside the electronic report.

The final paper compiled in recent months is mainly conspicuous by its absence. An illustrated account of Common Cranes from 2009 onwards has been assembled to archive a summary of observations during that period. Discussions are ongoing with Natural England to agree the form the paper will take for publication in the *Thorne Moors Vertebrates Report 2014*. As a result, for the present *Report*, short yearly summaries are included, inserted as appropriate. These augment an item published earlier that gives all records 1970–2008 (*Lapwing Special Series 16*: 59). Together, they span 44 years, and combine an overview of past records with documentation of colonization up to the first successful fledging of a juvenile. Natural England intend Thorne (and Hatfield) Moors to act as a population source to assist in the wider colonization of England. Thus, Common Crane management is aimed at maximizing breeding productivity. This requires some seasonal access restrictions and associated wardening. Linked with this, nesting and foraging behaviour have been monitored in detail, as has the Cranes' reaction to threats like adverse weather, disturbance and predators/control. The full paper summarizes all information made available for the period from 2009. This includes casual recording as well as material released by Natural England. Hopefully, a publishable version of the paper will be approved for the next *Report*.

2. Recording area. The Thorne Moors recording area is deliberately interpreted somewhat loosely. It comprises the whole of the peatland, contiguous unfarmed areas, the Thorne Colliery curtilage, and peripheral farmland and drains. The limit to the north is defined as the line of the old Axholme Joint Railway. Otherwise, a field width or so is a practical rule-of-thumb.

3. Place-names. In broad terms, the name Thorne Moors is used to embrace both the peatland and other areas under study. The surviving peat is divided by parish limits, the parish names being Thorne Waste, Snaith & Cowick Moor, Rawcliffe Moor, Goole Moor and Crowle Moor. Thorne Waste (except now the Yorkshire Triangle) lies in South Yorkshire. The other parishes lie in East Yorkshire, except Crowle Moor and the Yorkshire Triangle, which are in North Lincolnshire. That part of Goole Moor situated north of Rawcliffe Moor is designated as 'Northern Goole Moor' for recording purposes. The name Top House Farm refers only to that part of the farm that extends from the Moors to the Thorne–Goole railway. Within the parish framework, numerous place-names are employed for bird recording. Virtually all these names were included on a place-names map issued with the *Thorne Moors Vertebrates Report 2005*. Several copies of this map are still available.

It should be noted that during 2012 the name 'Woodside floods' became established, and is again employed here. It denotes flooded workings bounded by Will Pits Tram, Will Pits, Mervyn's Tram and Middle Moor Tram. Another name now in use is 'Thousand Acre floods', describing an area bounded by Middle Moor Tram north of Fisons' Road, Blackwater Dike and Will Pits. The term 'southern fields' embraces fields from Elmhirst, around the southern part of Thorne Waste and as far as Pony Bridge Wood. One of two further new names that occur in this report is 'Swinefleet Gate'. This is now given to the security gate restricting access to the Moors over Swinefleet Warping Drain next to Top Moor Farm. The second is 'Lonesome Pine Track'. This is west of Pony Bridge Wood and east of Limberlost Tram. It extends from the latter tram towards the southern edge of the Moors, between Limberlost Wood and the south-eastern corner of the Moors.

4. Current sources of nomenclature and species sequence

- *The British Birds list of Western Palearctic Birds*, British Birds Ltd. See www.britishbirds.co.uk/bblist.htm (accessed 5th June 2014)
- S. Harris & D.W. Yalden (editors) (2008) *Mammals of the British Isles: Handbook, 4th edition*. The Mammal Society, Southampton
- H.R. Arnold (1995) *Atlas of amphibians and reptiles in Britain*. Institute of Terrestrial Ecology research publication No. 10. HMSO, London
- C.E. Davies *et al.* (compilers and editors) (2004) *Freshwater fishes in Britain the species and their distribution*. Harley Books, Colchester
- G.T.D. Wilmore, J. Lunn and J.S. Rodwell (2011) *The South Yorkshire Plant Atlas*. Yorkshire Naturalists' Union and Yorkshire & the Humber Ecological Data Trust, no place

5. Descriptions and visual evidence of birds. For nationally rare taxa, evidence should be made available in accordance with the requirements of the British Birds Rarities Committee. At county level, material should be prepared in compliance with the lists issued by the Yorkshire Naturalists' Union (Birds Section Adjudication Panel) or the Lincolnshire Bird Club (Lincolnshire Bird Records Committee), as appropriate. Advice can be made available upon request.

6. Rare breeding birds. In addition to Natural England, records of rare breeding birds are made available to the county organizations, and *via* them to the Rare Breeding Birds Panel. Records may also be accessed by *bona fide* specialist study groups.

7. Daily bird counts and WeBS counts. In the species accounts that follow, there may be references to daily counts, counts, totals *etc.* It is emphasized that these are not full site counts, but counts made by an individual observer or group on a particular date. It is possible to have more than one count on a single date, when the highest will be used if they cannot be coordinated or united. The recording area is very large, and site totals are difficult to establish with certainty, except for the scarcer species. However, for some wetland birds, it is possible to visit the most likely places to count them, thus attaining a relatively accurate moorland total. It is acknowledged that such reported daily counts may sometimes be regarded as vague. However, they are broadly comparable over a period of years.

During 2012, more structured monitoring of wetland birds was commenced, and this continued in 2013. Under Natural England's survey programme for the NNR, year round counts of wetland birds on Thorne Moors were undertaken as part of the national Wetland Bird Survey (WeBS).*

*WeBS is a partnership between the BTO, the RSPB and the JNCC, in association with the Wildfowl and Wetlands Trust.

8. Website. There is now a separate website dedicated to background information about Thorne Moors vertebrates: thornemoors.wordpress.com. Although accessible from April 2014, it is still under construction. However, note item 9 below, for which there is no change.

9. Contacts. Records of all vertebrates can be submitted for the blog/report *via* 'Contact us' on the website www.birdingsiteguide.com. Alternatively, records can be emailed to Bryan Wainwright bryanwainwright@yahoo.co.uk or posted to him at: Silverthorn, St Michael's Drive, Thorne, Doncaster, DN8 5QF.

WORKING PAPER ON DEER

The Deer of Thorne Moors: A Working Paper by Martin Limbert was published in May 2014. This 32 page publication provides detailed accounts of Red Deer and Roe Deer, plus recent records of Reeves' Muntjac. It covers the period from 1959 to mid-April 2014. In addition to the species accounts, there are sections on the local impact of the deer, on the outcome of a recent culling programme, and on their future management. Thus the *Working Paper* offers a case-study of interest at both a local and wider level, and copies are still available.

SPECIES MONITORING

Species monitoring focuses on the occurrence and encouragement of rare or declining breeding species, but may involve other species. Monitoring is also a tool in assessing habitat management on the NNR. To assist with this, observers are requested to provide **FULL DETAILS OF EVERY RECORD** (location, age, sex, *etc.*, as appropriate) of the currently monitored species. These are marked with a dagger (†) in the systematic lists:

- MARSH HARRIER, COMMON CRANE, EUROPEAN NIGHTJAR, EUROPEAN STONECHAT
- HERPTILES, RED DEER

RECORDING IN 2013

In 2013, there were more bird records received *via* the recording blog than ever, at 7787 records (6036 in 2012). Records were also obtained from more traditional sources. An unprecedented 165 species were identified, excluding released Green Pheasants. Two additional races were reported, darker-

backed Lesser Black-backed Gulls and White Wagtail. Records of Caspian Gull *Larus cachinnans* seen in 2012–13 are still to be assessed by the YNU Birds Section, and so are not included here. The first accepted Yorkshire record of this gull was as recent as 2001 (Dobbs 2003).

The first of several notable species was Common Scoter, with the three records including a remarkable c.200 overhead on 26th October. Large overland totals at nearby Blacktoft Sands have been known since 1975 (Grieve 1976). The second newcomer was a Mandarin Duck, making a brief appearance on 28th September. A single 'Tundra' Bean Goose would also have been new but for the submission of a belated record of six on 18th February 2008. Two records of Greater Scaup perhaps involved the same bird. They were the first in the area since the species was described long ago as having been taken in Crowle Old Decoy (Stonehouse 1839). Other notable wildfowl were Bewick's Swan, White-fronted Goose (sixth record), Barnacle Goose (sixth record), Red-crested Pochard (second and third records) and Garganey. Other non-passerines of note included Common Quail, Northern Gannet (fourth record), Little Egret (ninth–tenth records), Red Kite, Osprey, Spotted Crake (fourth–sixth records at least), Bar-tailed Godwit (eighth record), Temminck's Stint (second record), Wood Sandpiper, Arctic Skua (fourth record), Black Tern, Mediterranean Gull, Wryneck (fourth record) and Lesser Spotted Woodpecker. Amongst the passerines, two records of male Red-backed Shrike were unexpected, in May and October, with a Great Grey Shrike fairly regular in November–December. Other noteworthy passerines were Bearded Tit, Woodlark and Common Redpoll.

For the first time, the nesting Common Cranes successfully fledged a juvenile. Breeding species to highlight at a lower level include Greylag Goose, Eurasian Teal, Tufted Duck, Marsh Harrier, Coal Tit, Willow Tit, Garden Warbler, Eurasian Treecreeper, European Stonechat, Tree Sparrow and Tree Pipit. The European Nightjar census resulted in the mapping of 53 territories, as well as yielding 26+ 'reeling' Grasshopper Warblers. Table 1 illustrates the local fortunes of European Nightjar since 2005. Also of interest during the year was display by Common Buzzards on two April dates, and possible or definite Spotted Crakes during May–July.

Site	2005	2006	2007	2008	2009	2010	2011	2012	2013
Thorne Moors (excl. Crowle M.)	23	36	34	30	37	32	34	34	40
Crowle Moor	21	20	13	12	15	16	13	12	13
Thorne Moors subtotal	44	56	47	42	52	48	47	46	53
Hatfield Moors	27	33	32	29	31	35	36	42	38
Total	71	89	79	71	83	83	83	88	91

*Table 1. Numbers of territories of European Nightjar *Caprimulgus europaeus* located on the Humberhead Peatlands NNR during 2005–13. (Source: Middleton Ecological Consultancy).*

Several species were relatively frequent during 2013, notably Common Goldeneye (23 dates), Common Buzzard (136 dates), Short-eared Owl (11 dates) and European Stonechat (115 dates). Additionally, some species occurred in record numbers, or at least had notable totals. These included Pink-footed Goose, Gadwall, Eurasian Teal, Shoveler, Common Buzzard, Yellow-legged Gull, Hobby and Goldfinch. As always, some birds gave cause for long-term concern, or had a bad year. Beyond the nationally-declining species like Turtle Dove and Willow Tit, others in 2013 were Red-legged Partridge (three dates), Black-necked Grebe (four dates), Long-eared Owl (one date) and Green Woodpecker (25 dates). Lesser Whitethroat was represented by perhaps a single singing male and one autumn migrant. There were several unseasonable dates reported. These involved Goosander (June), Little Egret (January), Little Stint (October) and Siskin (June). Ruffs in November on Goole Fields gave credence to unconfirmed 'winter' records from there in recent years.

During 2013 there were records of 19 species of mammal, excluding sight records of bats. Again, Martin Hammond recorded aquatic vertebrates, including sightings/field signs of Water Vole, related to habitat and water chemistry. These records are summarized here. Also of interest during 2013, Natural England sponsored a thermal imaging (infra-red) survey of deer over two nights in April. Undertaken by the Deer Initiative, this was to attempt an assessment of the total deer

population of the Thorne Moors area. Other notable mammals were, in their different ways, Harvest Mouse and Reeves' Muntjac, with two records of each. There was also a case of Badger snaring.



Figure 1. Aberrant Adder Vipera berus on Thorne Moors on 28th April 2013. The dorsal black marking is barely visible. Photograph © Rob Watson.

Three species of reptile were documented. There was an encouraging number of records of Common Lizard, and many reports of Adder. The most interesting individual was a black Adder photographed on 28th April (Figure 1). There were also three amphibians and perhaps two species of fish. These latter included Ten-spined Stickleback, reported by MH. His fieldwork in 2012–13 provided the first records of this fish since 1987.

Dobbs, G.E. (2003) Review of Yorkshire Caspian Gull Records. *Yorkshire Rare and Scarce Bird Report 2001*: 76–79.

Grieve, A. [1976] Overland Migration of Common Scoter at Blacktoft Sands. *Goole and District Natural History Society Annual Bird Report 1975*: 12.

Stonehouse, W.B. (1839) *The History and Topography of the Isle of Axholme: being that part of Lincolnshire which is west of Trent*. Longman, Rees, Orme & Co., etc., London.

BIRDS

Mute Swan *Cygnus olor*. Recorded on 11 dates, beginning with two on floods near Will Pits on 1st January and seven at floods near Green Belt on 2nd February. What was possibly a single bird was seen on three April dates, on 3rd ('Thousand Acre floods') and 9th/10th (Goole Moor). July records were obtained on 11th (one east) and 21st (one north). In October, one flew off west from 'Thousand Acre floods' on 18th, with two low to the east on 23rd and three east on 30th. An immature was at flooded workings north of Fisons' Road on 10th November.

Bewick's Swan *Cygnus columbianus*. On 10th November three flew east (BPW, RJS, WHP).

Whooper Swan *Cygnus cygnus*. There were records in January on 4th (20) and 13th (60+ on flooded workings), and in February on 5th (seven flew east from a roost on Goole Moor). Recorded on seven dates in March. These included 4th (18 north), 16th (four departed north-west) and 27th (six on Goole Moor and 15 north over Goole Fields). On three dates 17th–21st counts reached 45, but on 18th there were 55 on Snaith & Cowick Moor and 14 elsewhere, presumably therefore totalling 69 swans. The next sightings were in October, commencing with 12 east on 16th, and with subsequent counts at flooded workings reaching 11 on 26th. Two were at the western end of Goole Moor Tram on 4th

November. There were four December records, on 7th (seven south), 13th (two at Will Pits Scrape), 18th (10 south) and 28th (one at Will Pits Scrape).

Bean Goose *Anser fabalis*. One 'Tundra' race *A.f. fabalis* was with Pink-feet on 12th November (TCL). The second record.

Pink-footed Goose *Anser brachyrhynchus*. Encountered on three dates in the early months: 27th January (seven), 9th February (67 west) and 24th March (nine on Goole Fields and 14 low to the north-east). Counts in September commenced on 19th with 58 on farmland north of Crowle Moor. Recorded almost daily to the end of the month, with counts at 'Thousand Acre floods' reaching *c.*200 on 26th and 168 on 27th. Numbers on Goole Fields were notable on 24th, when *c.*700 departed north-east to roost. Transient birds included 94 west on 20th and a total of *c.*100 east on 23rd. There were *c.*280 on 30th (no details). Frequent records in the area during October resulted in many daily counts of up to 400 or more. There were 525 on 5th October, *c.*1790 on 6th, *c.*520 on 10th, *c.*700 on 11th, and *c.*1060 on 18th (mostly to roost at 'Thousand Acre floods'). There were *c.*3000 on 12th, comprising *c.*1000 west and *c.*2000 departing from the roost at 'Thousand Acre floods'. On 26th the total leaving this roost was a record *c.*4000. These higher figures were also evident in the first half of November, when large numbers roosted on Goole Fields and farmland north of Crowle Moor. They reached *c.*2800 on 4th/12th, but this level was exceeded on 2nd (*c.*4000 again) and 5th (*c.*3500). However, after *c.*60 reported on 13th November, there were only four more dates. One landed at 'Thousand Acre floods' on 1st December. The others were in flight, on 23rd November (69 north-west), 14th December (44 east) and 15th December (40). It is of interest to add that the previous highest count was 2664+ on 22nd October 2011.

White-fronted Goose *Anser albifrons*. One first-winter bird was with Pink-feet on 11th–12th November (TCL). The sixth record.

Greylag Goose *Anser anser*. Recorded in each month, most frequently in March–April and September, and scarcest June–July and November. Monthly maxima were 25, *c.*100, 54+, *c.*40, 195, 1, 62, 115, 623, *c.*300, 28 and 38. During May, counts exceeded 30 on 5th ("42 pairs with 7 goslings"), 9th (66), 19th ("191 with 4 unfledged young") and 21st ("181 with 7 unfledged young"), presumably inferring breeding on or about Thorne Moors. September totals were the highest of the year, and exceeded 300 on 3rd (442), 4th (623 at Will Pits Scrape), 9th (495), 10th (*c.*350), 12th (*c.*400), 27th (371) and 28th (*c.*500). The last large total was *c.*300 on 7th October.

Canada Goose *Branta canadensis*. Irregularly recorded during the year, the first being two on 27th February. In March, after 16 on 2nd, there were two on three dates. Fifteen dates in April yielded records of one to four. However, there was an influx of 18 on 14th, and five subsequent counts of five to eight, the latter on 24th. Occasional totals in May of up to three included a hybrid Canada Goose x Greylag Goose on 19th. From the latter date until September there were only two further dates: 11th June (32 south) and 27th August (*c.*80 at pools on Goole Moor). This record heralded a period of higher counts during September–mid-October, involving totals over nine in September on 2nd (57 flew to fields west of the Moors), 10th (98 again left the Moors for the western fields) and 27th/29th (*c.*100). There were October figures of 41 on 3rd and *c.*130 on 12th, and then nothing except seven overhead on 10th November.

Barnacle Goose *Branta leucopsis*. A lone bird flew west on 5th October (RJS, JS). The sixth record.

Common Shelduck *Tadorna tadorna*. Two on 9th–10th February, then one on 15th. Noted overhead in March on 2nd (two) and 20th (three north). Mainly a bird of April–June, with records of one or two to 23rd June, plus three on 26th April and 19th June and four on 21st/23rd April.

Mandarin Duck *Aix galericulata*. A male briefly occurred at Will Pits Scrape on 28th September (RJS). The first record.

Eurasian Wigeon *Anas penelope*. Recorded on four dates in the early months: 4th January (eight), 13th January (four), 11th March (four) and 16th March (16). The five April dates were 3rd (six), 13th (12), 15th (one), 22nd (two) and 25th (one). A male at Will Pits Scrape on 7th August was an isolated occurrence. Mostly recorded September–November, beginning with one on 9th September, seven on 12th, then no more until 25th (21). There were six to eight on later dates in September and in early October, plus 19 on 27th September. There were then *c.*40 on 6th October. During the remainder of October and November counts ranged from one to eight, with three exceptions. These were 24th October (14), 18th November (nine) and 25th November (13). Also two on 7th/15th December.

Gadwall *Anas strepera*. After four on 4th January, records in the first half of February attained 16 on 8th. March totals reached 21, then 29 on 16th, 40+ on 20th and 24 on 22nd. There were many records in April, of up to 12, occasionally 19–29, with 30 on 9th and 31 on 5th/14th. May–June figures rarely exceeded five, although May had a notable total of 62 on 3rd, then 15 on 12th. There were two August dates, four dates in late September–early October and then 25th October. On the latter date and 29th August 10 were reported, with nothing else above four. On 13 dates in November totals reached seven, occasionally more, with nine on 13th/27th and 11 on 12th/20th. December counts raised six, except eight on 4th and nine on 14th.

Eurasian Teal *Anas crecca*. Monthly maxima were *c.*150, 92, *c.*250, 87, 121, 33, 22, 550+, *c.*640, *c.*700, *c.*400 and 239. The March maximum, on 15th, was somewhat isolated, with no other counts over 63 in that month except 104 on 24th. The August maximum, on 24th, was over twice as large as the next highest. Although September counts peaked at *c.*640 on 7th, there were five other notable totals, of *c.*400–*c.*430 and 512 on 10th. In October, the maximum figures were *c.*700 on 20th (a record total), 449 on 24th, *c.*580 next day and 479 on 28th. After *c.*400 on 2nd November, numbers in that month reached up to 143 in the first week, with fewer thereafter, maximum 96. The December peak (13th) was again over twice as large as the next highest total. Females and (up to six) unfledged young were seen 31st May–26th June, locations being New Cross Drain, Mill Drain and Will Pits Scrape.

Mallard *Anas platyrhynchos*. Monthly maxima were *c.*350, 186, 111, 63, 52, 61 (+ seven unfledged), 22, 98, *c.*530, 212, *c.*310 and 295. September counts occasionally attained *c.*300, exceeded by the monthly maximum on 4th and 438 on 9th. Females accompanied by up to 11 young were seen 21st May–11th July, at flooded workings, Will Pits Scrape and on Northern Goole Moor.

Pintail *Anas acuta*. A pair was present on 20th March, and three flew south on 20th April. Singles occurred 14th–29th September and on 12th October, with two on 7th/25th October and 13th December. All these later birds were described as female or "female type".

Garganey *Anas querquedula*. On Goole Moor, there was a male on 9th May (KL), and an eclipse male with Mallards on 5th September (RB).

Shoveler *Anas clypeata*. The only early records were three on 13th January and single males on 2nd/15th February. In March there were counts of four–eight (four males), with April figures reaching 16, and 25 on 14th. Totals in May attained 21, but with 62 on 3rd and 42 on 9th (maximum of nine males on 20th). Records during 1st–11th June were in single figures except 12 males on 4th and 18 males on 8th. Counts beginning 7th August reached 27 on 19th and an unprecedented 74 at 'Thousand Acre floods' on 24th. September figures occasionally reached 48, but with 69 on 14th, 65 on 28th and *c.*60 next day. October totals reached *c.*40 on 7th, 44 next day and 63 on 20th. November–December totals were lower, rarely exceeding eight. However, November occasionally attracted up to 20 (including 12 west on 26th), and 26 on 18th.

Red-crested Pochard *Netta rufina*. Recorded in October. On 6th, one male flew with Mallards from flooded workings along Fisons' Road towards Will Pits Scrape (PA, PH). On 25th, two males and a female were at Will Pits Scrape (BPW). The second and third records.

Common Pochard *Aythya ferina*. A female was at Will Pits Scrape on 29th–30th March. April records involved a pair at Will Pits Scrape on 10th and a female at 'Woodside floods' on 21st. At Will Pits Scrape there was a female on 24th September and two (no details) on 7th October.

Tufted Duck *Aythya fuligula*. First recorded in early January, with two on 1st and three on 4th. Noted on six February dates, including a pair, but with nine on 9th and four next day. Records in March involved totals peaking at eight on three dates, and including two pairs. April counts sometimes numbered 11–14 in the first half, plus 16 on 11th and again on 21st. Counts in May were unexceptional, with single figures except 10 on 5th and 13 next day. June records extended to 26th, and numbered up to five adults. Throughout the first half of the year, virtually all specified records emanated from Will Pits Scrape, rarely flooded workings. During June, there were occasional sightings at the Scrape of a female with seven unfledged young. Recorded again on 10th September (eight), with further totals in September and the first half of October. These numbered up to six, with 12 on 25th September and 20 on 7th October. The latter were at Goole Fields Reservoir, the rest at Will Pits Scrape. Subsequently, the Scrape hosted four on 25th November and two on 15th December.

Greater Scaup *Aythya marila*. A "female type" was at Goole Fields Reservoir on 24th September (TCL). On 7th October, one described as a juvenile was at Will Pits Scrape (BPW, DA, RD, SHi). The first modern records.

Common Scoter *Melanitta nigra*. On 17th May, three males and six females were at 'Thousand Acre floods' (BPW, RA, WHP). In autumn, a second-year male was at Will Pits Scrape on 25th September (BPW), and on 26th October a remarkable *c.*200 flew high to the east over the northern edge of Goole Moor (RJS, JS). The first records.

Common Goldeneye *Bucephala clangula*. A female/juvenile was at Will Pits Scrape on 13th October. From mid-November to the end of the year, recorded on 22 dates, almost entirely at Will Pits Scrape. On 12th November there were two "female type" and a juvenile at flooded workings, with a single female at Will Pits Scrape subsequently to 28th December. It was joined in November by a male on 15th and an immature male on 27th. In addition, there were six "female type" at Will Pits Scrape on 18th November, and there was a female at Goole Fields Reservoir on 25th November.

Goosander *Mergus merganser*. After 11 on 1st January, there were 10 on 4th, nine on 13th (including one male) and a male again next day. Noted 2nd–3rd February, with eight and 13 respectively, including seven males on the second date. There were up to three during 8th–10th February. Counts through March occasionally reached six. There were eight on 2nd, these latter including two over Durham's Garden. There were eight again (four pairs) on 29th. Records during the first half of April exceeded six on 13th (eight) and 14th (nine). The maximum number of males was three, and the last was a female on 16th. A male on 1st June was unexpected, and the first in that month. Sightings recommenced on 19th November (two "female type"). There was then a female/"female type" occasionally and four–five females on 23rd, plus males on 20th/23rd (one) and 28th (two). In December, apart from a male on 7th–8th December, records were obtained on 1st (three males and two females), 14th (two males and four females), 15th (two males and one female), 17th (one male and three females), 19th (six males and four females), 20th (seven males and four females), 22nd (four males and two females) and 28th (the year's maximum of nine males and four females). Throughout the year the only specified location (except 2nd March) was Will Pits Scrape.

Common Quail *Coturnix coturnix*. On 27th August, one was in a field north of Fillingham's Gate.

Red-legged Partridge *Alectoris rufa*. Barely registered, being encountered only on 14th April (two), 21st April (one on Fisons' Road at Green Belt) and 2nd September (two on Goole Moor).

Grey Partridge *Perdix perdix*. Recorded on 28 dates. The first were singles on 22nd February (no location) and 29th March (field at Fillingham's Gate). The April records, of singles or pairs, were all from farmland, including Top House Farm and south of Crowle Moor. There were singles or pairs in May, the stated locations being fields at Creyke's and south of Crowle Moor. During June, the

farmland at Creyke's held up to four (on 9th). There was one at Top House Farm on 11th July. On 22nd September, six were in a field at the western end of Jones' Cable, after one had been heard towards the allotments the previous day. There were no locations given for records on 27th August (four) and 3rd October (12). There were further reports in November from agricultural land, comprising four on 15th and a notable c.30 near the Moorends (Paraffin) Works on 30th.

Common Pheasant *Phasianus colchicus*. Although recorded in every month, there were only three records during the period mid-May–early September, but including young birds on 16th June and 19th August. Maximum counts were highest September–November, with c.30 on 25th September, 26 on 8th October, c.20 on 28th October, c.30 on 6th November and 28 on 13th November.

Northern Gannet *Morus bassanus*. On 13th October, a juvenile headed low to the north-east over 'Thousand Acre floods' and Will Pits (RWa). The fourth record.

Great Cormorant *Phalacrocorax carbo*. The first of 13 dates was 13th January, when one was at Will Pits Scrape. Transient birds were reported on 16th March (three east), 19th April (two north) and 24th April (two west). There were three in May, on 8th (one departed westwards from 'Woodside floods'), 13th (one south-west) and 19th (one north-west). One was flushed from floods on Northern Goole Moor on 7th June. In the second half of the year, all were passing birds, on 27th August (one west), 28th September (three at Will Pits Scrape), 29th September (one west), 5th November (one north-east) and 10th November (one south-west).

Little Egret *Egretta garzetta*. On 27th January, one flew from the north over 'Thousand Acre floods' and Will Pits Scrape (BPW). This was the first January record. On 22nd August, there were two on flooded workings close to the junction of Fisons' Road and Middle Moor Tram (SHi). The ninth–tenth Thorne Moors records, plus others from nearby.

Grey Heron *Ardea cinerea*. Unrecorded February and November, and with only single records in January, June and December. However, that in June (four on 4th) was the year's peak count. More frequent March–May, maximum three on 2nd May. From July–October there were records of one–two, including an immature at Chadwick Field on 18th July.

Little Grebe *Tachybaptus ruficollis*. Relatively few records, spanning 28th March–6th November. During March–May, there were records of one or two from Inkle Moor Pond, Bell's Pond and Will Pits Scrape. Then singles (without locations) on 8th June, 24th August and 7th September. These were followed by records from Will Pits Scrape on 8th September (two), 26th September (one) and 6th November (one). A lone bird occurred on 3rd November at 'Green Belt floods'.

Great Crested Grebe *Podiceps cristatus*. At Will Pits Scrape, there were singles on 30th March, 10th April and 8th May, followed by two there on 23rd June.

Black-necked Grebe *Podiceps nigricollis*. A poor year. Singles were seen at the Black-headed Gull colony at 'Woodside floods' on 21st/29th April and 4th/14th May.

Red Kite *Milvus milvus*. One passed over Top House Farm on 12th June (JHi). On 20th October, one from the east flew low over flooded workings, and departed north-west, gaining height (RWa).

†**Marsh Harrier *Circus aeruginosus*.** Present throughout the year, and all birds are cited here as described. There were only three dates in January, and the only specified bird was a male on 4th. In February, the birds were collectively described as single males and females, except an immature on 2nd and three females on 20th. March counts reached three, and four on 22nd. There was one – occasionally two – females/'creamcrowns', and a "juvenile type" on 4th. All others indicated were males, maximum two on 11th/22nd/24th. They were individually characterized as adult male/male (15th/18th/22nd–24th), second-calendar-year male (4th), first-winter male (13th/20th/24th) and

immature male (two on 11th and one on 22nd). In addition, two males and four 'creamcrowns' flew north over Goole Fields from a Thorne Moors roost on 12th March.

The April counts reached five on five dates, and peaked at six on 20th–21st. The stipulated birds included three pairs on 20th (and 21st?), plus a maximum three adult females/females. Apart from three males on 3rd, there were up to two adult males/males, a "near adult" male from 2nd–4th, and an immature male on 8th–9th/22nd. There were also reports of immatures and first-winters during the month, up to two of each during 3rd–8th. Also in April, a pair displayed at 'Green Belt floods' on 5th/7th, and subsequently nested there. A pair was "battling" with two Common Buzzards on 30th. In May, there were five on four dates during 2nd–14th and six on 20th. Records describing males reached day-counts of two, plus four on 3rd/20th. There was an immature male on 5th. Females numbered up to three, and four on 13th, but with only two throughout the second half of the month. June totals attained day-counts of four. They comprised two adult males/males, plus a male "not full adult" on 22nd. There were two females, plus immatures on 24th (two) and 26th (one).

July data involved single males and females/'creamcrowns', although with two males on 2nd and two 'creamcrowns' on 21st. On 6th, a male was "dropping into reeds with food for young" at 'Green Belt floods'. On 8th a juvenile was at 'Middle Moor', and on 10th a female and two recently-fledged young were on Goole Moor. On 12th, there was a female and three "immatures", one of the latter separate from the other two. On 26th, there was "[a] male passing food to [a] juvenile which caught it, also [a] female". In August, there were single adult males/males and females/'creamcrowns', plus two of the latter on 22nd/30th. There were also one–two immatures on 7th, one immature on 22nd and one juvenile on 28th. There were September peaks on 4th (nine, comprising three males, one female and five juveniles), 14th (five unspecified), 28th (six unspecified) and 29th (eight in the air together, including single adult and immature males, a female and two juveniles). Further, in addition to single adult males/males, two males occurred on 22nd and immature males on 7th (two) and 20th/30th (one). There were single adult females/females/'creamcrowns', although 'creamcrowns' numbered two on 2nd and three on 29th. There were lone immatures on 2nd/16th, and one–three juveniles through September, one being "hassled" by two Carrion Crows on 9th.

October numbers occasionally reached five, plus six on 11th, the latter unspecified due to poor light at a roost site. Adult males/males occurred singly on 7th/18th/20th/28th. There were also single adult females/females/'creamcrowns', except three 'creamcrowns' on 22nd/25th. Those on 22nd were at a roost with two juveniles. There were other reports of one or two juveniles. Also, there was an "immature creamcrown" on 1st, a first-winter on 23rd, and immature males on 1st/6th/27th–30th. Single unspecified immatures were observed on seven dates, plus three on 27th. November counts exceeded four on 10th/23rd, both times involving six birds. There was a male on 6th/10th, and an immature male on 3rd/8th/10th. Sightings of up to three adult females/females/'creamcrowns' were exceeded by four 'creamcrowns' on 10th. Single immatures were reported on 16th/18th–19th/27th–28th, as were single juveniles on 3rd–5th/10th/12th. December reports, although fewer, remained complicated. There were single males on 19th/24th, two males on 17th and an immature male on 15th. Females/'creamcrowns' involved three on 8th, and one–two during 16th–28th. On 15th there was both a "first-winter" and the immature male.

Hen Harrier *Circus cyaneus*. Single males occurred in January on 4th/27th, with a female on 14th. During 2nd–11th February there were two males on 2nd and one male thereafter, with a 'ringtail' on 5th. Also a male on 20th. Records in March were of a male/adult male on a number of dates, a first-winter male on 24th and an immature male on 30th. The only 'ringtail' was on 15th. Also in March, on 12th two (unspecified) flew south over Goole Fields, apparently from a roost. Single males/adult males occurred throughout April to 28th. On 3rd, there was an immature male and a 'ringtail', the latter mobbed by Carrion Crows. The next records were obtained in October, commencing with a 'ringtail' on 6th, and others also described as 'ringtails' on 25th/26th. There were adult males on 22nd/29th (flying to roost at flooded workings), and an immature male on 27th. On 30th, an adult female and a male flew separately to roost at flooded workings. During November, single males/adult males occurred on seven dates, with an immature male on 2nd/3rd and a female on 2nd–4th/10th. December sightings involved a male/adult male on four dates, an immature male on 16th, and a "near adult" male, different to the foregoing, on 19th.

Eurasian Sparrowhawk *Accipiter nisus*. Occasional in January–February. March began with four on 2nd, with subsequent single birds including an immature male (11th), a male (29th) and a female (23rd/29th). Singles were seen in April (two on 23rd), with females on four dates and a male on 24th. During May–July, there were singles infrequently, with females indicated in June (carrying prey on 17th), and males on 14th May, 9th June (carrying prey on Crowle Moor) and 22nd/26th July. On 21st July there were separate male and female, the latter with prey flying on to Crowle Moor. Singles in August involved a male on 14th, with the others unsexed or female, the latter including one mobbed by Carrion Crows on 7th and one ringed on 22nd. Daily totals in September were one or two, being males where notified except a female on 29th. A male was mobbed by two Carrion Crows on 16th. Totals in October–November reached three on 8th/31st October, those specified being females except single males on 5th/27th October. There was a female on 7th December, and finally a male on 19th.

Common Buzzard *Buteo buteo*. Recorded on 136 dates, the most prolific months being March–June and September–October. Counts reached three, sometimes four or more, with larger totals of five (2nd March) seven (30th April, 29th September, 5th October), eight (22nd September) and ten (a record total on 6th October). Two of those on 30th April were "grappling claws and spinning around with Marsh Harriers". Two were described as "sparring" on 14th May, and on 6th November one was mobbed by a Common Kestrel and two Magpies. Interestingly, display was noted in April by pairs over Woodpecker Wood (6th) and Will Pits (13th).

Osprey *Pandion haliaetus*. An immature flew south on 29th September (WHP).

Water Rail *Rallus aquaticus*. During January–late March there were several records. One on 24th January along Mill Drain at Will Pits was followed by two at Chadwick Field on 3rd February. Specified locations in March were Middle Moor Tram in the Fisons' Road area (including two on 20th March), flooded workings and the "Paraffin area". April locations were flooded workings/Fisons' Road (two at 'Woodside floods' on 2nd), the Viewing Platform and 'Middle Moor'. There were infrequent records during the period May–mid-August, the locations including Goole Moor, Fisons' Road (four on 31st May), 'Woodside floods'/Will Pits, Will Pits Scrape and the Viewing Platform. Five were heard during the annual European Nightjar survey. From mid-August there were occasional records to late September, the only locations given being Mill Drain Marsh and Will Pits Scrape. Records increased during October–December, with totals occasionally reaching three, plus four on 4th November and 4th December, and four+ on 10th November. Locations, where given, were typically vague, involving flooded workings/'Green Belt floods'/Fisons' Road, Will Pits and Goole Moor.

Spotted Crake *Porzana porzana*. On 25th June a possible Spotted Crake was heard at Creyke's (MHO, KL). On 30th June, one was heard in SE7117 during the annual European Nightjar survey. In 1km square SE7218, one was calling on 19th June (JWH), with perhaps two calling on 1st–2nd July (RM). On 11th July, possibly heard along Swinefleet Warping Drain towards Goole Moor (TCL). The fourth–sixth records at least.

Moorhen *Gallinula chloropus*. Monthly maxima were nil, five, four, seven, eight, five, three, one, one, three, four and five. Apart from a c/7 at Will Pits, not much else reported.

Common Coot *Fulica atra*. Present 2nd March–23rd June, with most – perhaps all – records from Will Pits Scrape. Monthly maxima were two, seven, seven and four.

†**Common Crane *Grus grus*.** Records commenced on 2nd March when four (seemingly two pairs) were present. One of these pairs subsequently bred, with the single chick probably hatching on 3rd May and fledging sometime after 4th July. This was the first case of successful breeding at Thorne. A second pair was apparent on 2nd–5th/18th March, then on a number of April dates and 3rd May. Also, an additional single bird may have been present on 6th April, with further singles spasmodically from 14th April–26th May. What was described as a "browner-backed adult", reported on 3rd/20th May, may have been responsible for all the single Crane observations during April–May. The nesting pair was encountered through June and up to 4th July. The latter date was the last occasion that the

unfledged juvenile was seen. A probable additional pair was reported on 9th June. During 5th July–25th September the adults and their fledged juvenile (or three Cranes) were seen on only four dates. Interestingly, what was presumably the Thorne family was on Hatfield Moors on 13th/21st August. Activity at Thorne resumed in late September, with the family recorded 26th September–8th October, plus up to 12 extra adults from 28th September, giving a maximum total count of 15 on 28th/30th September and 5th October. The new birds persisted until 8th October, when the family and one other adult were present. The only later evidence involved two heard from Fisons' Road on 14th October.

Oystercatcher *Haematopus ostralegus*. Virtually all records were in May, the exceptions being 24th April (two in a field near the Moorends (Paraffin) Works) and 5th June ('Thousand Acre floods'). In May, there were singles (unless specified otherwise) at flooded workings on 4th–5th, 6th (two), 12th, 15th (two) and 16th/19th.

European Golden Plover *Pluvialis apricaria*. The only January records were from Goole Fields, with *c.*160 on 9th and *c.*100 on 30th. Two counts in February (*c.*50 on 2nd and *c.*80 on 9th) were probably also from Goole Fields. On 15th March, the 'southern fields' held *c.*270. Later in that month, there were 237 on 27th on Goole Fields, 52 (no location) next day, and 64 on farmland north of Crowle Moor on 30th. Records in April commenced with 25 at Top House Farm on 3rd and *c.*70 in a field at Creyke's on 5th. On 16th, a total of *c.*150 inhabited farmland at Goole Fields and Red House Farm. Goole Fields then attracted *c.*200 on 19th, *c.*80 on 24th and 46 on 27th. These were the last until late September, when four headed west on 27th and there were *c.*30 over the Moors to Goole Fields on 29th. October counts were submitted for 3rd (53), 4th (12) and 14th (32 over Goole Fields). There were 61 in "fields" on 10th November, with five (no details) a few days later, on 16th.

Grey Plover *Pluvialis squatarola*. In August, one headed east on 27th and two north on 28th. One called over Crowle Moor on 20th October.

Northern Lapwing *Vanellus vanellus*. Unrecorded in January and with only single figure totals in February–March, but with *c.*70 on 25th February and 19 (on farmland north of Crowle Moor) on 30th March. There were numerous April–May records, but with counts rarely exceeding 16. The exceptions were on 15th April (*c.*75 over Will Pits Scrape) and 3rd May (*c.*85 on Goole Fields). There were four at 'Woodside floods' on 7th April, and a territorial pair at Mill Drain Marsh later in the month, on 15th. The fewer June–early July figures reached nine on 7th/19th June, but included two at Will Pits Scrape on 26th June. Totals increased from 7th–28th July, occasionally reaching 31, and with 38 on 11th. At flooded workings, there were 54 on 25th (including at least one young bird), and 61 next day. The four August dates included one being pursued by a Peregrine Falcon on 19th and 44 at Will Pits Scrape on 24th. In September, counts at Will Pits Scrape varied from 19–*c.*40, with *c.*90 on Goole Fields on 19th, and up to 65 (without locations) at the end of the month. Exceptionally, October totals exceeded 30, with a maximum of *c.*60 at Will Pits Scrape on 6th. Subsequent totals during the month were associated with Goole Fields: *c.*115 on 24th, *c.*110 on 27th, *c.*350 on 28th and *c.*300 on 31st. Counts in the first half of November attained three figures on 3rd (*c.*200 in fields to the north and west of the Moors), 4th (116) and 9th (126 south-east). After 77 on 19th November, the only later records were of singles/three on four December dates, plus *c.*60 overhead on 15th.

Little Ringed Plover *Charadrius dubius*. One–two were in the Thorne Colliery area from 24th April–7th June and on 18th July. There were odd birds at the flooded workings in early May, plus seven on 9th May (giving nine with the Colliery pair). Further singles were on the Moors in May–early June, then two on 8th June and an isolated nine on 3rd July.

Ringed Plover *Charadrius hiaticula*. One was at the Thorne Colliery spoilheap on 19th March, but departed on to the Moors. There were two at the Colliery on 18th April, and on 3rd May three flew from that area to the Moors. After one over 'Thousand Acre floods' on 3rd April, all other localized records in the first half of the year were from May–early June. These included Goole Moor on five dates 6th–14th May, where there were up to eight but 12 on 12th and 13 on 14th. Ten occurred at flooded workings between Blackwater Dike and Shoulder o' Mutton Tram on 13th May. There were

also 10 in flight over flooded workings on 15th, one–four occasionally thereafter to 9th June, and three on 17th June. In the later months, there were records on 14 dates spanning 24th August (two) and 3rd October (one). It is likely that all were at flooded workings, and they usually numbered one–four. There were five on 30th August and 10 on 16th/19th September.

Whimbrel *Numenius phaeopus*. Two were on Goole Moor on 9th May. In June, one was on Goole Fields on 3rd, and singles occurred on 21st/29th, these during the European Nightjar survey.

Eurasian Curlew *Numenius arquata*. There were singles overhead on 16th/29th March and 6th April. On 13th, one flew over Will Pits Scrape and two were at Inkle Flats. On 21st April there was display on Goole Moor and one at 'Woodside floods'. The last of the month were two at the Shoulder o' Mutton on 25th. There were occasional singles or pairs in May–June, described as at flooded workings/Inkle Flats, but also in June on Goole Fields (3rd), 'Middle Moor' (26th) and Mill Drain Marsh (29th). There were three later records: 18th July (one heard), 22nd September (two were flushed and flew off west) and 3rd October (one south).

Black-tailed Godwit *Limosa limosa*. On 26th April, 50+ circled over 'Thousand Acre floods' and then headed west. There were two at flooded workings on 2nd May, and on 8th May 38 circled and then flew west, possibly landing out of sight.

Bar-tailed Godwit *Limosa lapponica*. On 3rd June, one was with a Eurasian Curlew on Goole Fields (TCL). The eighth record.

Turnstone *Arenaria interpres*. On Goole Moor in May, there was one on 17th, followed by four low to the NNW on 29th.

Ruff *Calidris pugnax*. Over half of all records were in September, although with the first being on 28th August, when there were three at flooded workings and possibly others distantly in flight. On eight September dates one–two occurred, but five on 10th. After three at Will Pits Scrape on 1st October, there were singles on 5th–6th October. Detected in November on Goole Fields, with 14 on 10th and 10 next day.

Temminck's Stint *Calidris temminckii*. One was present on Goole Moor on 8th May (BPW, SHi, IP *et al.*). The second record.

Dunlin *Calidris alpina*. Mostly recorded in May (12 dates) and September (11 dates). The first was on 30th January (one with c.100 Golden Plovers on Goole Fields). Recorded in late March on 27th (nine on Goole Fields in a flooded field of Sugar Beet *Beta vulgaris* ssp. *vulgaris*) and 30th (one in a field north of Crowle Moor). On 28th April, two were on flooded workings at the western end of Blackwater Dike. Other dates outside the main months were 9th June (one), 7th August (one), 24th August (nine), 1st October (six) and 3rd October (four). The May records began on 6th (18), with further totals on 8th (five), 9th (eight), 11th (20), 12th (four), 13th (17), 14th (13) and 15th (c.11 in flight). There were then singles 16th–19th and four overhead on 29th. During 9th–29th September there were several records of one–two, occasionally three–five, with nine on 16th/19th.

Little Stint *Calidris minuta*. In September, first recorded on 7th (three juveniles), with an adult in flight on 30th. Presumably the same adult was present 1st/3rd/5th October, with Dunlin on the first date. This was the first October occurrence.

Common Sandpiper *Actitis hypoleucos*. Singles appeared on 3rd July and 24th August, with two on 9th September.

Green Sandpiper *Tringa ochropus*. There were two on 26th June and 14th September, also one on 8th September. Recorded in August from 7th, with records of one–two on 12 dates. Three Green/Wood Sandpipers were seen briefly and inadequately overhead on 8th May.

Spotted Redshank *Tringa erythropus*. A juvenile was on Northern Goole Moor on 24th August.

Greenshank *Tringa nebularia*. There were singles on 2nd/8th May and 21st July. In August, after five on 8th, there were six further dates involving one–two birds to 28th.

Wood Sandpiper *Tringa glareola*. One was present on 16th May at the Black-headed Gull colony established on Snaith & Cowick Moor.

Common Redshank *Tringa totanus*. Recorded frequently from mid-April–late July. In addition to singles in April, there were seven on 16th, then two–three until four on 24th, with five on 26th–27th and six on 25th/28th. During May, totals sometimes reached three or more, with six on 6th/9th/12th, and four–five during 14th–26th, plus seven on 19th. June–July records were often of singles, sometimes two (including the last, on 26th July), but with three on 8th July.

Jack Snipe *Lymnocyptes minimus*. One at Top House Farm on 2nd March. On 18th September, one flushed from Middle Moor Tram flew into Pony Bridge Marsh.

Woodcock *Scolopax rusticola*. Occasional birds were flushed during January–March, including one from the Thorne Colliery spoilheap on 16th February. During 1st–8th/30th April there were one–two, including along the Rhododendron Path, in the Paraffin Cuttings area, at Green Belt, in the Will Pits area (three on 8th), along Pony Bridge Tram and on Crowle Moor. There were also two at the Pony Bridge on 16th May. Four were noted during the annual European Nightjar survey. Otherwise singles were flushed on 6th October, during 19th–27th November and on 13th December. That on 26th November was from bushes on the Colliery spoilheap. On 29th November, seven were reported from the 'southern fields' at dusk.

Common Snipe *Gallinago gallinago*. Monthly maxima were two, two, 12, seven, one, one, 12, 19, 62, 24, five and seven. The counts in September peaked on 7th (40), 9th (62), 10th (28), 14th (20), 19th (36) and 20th/25th (21). Will Pits Scrape attracted many of them. There were also 24 on 15th October. Of interest, seven were flushed from a marshy area within the old Thorne Colliery compound on 19th December. 'Drumming' birds were recorded over the Fisons' Road–Northern Canals–Mill Drain Marsh–'Middle Moor' area. Five were 'chipping'/'drumming' during the annual European Nightjar survey, including one on Crowle Moor. Three were flushed by a Marsh Harrier on 18th August, with two flushed by an adult male Hen Harrier on 16th December.

Arctic Skua *Stercorarius parasiticus*. On 21st May, two pale morphs headed north over Goole Fields from Bank Top (BPW). The fourth record, the previous ones involving single birds.

Black Tern *Chlidonias niger*. One was at 'Woodside floods' on 8th May (IP, BPW).

Common Tern *Sterna hirundo*. During rain on 15th May, one in flight descended over 'Woodside floods' and 'Thousand Acre floods'. On 15th June one landed at 'Thousand Acre floods', and on 10th July four flew to the north along Swinefleet Warping Drain.

Black-headed Gull *Chroicocephalus ridibundus*. January–February records were unremarkable, except c.330 WNW on 15th February. Breeding birds returned in March, with subsequent colonies at 'Woodside floods', 'Thousand Acre floods' and on Snaith & Cowick Moor. The March maximum was c.120 on 30th, with peak counts in April on 26th (c.260), 27th (c.220) and 28th (c.200). Counts in May occasionally reached c.200, with higher numbers on 2nd (c.350), 12th (c.380) and 13th (c.250). The only count in excess of c.100 in June was c.120 on 6th. During April–June, there were occasional colony counts. At the 'Woodside floods' there were c.100 on 6th April. On Snaith & Cowick Moor, the colony totalled 66 on 30th April, 113 on 4th May and 63 on 23rd June. Chicks were first present on 5th June (seven at the 'Woodside floods' and one on Snaith & Cowick Moor). The first fledged young were seen on 26th June, but overall productivity was low with few chicks reared. Four were

ringed at the 'Woodside' and 'Thousand Acre' floods. On Snaith & Cowick Moor, c.100 roosted on 3rd July, and there were seven fledged young there next day. During September–December, daily totals were usually in single or double figures. However, September counts reached c.180 on 7th, c.150 on 14th, c.800 on 29th; and there were c.200 on 18th October. In early November, numbers reached 164 on 6th, c.400 on 7th and 308 on 10th.

Mediterranean Gull *Larus melanocephalus*. Encountered on two dates in May, both with breeding Black-headed Gulls. These was a first-summer on Snaith & Cowick Moor on 19th (BSt) and two adults at 'Thousand Acre floods' on 31st (WHP). On 4th September a juvenile, again with Black-headed Gulls, was on Goole Fields just beyond the old Axholme Joint Railway (c.SE740196) (MHo). The first record of a juvenile.

Common Gull *Larus canus*. During January–March, the only count in excess of seven was c.20 on farmland north of Crowle Moor on 30th March. In the same area there were 18 on 3rd April. In this month no other records exceeded seven, and sometimes there were only singles, including one with breeding Black-headed Gulls on 28th. During May–August there were only singles, on a mere two dates, including one at flooded workings on 6th June. There were occasional September–October records, including gulls in fields, maximum five on 7th September and 10 on 20th October. November–December records again included gulls on farmland, notably 45 in fields off Creyke's and Crowle Moor on 6th November, and 26 on Goole Fields next day.

Lesser Black-backed Gull *Larus fuscus*. There was one with other gulls on 16th February and an immature east on 24th March. There were more regular records in April, with one–three on eight dates, and 10 on 14th. May–July numbers ranged from one–six, but with 11 on 12th May, 14 on 17th June and 12 on 2nd July. All those specified were juveniles/immatures except an adult on 4th July. The gulls on 17th June left a roost at flooded workings on Snaith & Cowick Moor. There were none 19th July–23rd August, with the exception of a transient immature on 7th August. However, frequent records and higher numbers were apparent during 24th August–29th October. These sometimes reached 50, with quotable records featured here. Counts from surrounding fields included 88 on 24th August, c.430 on 28th August, c.380 on 3rd September, c.280 on 10th September and 136 on 2nd October. These October gulls left the farmland and headed towards the Moors at dusk. More certain October roosts were at 'Thousand Acre floods', with c.440 on 11th and 63+ on 18th. Loafing birds at the flooded workings included 20 on 27th August and 124 on 16th September. Passing gulls included c.645 west on 20th September, c.2000 south-west next day (equalling the previous maximum, in August 1999), c.1200 on 27th September and c.500 on 5th October. On 4th September, an estimated c.910 included over half on Goole Fields and the rest at flooded workings. Other totals of c.50–c.350 had no details appended. Subsequently, there were four on 30th October, with 16 roosting at 'Green Belt floods' on 3rd November, and a final record of two on 10th November.

The roosting birds on 3rd November included five+ darker-backed adults *L.f. fuscus/intermedius*.

Yellow-legged Gull *Larus michahellis*. Records on 15 dates. The first was an adult on 28th August. The September dates were 3rd (14), 4th (24), 7th (six adults), 8th (two adults), 10th (three), 20th (one west), 21st (one adult), 24th (25, a record total) and 29th (one). There were five October dates in the first half of the month: 5th/7th/12th/18th (three) and 11th (two). Locations were not always forthcoming, but included Goole Fields and other farmland; and Moorends recreation ground on 8th/21st September.

Herring Gull *Larus argentatus*. Monthly maxima were three, 35, five, nine, six, five, two, two, 20, 122, 200+ and 161. On 2nd October, 53 on farmland flew towards the Moors at dusk. Also, 20 roosted at flooded workings on 29th October. In November, roosting birds were recorded on 25th (122 in a field to the west of Thorne Waste) and 28th (200+ at 'Thousand Acre floods'). There were also gulls roosting at flooded workings in December, including 33 on 15th.

Great Black-backed Gull *Larus marinus*. Monthly maxima January–May were five, three, three, seven and 11. These latter were all immatures, some of them departing from the 'Thousand Acre

floods'. The last of spring were three adults at the western end of Goole Moor Tram on 29th May. Sightings recommenced on 4th September (two), with a monthly maximum of four except *c.*120 on 22nd. October counts reached *c.*40, the exception being *c.*110 which flew to roost on flooded workings on 29th. Similarly, November counts reached 49, but with 83 on 3rd and 82 on 28th. Those on the latter date formed a roost-flight to 'Thousand Acre floods'. December totals reached 56, with roosts at flooded workings including 311 on 15th and *c.*120 on 19th.

Rock Dove *Columba livia*. Feral birds were present, attacked by Peregrine Falcons on two dates. First, one was chased by single male and female Peregrine Falcons on Goole Fields on 12th March. Another was caught by a juvenile female Peregrine Falcon on 29th September. However, this latter was mobbed by Carrion Crows and was forced to release and lose its captive.

Stock Dove *Columba oenas*. Counts were obtained throughout the year, although with few January–February, June and October. The best month was April, but the highest counts were later in the year. These exceeded 12 on 10th September (*c.*20), 25th September (18), 28th November (*c.*30), 6th December (18) and 7th December (32). However, most notable were 100+ on Goole Fields on 10th November. In April, two pairs occupied nestboxes at Will Pits.

Wood Pigeon *Columba palumbus*. Counts sometimes exceeded *c.*100 (not May–August and October), with counts of *c.*250 or more in January–February and November–December. The maxima were obtained on 11th February (281), 28th November (*c.*320) and 7th December (*c.*300).

Collared Dove *Streptopelia decaocto*. Records began with two at the horse paddock off Grange Road, Moorends on 16th February and 2nd March. Also in March, there were six at Top House Farm on 15th. Recorded 18th April–8th July (possibly later) at Bank Top, where a pair built a nest but were probably unsuccessful. Noted irregularly and often vaguely September–December, with counts on ten dates of one–six, including one east over 'Middle Moor' on 17th October and five at Creyke's Crossing on 6th November. Most notably, on 9th September the day-count was 19, comprising four at Creyke's Crossing and 15 in stubble adjacent to Thorne Colliery.

Turtle Dove *Streptopelia turtur*. The only April record was a pair at Limberlost on 30th. In May, the first were singles on 8th at Green Belt and Yorkshire Triangle. There were then records of one–two at Green Belt throughout the rest of May, with four there on 20th. Other May localities were Limberlost (one on 25th), Will Pits Scrape (two on 27th) and the Rhododendron Path (two on 31st). Reports in June commenced on 2nd, when two were along the Rhododendron Path. On 4th, there were three at Green Belt and two on telegraph wires in the Jones' Cable–Thorne Colliery area. On 7th there were four in the Durham's Garden area. Five on 8th comprised a pair and a single 'purring' male at Will Pits, with others 'purring' at Pony Bridge Marsh and on Crowle Moor. There were then 'purring' birds at Will Pits (11th/29th), Will Pits Scrape (23rd), Pony Bridge Marsh (24th), Green Belt/Rhododendron Path (two on 17th) and Durham's Garden (two on 17th and one on 27th). The five July dates involved three locations. There were two at Green Belt on 8th/26th. On 10th four 'purred' at Will Pits Scrape, and on 12th there were two at Bank Top. Five on 18th were not localized, and on 26th there was one on the above telegraph wires. Of the five dates in August, the first was 14th when three at Green Belt included at least one juvenile. There were singles at Durham's Garden on 20th–21st, followed on 23rd by one 'purring' along the Rhododendron Path. On the above wires there were two on 23rd and four on 29th. There were three dates in September. The wires attracted five on 9th and two on 12th, and finally three adults and two juveniles were at Green Belt on 14th.

Common Cuckoo *Cuculus canorus*. The first was at Durham's Garden on 20th April, with subsequent Moors totals of up to four, but five on 9th May and 5th June (one female), then six on 8th June. One sang briefly on 10th July and was the last of summer. However, there was a juvenile at Eastern Boundary Tram/'Middle Moor' on 9th September.

Barn Owl *Tyto alba*. Mostly recorded in the first half of the year, beginning on 24th January when one hunted in the Swinefleet Warming Drain–Will Pits area. In February there were singles at Creyke's

Crossing on 9th and near Medge Hall on 12th. One was seen between the Viewing Platform and Elmhirst Tram on 14th March, with one at Top Moor Farm on 20th. There were singles on the edge of Crowle Moor on 26th May and 1st June. During the remaining months, other singles were seen on 25th August (near the Swinefleet Works) and 27th September (Fillingham's Gate).

Little Owl *Athene noctua*. After one on 1st February, records at Top House Farm spanned June–August, and included two young birds. There was also a record from Priory Farm on 17th May. On 3rd April one was flushed at Will Pits near Natural England's shed. Pellets from there on 14th August contained Coleoptera remains and were presumably this species. Singles were also on Goole Fields (Axholme Joint Railway) on 27th September and at the Swinefleet Works on 4th October.

Tawny Owl *Strix aluco*. Singles on two dates in March–April did not have locations. Records in May were obtained on 16th (Yorkshire Triangle) and 25th (northern edge of Goole Moor). There were records from Will Pits on 9th June, 22nd–23rd/26th September and 27th November. Three were heard during the annual European Nightjar survey (two of them on Crowle Moor).

Long-eared Owl *Asio otus*. Surprisingly, the only report was of one at Will Pits on 30th May.

Short-eared Owl *Asio flammeus*. Continuing a theme since 2011, another good year for this species. The records in the first half of the year were clustered in the north. All were of singles, on Goole Moor (17th/20th–21st March and 20th May), the Creyke's area (6th/10th April) and Fisons' Road North (8th May). On 4th September there was one on Goole Fields. The latter location again attracted a single on 6th October, with one on Goole Moor on 6th November. On 23rd November, one was mobbed by Peregrine Falcons and headed towards Limberlost.

†**European Nightjar *Caprimulgus europaeus*.** Extreme dates were of singles on 19th May (Crowle Moor) and 30th August (Durham's Garden). During the survey in June–July, 53 territories were located, regarded as "almost certainly conservative" (Middleton Ecological Consultancy). A brood of two young was noted on Crowle Moor on 30th June and 10th July.

Common Swift *Apus apus*. After two with hirundines on 22nd April, recorded daily for the rest of the month. There were six on 23rd, 19 west on 24th, and 36 south-west along a shower front on 25th. The April counts then rose, with up to c.70 (26th), and c.100 on 4th May. Subsequent May maxima were c.200 on 9th, c.450 on 10th, c.350 ("massing before rain") on 12th, c.320 on 13th, c.180 on 15th and c.150 on 29th. June counts exceeded 100 on 5th (c.180), 8th (c.140) and 13th (c.200). July figures peaked on 2nd (c.80) and 12th (100+). After c.60 on 21st July, there were six on 24th, eight on 26th; and 100+ on 1st August. A half-eaten corpse on 5th June might have been Hobby prey.

Common Kingfisher *Alcedo atthis*. Singles were at Durham's Garden on 26th July and Green Belt Scrape on 26th September.

Wryneck *Jynx torquilla*. One was near the Viewing Platform on 1st June (TRu). The fourth record.

Green Woodpecker *Picus viridis*. Recorded on 25 dates. Three of these were in February–March, involving singles at Will Pits. The records from April–June concerned singles at Will Pits and occasionally elsewhere. These latter locations were Durham's Garden (1st April), Will Pits Scrape (7th April), Pony Bridge Marsh (23rd June), Crowle Moor (7th April and 16th–17th May) and Goole Moor (1st June). Six August dates involved single birds at Thorne Colliery/Moorends recreation ground, Will Pits and on Crowle Moor. There was also one at the recreation ground on 23rd October.

Great Spotted Woodpecker *Dendrocopos major*. Mostly reported from Will Pits (four on 19th April), with two 'drumming' from there. Other spring sites included Northern Goole Moor, Creyke's, the Alder Woods, Durham's Garden (three males on 6th April), Inkle Moor/'Paraffin' area (three males on 7th April), Woodpecker Wood ('drumming' on 1st April), and Crowle Moor ('drumming' on 7th April). Nesting in a large dead willow *Salix* on Crowle Moor was proven on 2nd June. One–two were

recorded July–December, the localities including Will Pits, Woodpecker Wood, Green Belt, Inkle Moor and Crowle Moor.

Lesser Spotted Woodpecker *Dendrocopos minor*. Singles were encountered on 27th January (Crowle Moor), 15th February and 4th March (both Will Pits). These latter two were described as "probable female" and male respectively.

Common Kestrel *Falco tinnunculus*. Daily counts sometimes reached three, with four on five dates (April, September, November), plus five on 23rd April. The records included a pair on 6th April and, at Will Pits Scrape, a female and immature on 22nd July, with a lone immature there on 14th August. On 26th July, three briefly mobbed a Peregrine Falcon (see that species). During the year, identified prey included a shrew and Field Vole.

Merlin *Falco columbarius*. Females were recorded on Goole Fields on 9th January, 20th February and 4th April. There were other early singles on 16th March and 3rd/13th/19th April, the latter also a female. Next recorded on 2nd October (one over fields at Creyke's), with single males on 5th/20th/26th and a perched female on 18th. After one at Crowle Common on 6th November, there were females on 7th/18th, and a juvenile and male on 12th, the former flushing redpolls. Recorded in December on 6th (a "female type" chased a Skylark at Thorne Colliery) and 14th (one male).

Hobby *Falco subbuteo*. The first appeared on 20th April, with one–two subsequently, and three on 5th/7th May and four on 14th May. After seven on 21st May, counts for the rest of the month attained six, plus 13 on 25th. June–July figures sometimes reached three, but with June maxima of four on 1st/4th/30th, five on 7th–8th and eight on 9th. Birds on 8th July comprised at least single adult and juvenile. There were one or two on dates in August and on eight dates in September, including, on 2nd September, feeding on dragonflies and briefly chasing a Barn Swallow. There were September juveniles on 4th/16th. An adult and juvenile were seen on 5th–6th October, plus a lone adult on 8th.

Peregrine Falcon *Falco peregrinus*. Recorded in every month except May, commencing in January with an adult female on 9th and three adults together on 27th. There were singles on 3rd/9th February, the latter involving an immature attacking a Great Black-backed Gull. A male and female chased a feral Rock Dove on Goole Fields on 12th March. There were then singles on 21st/24th March, the latter being an immature. Adult males were seen on 14th/29th April, and an unspecified bird occurred on 24th June. Single male/adult males were seen on 8th/26th July. On the first of these dates racing pigeons were chased, and on the second the bird was standing in water until it flew and briefly "tangled with Kestrels". Recorded on four August dates: 7th (an adult male mobbed Hobby and Marsh Harrier), 13th (one feeding on a racing pigeon), 19th (an immature female pursued a Northern Lapwing) and 28th (an adult male). The ten September dates included several different birds, commencing with a male on 2nd and an adult male on 7th. On 12th there were a juvenile male and an adult female. After one on 14th, there were unspecified juveniles on 19th–20th. There was then a male on 22nd, a juvenile male on 28th–29th, and also a juvenile female on 29th. Three birds on 30th comprised an adult male, adult female and second-year female. The juvenile female on 29th caught a feral Rock Dove, but was mobbed by Carrion Crows and released it. Next day, the second-year female pursued a Eurasian Teal. The 12 October dates involved adult males and unaged males on several occasions, plus a juvenile male on 5th. Adult and unaged females also occurred, an adult female "harassing Pink-feet" on 1st, and a female attacking Eurasian Teal, Shoveler and Marsh Harrier on 30th. In November, adult males/females were reported irregularly, with a male and female on 12th. Otherwise, single adult females/females appeared on 3rd/14th/19th–20th. Two unsexed birds mobbed Marsh Harriers and a Short-eared Owl on 23rd. In December, there was an immature female on 4th, a male on 16th, and one on 18th merely described as "chasing ducks".

Red-backed Shrike *Lanius collurio*. Remarkably, males occurred on Goole Moor on 21st May (TCL) and along Fisons' Road on 30th October (SHi). The fifth–sixth records.

Great Grey Shrike *Lanius excubitor*. One pursued titmice in the Thorne Colliery–allotments area on 3rd January. Otherwise reported 5th November–24th December, when one was seen widely on Thorne Waste (and on Goole Moor on 25th November). It actively chased bird prey, and succeeded with a male Reed Bunting on 16th December (hung on the fork of a willow bush).

Magpie *Pica pica*. Counts during the year up to early May, and from early August onwards, rarely exceeded eight. However, in the first half of February there were 18 on 2nd, 32 on 11th and 17 on 15th. Otherwise, the only comparable totals were in the second half of September: 16 on 20th and 15 on 30th. Although there were 11 on 3rd May, records during May–July were few, and otherwise only reached three.

Eurasian Jay *Garrulus glandarius*. Daily counts sometimes numbered three (especially in the first half of May), even four–five (July–November). Also six on 30th March and 29th September, seven on 20th September and 24th October, 12 on 30th September and 13 on 17th October.

Western Jackdaw *Corvus monedula*. Mostly recorded in the first half of the year, commencing in March with one over Durham's Garden on 2nd, one over Swinefleet Gate on 29th, and singles over the Alder Woods and Will Pits on 30th. Reported in April on 6th (one east over 'Middle Moor') and 16th (one over Goole Moor). One headed north over Will Pits on 4th May, and two moved north-west over Long Meadow on 2nd June. The only subsequent sightings were on 29th September (three west over Will Pits Scrape) and 17th October (two south over Chadwick Field).

Rook *Corvus frugilegus*. Noted on two dates. There were 12 on bare peat on the northern edge of Goole Moor on 7th October, and 74 flew east over Bank Top on 14th November.

Carrion Crow *Corvus corone*. Many counts during the year were less than 14, but with 18 on 3rd February and occasional April totals of *c.*20–*c.*30, peaking at 54 on 28th. Counts during September–December sometimes attained *c.*30, even *c.*50, with higher totals of *c.*70 on 29th September, *c.*60 on 11th October, and a roost-flight of *c.*500 on 6th October. On 28th April, perched Carrion Crows were watching nests of Black-headed Gull and other wetland species. Smashed eggs were frequently found by the Crane warden.

Goldcrest *Regulus regulus*. Recorded on nine dates February–April, one–two except four on 24th March. Locations were the 'Paraffin' area, Durham's Garden, Rhododendron Path, 'Middle Moor', Goole Moor and Crowle Moor. The last were two on 11th April. Next present on 5th–6th October (singles), and then fairly regularly from 17th. Totals reached four, with five on four November dates and seven on 15th November. Stated locations were Woodpecker Wood, Creyke's, Will Pits/Will Pits Scrape, Pony Bridge Wood, Goole Moor and Crowle Moor.

Blue Tit *Cyanistes caeruleus*. Daily counts were often not above six, but occasionally seven–eight, and higher on 16th February (12), 20th September (11), 24th October (17) and 13th November (10). Adults were feeding young at Will Pits Scrape on 19th June.

Great Tit *Parus major*. Few counts were in excess of six, rarely up to 12, with 16 on 17th October. On 2nd June on Crowle Moor, pairs were feeding young in a nestbox and in a dead birch *Betula*.

Coal Tit *Periparus ater*. Present at Creyke's on 9th February (one) and 20th March (three together), with one along the Rhododendron Path on 13th April, a pair on Crowle Moor on 15th April, and one on the northern edge of Goole Moor on 3rd May. There were singles on 26th July and 20th August (both Will Pits), 22nd August (Creyke's) and 28th–29th September (Will Pits Scrape). On 6th November there was one at Will Pits and four on Crowle Moor. During the remainder of November there were singles on 19th/23rd (no locations) and 27th (Pony Bridge Wood). The four December records were from Inkle Moor (one on 4th and two on 20th) and Will Pits (singles on 8th/15th). During the year there was again evidence of breeding, with one singing at Will Pits on 22nd April, then a singing adult and a nearby juvenile at Will Pits Scrape on 10th July (RB).

Willow Tit *Poecile montana*. Records on 93 dates, the most productive months being April and August–December. Almost all daily totals were of one–two, but with four counts of three (August–September and November) and four counts of four (February, August, October–November). There were six on 7th August. The most favoured locations were the Bank Top–Will Pits–Will Pits Scrape area (including in the breeding season), with the Durham's Garden–Whaley Balk and Inkle Moor areas also productive. Other locations on Thorne Waste were widespread, with named places including the Rhododendron Path–Green Belt, the 'Paraffin' area, the Southern Canals, Elmhirst Tram, Pony Bridge Wood and Creyke's. Others were on Crowle and Goole Moors, and on single occasions near Red House Farm (one) and in a garden at Creyke's Sidings (two). On 2nd June a pair was feeding fledged young in a dead birch on Crowle Moor, and on 9th July a pair had three young at Will Pits.

Bearded Tit *Panurus biarmicus*. There were two records in March, perhaps referring to the same bird. First, a male was in Common Reed *Phragmites australis* along Middle Moor Tram close to Fisons' Road on 4th (SR). Then one was heard calling there on 29th (WHP). On 21st April, one was along Swinefleet Warping Drain almost 1km north of Goole Moor (TP).

Woodlark *Lullula arborea*. On 13th April, there was one at Thorne Colliery and two reported on the eastern edge of Crowle Moor (JSm *et al.*). On 23rd one sang over Durham's Garden (WHP). One sang over Lonesome Pine Track on 16th May (SHi), and one flew over Crowle Moor on 6th June (BPW).

Skylark *Alauda arvensis*. From 27th January–27th September it was rare to record more than five in a day. The exceptions were eight on 15th February and 12 on 16th February and 11th March. On 29th September, 35 flew west over Will Pits Scrape and *c.*50 were on farmland at Creyke's. Next day, there were 57 on farmland south of Crowle Moor. Relative high totals on some October dates reached 28–*c.*60, but with *c.*100 south on 6th. Other October passage included 28 east on 3rd and *c.*60 south on 20th. November totals did not exceed nine (on 4th), except 43 west on 7th. There were odd birds in December, one of them evading a Merlin on 6th.

Sand Martin *Riparia riparia*. The first were 20 on 14th April, mostly going west. Other April counts reached 15 on 23rd, 11 west on 24th and 23 on 27th. Subsequently recorded on 3rd May (two), 9th May (one) and 29th June (one). There were then 10 on 21st July, odd singles in August (three on 7th), and six on 7th September.

Barn Swallow *Hirundo rustica*. The earliest were in April on 13th (two) and 14th (seven+). Subsequent counts in that month occasionally reached *c.*40, with *c.*60 on 27th, 67 west on 24th and *c.*100 on 22nd. The peak occurred on 25th, when there were 132 on the eastern side of Goole Moor, many resting on small bushes. May figures reached 24, but were higher on 9th (*c.*30), 10th (*c.*50), 12th (*c.*160) and 13th/15th/17th (*c.*100). The June peak was 25 on 24th. In July, 27 on 12th was topped by 46 (including juveniles) on 25th at Swinefleet Gate. There were higher figures in August with up to 20, eventually exceeded by *c.*30 on 30th. The numerous September records surpassed 38 during 9th–22nd: 103 on 9th, *c.*130 on 14th, 58 on 16th, *c.*60 on 20th and 196 south on 22nd. For the rest of September and in October, no totals went beyond eight except in early October: 10 on 4th, 18 east on 5th and 15 on 6th. After this latter date, the only record was of one south over Top House Farm on 28th October.

House Martin *Delichon urbicum*. After five west on 14th April, there were regular April reports of up to six, with 10 on 25th, 13 on 26th and eight on 27th. Similarly in May, counts overtook six on 9th–10th (*c.*30), 12th (*c.*20) and 29th (10). Recorded on 12 dates during June–July, maximum six on 21st July. In August, there were singles on 7th/23rd and 11 on 21st. More numerous in September, exceeding two on 7th (16), 10th (39 west), 12th (21), 19th (38) and 20th (*c.*30), the last date.

Long-tailed Tit *Aegithalos caudatus*. Monthly maxima were 11, 19, 11, 10, 3, 15 (including 13 juveniles), nine, six, 18, 18, 35 and 32. The two + 13 juveniles were on 7th June. Nest-building was

watched at Will Pits on 7th April. On 19th May a nest of five young was found on Crowle Moor, built in a Hawthorn *Crataegus monogyna* and Bramble *Rubus fruticosus* agg.

Common Chiffchaff *Phylloscopus collybita*. After six+ on 7th April there were 12 on 13th/20th. The May–August peak was seven on 3rd May. In September, six was exceeded on 9th (15) and 20th (11). In October, recorded 1st–8th (four on 3rd), 12th (one) and 20th (two). On 2nd June, a c/5 was found in a grass tussock on Crowle Moor.

Willow Warbler *Phylloscopus trochilus*. After one on 14th April, counts occasionally reached 33, with c.50 on 26th and 41 next day. In May, counts eclipsed single figures only twice, with c.30 on 2nd–3rd. The July–August peak was 17 ringed on 24th July. Recorded in September to 23rd, maximum eight on 9th. One at Durham's Garden on 5th October (RJS, JS) equalled the previous latest date. On 27th May, a nest at Will Pits held six or seven young. On 2nd June, a c/6 was found hidden beneath dead Bracken *Pteridium aquilinum* ssp. *aquilinum* on Crowle Moor.

Blackcap *Sylvia atricapilla*. In April, recorded from 15th onwards, maximum 18 (17 males) on 24th. May counts peaked on 2nd, when there were 10 at Durham's Garden and six at Green Belt. June–August counts reached eight on 8th/26th June and 16 ringed on 22nd August. After eight on 4th September, two were logged on 9th–10th, with three on 14th and two on 22nd–23rd. There were singles on 6th–7th October, the latter on Crowle Moor. Here, on 19th May, a c/4 was located, in a nest built low in Bramble and Common Nettle *Urtica dioica* ssp. *dioica*.

Garden Warbler *Sylvia borin*. Recorded from 2nd May, with no totals to July exceeding four. Birds were ringed in August on 8th (two) and 22nd (five), and the latest was along Elmhirst Tram on 9th September. At Will Pits, a c/5 found on 4th June successfully fledged later in the month. Another nest at Will Pits, found on 16th June, had a brood of five, outcome unknown. A Garden Warbler ringed at Beachy Head, Sussex on 20th August 2007 was controlled on Thorne Moors on 26th June.

Lesser Whitethroat *Sylvia curruca*. One sang at Green Belt on 23rd April and 9th/14th May. As with the preceding species, Elmhirst Tram attracted one on 9th September.

Common Whitethroat *Sylvia communis*. Following three on 20th April, totals in that month reached 16 on 27th, with subsequent monthly peaks of 25+ on 5th May and 10 on three dates during 2nd–8th June. Counts in July–August attained 22 on 18th July and 10 on 27th August. There were one–three during 2nd–14th September, but 17 on 9th. The last was on 28th September. On 27th May, a c/5 was found near Will Pits Scrape, built in Common Nettle.

Grasshopper Warbler *Locustella naevia*. After one on 19th, there were April totals of up to seven, and few May–July figures exceeding five. These were two June counts comprising 20 on 22nd and 14 on 29th. Twenty-six were 'reeling' during the annual European Nightjar survey. This was regarded as a minimal number "because the ones recorded are located from tracks and there are many areas with suitable habitat for this species that are not covered during the nightjar survey" (Middleton Ecological Consultancy). The last were in August, on 7th (two) and 22nd (one),

Sedge Warbler *Acrocephalus schoenobaenus*. April began with three on 19th, then 24 on 25th (the length of Fisons' Road/Fisons' Road North), 14 on 26th/28th, and c.30 on 27th (29 of them along Blackwater Dike and Goole Moor Tram). May counts peaked at 28 on 2nd and 24 on 3rd, but with no more than six during June–July, and August records only on 22nd (two) and 24th (one).

Reed Warbler *Acrocephalus scirpaceus*. After one at Bell's Pond on 23rd–24th April, there were four on 25th along Swinefleet Warping Drain at Will Pits, and this was the monthly maximum. Through to August, day counts occasionally reached five, but with May numbers featuring 12 on 12th (10 at Durham's Garden) and 10 on 31st. Named locations were Inkle Moor, Durham's Garden (including Bell's Pond), Green Belt, the canal towpath and Swinefleet Warping Drain. August counts reached six on 7th, and the sole September record was of one on 9th.

Eurasian Treecreeper *Certhia familiaris*. In March, there were singles on 3rd/13th (no locations), three on 20th (two at the Alder Woods and one at Green Belt) and three again on 29th (Will Pits–Will Pits Scrape). April records began with one at Will Pits on 7th, then further singles on 8th (northern edge of Goole Moor) and 19th/26th–27th (Will Pits). May records included singles on the northern edge of Goole Moor on 3rd and on Crowle Moor on 19th. Other records in that month involved a pair with a nest in a dead birch at Natural England's shed (Will Pits). There was also one at Will Pits on 26th July. There were then singles at Creykes on 8th/22nd/27th August, and further singles on 8th September (no location), 6th October (Creyke's), 24th October (no location) and 4th/9th November (no locations). Crowle Moor attracted one on 6th November. On 5th December there was one at Creyke's Crossing, with subsequent reports on 8th/15th (Will Pits), 9th (Durham's Garden), 22nd ("NW edge") and 31st (a garden at Creyke's Sidings).

Wren *Troglodytes troglodytes*. During January–August, monthly maxima varied from three–15. However, there were some higher counts subsequently, exceeding 26 on 24th October (38), 4th November (41), 22nd November (36), 27th November (32) and 6th December (c.40).

Common Starling *Sturnus vulgaris*. The January maximum was c.80 on 27th. Notable totals in February were 105 on 16th and 215 on 22nd. In March–early April, counts on surrounding farmland/Chadwick Field peaked at c.180 (23rd March), although with an unspecified c.350 on 16th March. There were no records 6th April–11th September, apart from two June dates, including six juveniles on 11th. From mid-September–late October the maximum was c.40 on 4th October. Counts on/over Goole Fields reached c.200 on 30th October, c.1000 on 28th October and 2nd November and c.2000 on 27th October. In November, farmland at Creyke's held c.900 on 6th and c.300 on 12th. Also in November, the larger counts were c.300 on 5th (no details), c.500 on 7th ("fields"), and c.700 ("to roost on moors") on 11th. Other counts of up to c.280 had no details appended. This latter was also true in December, maximum c.80 on 9th.

Blackbird *Turdus merula*. Throughout January–late October, no counts exceeded 16, and most did not exceed seven, except c.20 on 16th March. After 22 on 24th October, counts to the end of the year climbed higher, with c.20–39 on occasion. The November peaks were 43 on 19th and 48 on 22nd, with the December equivalents being 45 on 6th and 53 on 9th. There was one breeding record ("noisy brood being fed near Will Pits Scrape").

Fieldfare *Turdus pilaris*. In February, recorded from 2nd, with maxima of 179 on 11th and c.360 on 15th. The top figures in March were c.120 on 13th and c.90 on 29th. Some fed on farmland, and Chadwick Field attracted up to 49 (with Common Starlings on 23rd). Present through much of April, including at Chadwick Field on 1st (c.150), 7th (50+) and 15th (nine). There were 44 in a field at Creyke's on 5th, and 11 on Goole Moor on 8th. There were also 38 (no details) on 9th. The latest were four on the edge of Goole Moor on 28th. The next were eight on 12th October, and then up to 20 until late in the month. After 189 on 29th and 345 on 31st October, November counts sometimes reached c.200–333, plus c.400 on 7th and c.360 on 28th. The few November details included 290+ west on 5th and 61 south at dusk on 10th. Counts in the first half of December began with c.500 on 1st, with 403 on 4th and c.200 on 7th/9th. There were no later counts above c.80, except 317 on 15th.

Song Thrush *Turdus philomelos*. There were no records in January and August, but with many of them during March–May (three singing at Will Pits on 16th March). The number of birds *per* day reached five on 30th March and six on 28th September and 5th October. However, just one was fairly normal. A juvenile was seen on 18th July.

Redwing *Turdus iliacus*. Until late February the maximum was 22 on 1st January. After 84 on 22nd February, peak counts in March were c.60 on 2nd, 96 on 19th, 27 on 24th and c.100 on 29th. The latter two totals were at Moorends recreation ground. In April, the recreation ground attracted 100+ on 6th/13th, with the latter date also revealing c.20 at Will Pits. Chadwick Field held 10 on 1st and 150+ on 7th. The latest were four on 14th. After singles returned on 5th–6th October, other totals in that month reached c.30, but with c.120 south on 12th. There were many counts in November–December,

in the former month exceeding 36 on 24th (78) and 27th (79). December counts beyond 25 were *c.*70 on 1st, 46 on 9th, *c.*40 on 14th, 69 on 15th and 45 on 20th.

Mistle Thrush *Turdus viscivorus*. Recorded on 18 dates during February–April, usually one–two, but with four on 19th March and three on 6th April. The only locations given were Moorends recreation ground and Chadwick Field. Also recorded – without details – on 18th July (two), 27th August (one), 9th September (one) and 20th September (six). The 19 dates during October–December usually involved singles, occasionally two–three, with October counts of four on 5th and six on 29th. Goole Moor and Crowle Moor were the only locations given, both on 7th October.

Spotted Flycatcher *Muscicapa striata*. There were singles at Green Belt on 14th May and along Swinefleet Warping Drain on 17th June. Further singles were noted on 4th/9th September, at Creyke's and Elmhirst Tram respectively.

Robin *Erithacus rubecula*. During January–April, there were occasional double figure counts (not January), the highest on 16th February (19), 16th March (16) and 14th April (15). During May–August there were four occasionally, with eight on 23rd/28th August. From September to the first half of November, totals occasionally exceeded 10, with notable figures on 30th September (29), 17th October (38) and 24th October (42). No subsequent count exceeded eight.

Common Redstart *Phoenicurus phoenicurus*. A female on the Rhododendron Path on 21st August.

Whinchat *Saxicola rubetra*. Males were seen on two dates in April: 20th (one along Goole Moor Tram) and 23rd (two along Fisons' Road). A male was along Shoulder o' Mutton Tram on 22nd May.

†**European Stonechat *Saxicola rubicola*.** Recorded on 115 dates. There were records of one–two in January, and three (including two males) on 4th, involving at least three males. Numbers slightly decreased through February. After six+ on 2nd, there were five on 9th, four on 10th–11th, three on 16th and two on 27th. These and other counts included a maximum in the early part of the month of three males (2nd/9th) and three females (2nd). Those on 10th–11th February were described as two pairs. Most of these early records were from, and about, Fisons' Road. On 2nd March there was a male and two "female type", with perhaps the same birds next day. On 4th March a pair was watched. There was also a pair and two first-winters on 13th March, with three (unspecified) on 15th and one male singing on 16th. Perhaps all March records to that date were from Fisons' Road. On 20th, a male was at Creyke's and a male, two females and a fourth bird along Fisons' Road. All specified locations from the rest of March indicated Fisons' Road, including three on 24th, a female on 28th, and six on 29th, these latter including two pairs along Fisons' Road. During April, there were records from Fisons' Road, involving two, and then one, bird. On 6th April there was a pair at 'Middle Moor', with perhaps the same pair at the Southern Canals next day. A male was at the Viewing Platform on 22nd. There was also a female along Fisons' Road North on 11th.

Records throughout May often involved a pair along Fisons' Road. They bred low in dead Bracken, the nest containing five small young on 4th. These were first seen along Fisons' Road on 14th, with subsequent records involving all seven on 25th. There were three adults (two males) at an unrecorded location on 9th. Other locations were near the Viewing Platform (two pairs on 19th), 'Middle Moor' (two pairs with two+ juveniles on 26th) and Goole Moor (one on 8th). Interestingly, on 26th there were three breeding pairs. Two pairs with two+ juveniles occurred at 'Middle Moor' and a male with three recently fledged young was along Fisons' Road. All June records were seemingly from Fisons' Road. The dates were 4th (one male), 5th (a pair and three fledged young), 7th (one), 11th (single male and juvenile), 19th/23rd (two juveniles) and 24th (one male). The only record during July–August comprised two juveniles at Green Belt on 26th July. The four September dates were 9th (a pair and a juvenile at the Viewing Platform and a juvenile along Fisons' Road), 14th (two pairs along Fisons' Road), 28th (a pair) and 29th (two males).

There were frequent records in October. Instructive ones involved 4th–5th (a pair and a juvenile at the Viewing Platform and 'Woodside floods' respectively), 6th (two males, three females and a juvenile at the Viewing Platform), 7th–17th (single males), 20th (two males and two females), 25th

(three males and a female), 28th (one male and two females), 29th (one male and two females), 30th (perhaps at least nine, comprising five males and four females) and 31st (perhaps four males, four females and two juveniles).

In November, there were frequent records in the first half, with notable totals on 2nd (three males and three females), 3rd (single male, female and juvenile along Fisons' Road), 5th (two males and two females), 6th (perhaps six males and three females), 7th (three males and two females), 9th (four males and four females), 10th/12th (three males and two females), 13th/16th/19th (two males and one female) and 18th (three males and three females). There were single males subsequently, with a female on 20th, and then more on both 27th (two males and one female) and 28th (three males and two females). There were December records of singles, beginning with a male on 1st. The subsequent records comprised two males and one female on 4th/17th, single male and female on 6th, and two males and two females on 15th/20th.

Northern Wheatear *Oenanthe oenanthe*. There were three periods of occurrence. The first of them was protracted, extending through much of April–May. On 8th April three males and two females were present, with single females on 9th–10th. On 15th there were five males and three females. For the rest of April there were counts of up to three, plus three males and a female on 27th. There were May records on 2nd/6th/16th/21st. All involved singles, the last being females on the latter two dates. The spring locations were numerous, often Fisons' Road, but as varied as Thorne Colliery, Goole Moor Tram and Goole Fields. There were two records in August, concerning a female on 19th and one on 30th. Records in the third period of occurrence, the first half of October, began with one on 4th, and continued on 5th (single female and first-winter) and 10th–12th (one male).

Dunnock *Prunella modularis*. Daily counts rarely exceeded three, doing so only twice January–August: five on both 16th February and 18th July. The totals rose a little during September–December, reaching six occasionally, and 10 on 4th November.

House Sparrow *Passer domesticus*. The two February records concerned the horse paddock off Grange Road, Moorends: one on 16th and two on 27th. There were records from Creyke's Crossing during March–April, maximum five on 28th April. Apart from one at Moorends recreation ground on 17th October, the remaining records occurred on four dates in November–early December. Three of them were from the Thorne Colliery area, in November on 8th (two) and 22nd (three) and in December on 9th (one). There were two at Creyke's Crossing on 10th November.

Tree Sparrow *Passer montanus*. Not recorded during January–February, and with only single dates in July–August. These comprised one at Swinefleet Gate on 8th July; and another at Swinefleet Gate and 15 on Crowle Moor (between 'Long Acres' and 'Silvertrees') on 7th August. During the period March–mid-June, there were quite regular reports from Creyke's Crossing, maximum seven on 2nd April. There were also sightings from Swinefleet Gate, especially late-April–early June, but only amounting to one–two birds. There were three at Red House Farm on 29th March, a pair was nesting in disused machinery at Swinefleet Works on 7th April, and eight were on the eastern edge of Crowle Moor on 15th/22nd April. Two were at Creyke's on 19th April. From September–mid-December, there were occasional sightings at Creyke's Crossing in November–December (five on 6th November). Others were in the Swinefleet Gate–Bank Top–Will Pits–Will Pits Scrape area. After one on 7th September, there were one–two irregularly, but eight at Swinefleet Gate on 28th November. Other locations were Creyke's (53 in a field on 7th October), Chadwick Field (one on 24th October) and the eastern edge of Crowle Moor (four on 22nd September and 10 on 6th November). Less typically, on 30th October one was calling from Common Reed at the junction of Middle Moor Tram and Fisons' Road; it flew off east.

Yellow Wagtail *Motacilla flava*. After one overhead on 14th April, there were frequent records until the last one on 30th September. Daily counts occasionally reached six, with 10 on 18th April, 13 on 27th April, nine on 6th May and 11 on 24th August. However the maximum was 22 (grounded by rain) on 10th September.

Grey Wagtail *Motacilla cinerea*. On 20th September one was at a new sluice near Woodpecker Wood. Other singles in September were on 22nd (at flooded workings alongside Fisons' Road) and 30th (heading west over Chadwick Field). One on 7th October was flushed along the northern edge of Goole Moor.

Pied Wagtail *Motacilla alba*. After odd singles in January–February, daily maxima reached five, occasionally more during August–October with monthly maxima of 12, 17 and eight. However, the maximum was outwith this period, being 22 roosting at Top House Farm on 4th March. Bred successfully (two broods) in a disused shed at Bank Top.

White Wagtail *M.a. alba* occurred in two areas in April. On 14th there was one along Fisons' Road. Four on 18th on Goole Fields were feeding with Yellow Wagtails in a freshly-tilled field.

Tree Pipit *Anthus trivialis*. Mostly recorded from Crowle Moor. Here, two were singing on 30th April, with a maximum of five singing on 19th May, the last being in song on 10th July. One pair was proved to breed on Crowle Moor; the nest was well hidden beneath a grass tussock. On 9th June the pair was carrying food to the nest of five young. Other locations were Goole Moor (one singing north of Goole Moor Tram on 3rd May) and Lonesome Pine Track (one on 16th May).

Meadow Pipit *Anthus pratensis*. Monthly maxima were nine, five, nine, 28, 12, six, eight, 23, c.50, 32, nine and 12. The counts in September began with 32 on 9th, rose to c.50 on 12th, then with 47 on 19th and generally fewer thereafter (but 43 on 25th). In June, a juvenile was ringed at Creyke's on 19th, and an adult was food-carrying on Goole Moor on 24th.

Common Chaffinch *Fringilla coelebs*. Many counts through the year amounted to no more than 10, occasionally 20 or so. Higher counts mostly involved a roost at Durham's Garden. In February, this reached c.355 on 11th and 117 on 27th, with a March maximum of 400+ on 23rd. During September–October, no roost count exceeded 38 on 9th September, but November totals attained c.260 on 14th, 214 on 15th and 203 on 25th. The December peaks were 305 on 4th, 201 on 6th and 192 on 9th, the ensuing maximum being 84 on 15th. Bred at Jones' Cable (in May, c/5 in a wild rose *Rosa* agg., with four–five young by 25th), and on Crowle Moor (a nest in a Hawthorn, the young having successfully fledged by 9th June).

Brambling *Fringilla montifringilla*. Singles occurred on 16th March (Durham's Garden) and 5th October (overhead).

Bullfinch *Pyrrhula pyrrhula*. Monthly maxima were three, 10, six, ten, five, five, six, six, 10, 11, eight and 10. Bred at Will Pits, with four young on 3rd July.

Greenfinch *Chloris chloris*. Monthly maxima were six, four, c.40, four, one, nil, nil, c.60, 11, six, 11 and 14. The two higher counts were isolated peaks, on 3rd March and 28th August, the latter involving birds on farmland.

Linnet *Linaria cannabina*. Monthly maxima were 13, 18, c.100, 31, c.30, nine, 29, 11, c.50, c.300, c.50 and c.70. Some significant counts were of birds feeding in fields, including c.100 on 16th March, c.300 on 3rd October and c.70 on 15th December. In October, there were no figures in excess of 26 except c.150 on 8th and the maximum c.300 above. Young successfully fledged from a nest in a Hawthorn on Goole Moor, and a female with one–two young was along Fisons' Road in early July.

Lesser Redpoll *Acanthis cabaret*. Well over half of all dates January–May were from April. Records January–March were obtained on seven dates, with up to seven except 12 on 29th March. April records were fairly regular during 7th–28th, mostly one–two but 10 on 14th and c.20 on 25th. There were also spring records during 2nd–6th May, maximum six on 5th. The species was more numerous October–November, beginning in October with three on 6th. Fluctuating October totals reached 22–c.30, but with 50+ on 23rd. Counts in the first half of November peaked higher, with c.120 on 2nd, 49 on 4th, 52 on 5th, c.80 on 8th, c.50 on 12th and c.30 on 13th. For the remainder of the year no totals

exceeded eight, except December counts of 29 on 6th and 13 on 8th. It should be noted that with all larger counts of Lesser Redpoll, the possibility of undetected Common Redpolls is a possibility, as acknowledged with the count on 8th November. A Lesser Redpoll ringed on Thorne Moors (date uncertain) was controlled in Dumfries & Galloway on 15th April.

Common Redpoll *Acanthis flammea*. On 23rd October, 10+ were with Lesser Redpolls along the canal towpath (BPW). Noted in November on 5th (no location) when four+ were with Lessers (BPW), and 12th when three+ occurred on the northern edge of Goole Moor (TCL). A single was at Will Pits Scrape on 19th December (BPW).

Goldfinch *Carduelis carduelis*. Monthly maxima were c.60, c.60, 31, c.30, four, four, 18, 46, c.200, c.60, 102 and c.60. The September peak was on 25th; no other total in that month exceeded c.80.

Siskin *Spinus spinus*. Spring records were restricted to 15th April (one over Crowle Moor), 20th April (four over Will Pits) and 6th June (one over Crowle Moor), the latter being the first in that month. Recorded on six September dates, the first on 20th (two overhead), then one–three except 15 on 28th and 10 next day. There were seven dates during October–December, maximum four on 5th October. Localities were not given for any of these later autumn–winter dates.

Yellowhammer *Emberiza citrinella*. Monthly maxima were six, 28, 60+, 10, eight, four, four, three, seven, eight, 10 and five. The counts in February reached 28 on 8th and c.20 next day, both at Creyke's Crossing. There were six at Creyke's Crossing on 8th March. In stubble fields at Creyke's, after eight on 2nd February, March figures were notable on 11th/13th (25), 19th (c.30), 22nd (60+), 29th (c.20) and 30th (10). Ten in the stubble on 3rd April was almost the last double-figure total of the year. Breeding was proven on 9th June, when a nest of four young was discovered on Crowle Moor. It was built in dead Bracken, grass and a little Bramble.

Reed Bunting *Emberiza schoeniclus*. Monthly maxima were seven, 11, 21, 24, 10, eight, five, four, 21, 17, 21 and 22. These totals included birds in the Creyke's stubbles and on other farmland, and 18 on 22nd November perched together at Will Pits Scrape. Food carrying was noted in late May–early June, with a nest found on 25th May. A male fell victim to a Great Grey Shrike on 16th December.

Corn Bunting *Emberiza calandra*. On 9th February, two+ were at Creyke's Crossing with Yellowhammers. All other records were from March–April. In the former month, two were in a stubble field at Creyke's on 11th, and this location attracted more later in March. After two on 16th, there were 26+ on 22nd, 23+ on 29th and c.30 on 30th. Also in March, eight were at Creyke's Crossing on 13th and six at Top House Farm on 19th. The Creyke's stubbles remained productive in April, on 3rd (21), 5th (nine), 10th (19) and 11th (31), with one–two on other dates to 25th. There were also singles at Top House Farm on 18th/26th April.

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Green Pheasant *Phasianus versicolor*. Single males were reported on 14th January, 5th May (both Will Pits) and 28th August (field at Alder Woods).

MAMMALS

Grey Squirrel *Sciurus carolinensis*. The first records were obtained in May, with singles at Bank Top on 3rd and at Will Pits on 16th. During June–September there were three dates. Singles occurred on 11th June (Will Pits) and 28th August (Alder Woods), and three on 20th September involved Inkle Moor, Woodpecker Wood and Elmhirst Tram. Eight records during October–December began with one at Will Pits on 3rd October. For the remainder of that month, there were reports on 24th (two at Durham's Garden and one at Pony Bridge Wood) and 31st (one at Durham's Garden). Singles occurred in November on 3rd (Will Pits), 24th (Durham's Garden) and 27th (Woodpecker Wood). One was at Will Pits on 7th–8th December, on the latter date feeding on haws of Hawthorn.

Bank Vole *Myodes glareolus*. One was seen well for a few seconds at Bank Top on 23rd June (PH).

Field Vole *Microtus agrestis*. On 16th December, a Common Kestrel clutched a Field Vole along the farm track to Fillingham's Gate.

Water Vole *Arvicola terrestris*. Several casual records commenced with one in Mill Drain (near Middle Moor Tram) on 13th March. In April, there was evidence in the Will Pits and Will Pits Scrape area on 2nd, and feeding signs in a ditch adjacent to Natural England's shed (at SE746153) on 16th. There were single animals in May on 5th (Goole Moor), 9th (dike at the edge of Thorne Colliery spoilheap), 21st (Mill Drain at Mill Drain Marsh) and 31st (dike at the edge of Thorne Colliery spoilheap). The final casual report, of one in Blackwater Dike (western end), was dated 2nd September.

MH again obtained detailed information, as follows:

- 23rd May: On Snaith & Cowick Moor, at SE718180, there were feeding signs, latrines and burrows in large tussocks of Hare's-tail Cottongrass *Eriophorum vaginatum*. The habitat was described as "Regenerating mire on [former] milled peat, dominated by [*Eriophorum*] with some open water" (on 19th October 2012, water pH 4.03, electrical conductivity 60 µS/cm)
- 23rd May: At 'Middle Moor' at SE732151, there were food piles (White Sedge *Carex canescens*) in an "Old linear peat cutting" (presumably a former canal), with marginal Marsh Cinquefoil *Comarum palustre*, Soft-rush *Juncus effusus* and White Sedge (water pH 5.08, electrical conductivity 150 µS/cm)
- 23rd May: At Will Pits fen, at SE744155, feeding signs and latrines were evident in a "Mixed fen with ankle-deep standing water" developing in a former peat cutting. As this site adjoins warp it was relatively base-rich. A water sample had been collected on 2nd April (water pH 7.30, electrical conductivity 360 µS/cm)
- 23rd May: At Will Pits Scrape (SE744150), there were feeding signs seen in fringing Common Reed. In addition, there was evidence of activity around an outflow ditch (SE745151) during April–May. The habitat was described as "Reedy fringe to a large oligotrophic water body on milled [*sic*] peat" (on 6th September 2012, water pH 4.6, electrical conductivity 110–150 µS/cm)
- 23rd May: Mill Drain at Will Pits (SE746155), one Water Vole dived into the drain. This was described as a "Moderately enriched drain with extensive emergent fringe"
- 27th May: At 'Middle Moor', in a "Large, steep sided ditch" (SE733151), "Feeding stations numerous, mainly around *Carex canescens* tussocks. Also latrines"
- 19th June: At the Southern Canals, in a "Large, steep-sided drain" at SE719157 (presumably New Cross Drain), there were "Abundant latrines and feeding stations. Feeding on *Phragmites*, *Carex canescens*, *Juncus effusus*"
- 19th June: At 'Middle Moor', in a "Very acidic peat cutting" (SE733154), there were "Conspicuous burrows in base of *Eriophorum* tussocks, also droppings". The cutting had "aquatic *Sphagnum cuspidatum*, fringed by dense tussocks of *Eriophorum vaginatum*" (water pH 3.22, electrical conductivity 100 µS/cm)
- 8th July: In Canal 6 of the Southern Canals, at SE727153, there were "Latrines and feeding stations ([Bottle Sedge] *Carex rostrata* leaves)". The canal was described as "with *Carex rostrata* and *Sphagnum fallax*"
- 24th September: At Angle Drain ('Middle Moor') at SE732149, there were "Feeding signs including *Juncus effusus* and [Bulrush] *Typha latifolia* fragments". Angle Drain was described as a "Shallow drain with mosaic of open water, emergent vegetation and fringing mire" (water pH 4.22, electrical conductivity 120 µS/cm)
- 24th September: At Angle Drain (west of Pony Bridge Marsh) at SE732145, latrines were observed. The habitat was described as "Shallow pools in line of ditch fringed by overhanging tussocks of *Eriophorum vaginatum*" (water pH 3.51, electrical conductivity 180 µS/cm)
- 24th September: At Angle Drain (adjacent to Limberlost Tram/Pony Bridge Tram) at SE732142, there were "Extensive...runs and burrows in ditch edge". The habitat was

described as "Mainly open water over sloppy peat with small amounts of submerged *Sphagnum cuspidatum*"

- 30th September: On Goole Moor, in a peat cutting, at SE749170, there were "Abundant latrines and food piles comprising leaves of [Common Cottongrass] *Eriophorum angustifolium*". The habitat was described as "Pools amongst *Juncus effusus* and *Eriophorum angustifolium* towards the northern edge of the [former] milled peat"
- 30th September: On Goole Moor, in a ditch adjoining Goole Moor Tram, at SE735172, latrines were noted. The habitat was described as "Shallow drain with *Eriophorum angustifolium* and [Bulbous Rush] *Juncus bulbosus*. Bankside vegetation includes *E. vaginatum*, *Juncus effusus* and *Carex canescens*"

Harvest Mouse *Micromys minutus*. A discarded nest was found amongst Purple Small-reed *Calamagrostis canescens* at the south-east corner of Pony Bridge Wood (SE736131) on 16th April (MH). A further nest was photographed along Middle Moor Tram on 5th November (BPW).

Rabbit *Oryctolagus cuniculus*. Reported March–December, but with few details. Most reports were from the Will Pits area, where counts included 10+ on 23rd June and 10 on 24th August. On 29th June, a Stoat dragged a Rabbit on Fisons' Road at Will Pits, with another Stoat intent on Rabbits at Chadwick Field on 9th December.

Brown Hare *Lepus europaeus*. Outwith the period April–September, rarely reported, with odd singles, two on 9th February and three on 30th October. Otherwise reported on 44 dates, mostly singles or two, but with three on 25th April, 16th May and 10th September, and four on 28th April. Locations, where given, were on Goole Moor/Goole Fields and at Creyke's.

Mole *Talpa europaea*. Single dead examples were along Fisons' Road on 26th April, on the northern edge of Goole Moor on 25th May, and at Durham's Garden on 31st October.

Common Shrew *Sorex araneus*. One in grassland on Inkle Moor on 23rd August was followed by three in September. These occurred on 9th/17th (between Will Pits Scrape and Swinefleet Warping Drain) and 30th (one dead on Fisons' Road at Green Belt). Another was dead along Goole Moor Tram on 22nd November.

Pygmy Shrew *Sorex minutus*. Singles were recorded on 15th March (Will Pits), 20th September (dead along Collis's Tram) and 5th November (Middle Moor Tram).

Water Shrew *Neomys fodiens*. Two November reports. On 23rd one was photographed along Fisons' Road east of Middle Moor Tram (MW), and on 25th one was along Collis's Tram (BPW).

[**Noctule *Nyctalus noctula*.** "Heard and seen" over Fisons' Road at Green Belt late on 26th June].

Fox *Vulpes vulpes*. Recorded on 25 dates, in all months except January and March, and all singles. Stated locations included Chadwick Field, Rhododendron Path, Will Pits, Bank Top, Goole Moor/Goole Moor Tram, Creyke's/Fillingham's Gate area (including farmland), "Paraffin area", Crowle Moor, and also Goole Fields. Cubs were encountered on 17th June (Bank Top) and 3rd July (Will Pits). On 9th February, one was sunbathing on an old peat stack on Crowle Moor, and singles were hunting small mammals on 8th/20th November.

Badger *Meles meles*. On 3rd May, two Badgers were caught in snares on Thorne Moors. The RSPCA, the South Yorkshire Police and the South Yorkshire Badger Group attended, to find the Badgers badly injured but still alive. One was later destroyed, and the second was put under the care of an RSPCA vet. The snares in question were illegally manufactured (THMCF blog).

Stoat *Mustela erminea*. Singles were encountered on nine dates, the first six all in the Will Pits–Bank Top area. These were on 27th April, 3rd/26th May, 29th June (dragging a Rabbit), 2nd July and 7th August. There were further records on 3rd October (Fisons' Road at Green Belt), 3rd November (with prey on Fisons' Road North at Creyke's) and 9th December (pursuing Rabbits at Chadwick Field).

Weasel *Mustela nivalis*. Seen on four dates in April, beginning with one on Fisons' Road at Will Pits on 20th. There were two on 23rd along Fisons' Road, at Bank Top and Will Pits. There was one at Bank Top on 22nd May, and another at Natural England's shed at Will Pits on 25th June. Away from those parts, one was along Goole Moor Tram on 25th April.

American Mink *Mustela vison*. There was one at Bank Top at Goole Moor Tram on 11th June. Another was along Fisons' Road on 25th July.

Reeves' Muntjac *Muntiacus reevesi*

There were singles on 6th April (in Rhododendron *Rhododendron ponticum* at Cassons) and 17th November (Rhododendron Path) (both JD).

†**Red Deer *Cervus elaphus*.** In 2013, there were notified records on 75+ dates, especially during May–June and in October. Day-counts reached 12, often involving the Will Pits–Bank Top area, where three counts attained this number in April. The few records from the Pony Bridge Wood area were of singles, except six (including one male) on 24th October, one male and two females on 28th October, and December counts of five on 13th and eight on 16th. Encounters on Goole Moor included four on 15th March, seven on 22nd May, one on 7th June, and one male and seven females on 29th September. On Goole Fields there were five on 26th June. In fields north of Crowle Moor, six were seen on 19th–20th May, seven on 29th June and 3rd July, plus two males and two females on 10th September. Other locations attracting one or two Reds included Crowle Moor, fields to the south of Crowle Moor, Fisons' Road–Green Belt, Cottage Dike (three females on 23rd June) and 'Middle Moor'. In June, on 8th there was a female on Fisons' Road North with a young calf; on 15th there were two females and a young calf at Will Pits. Larger counts commenced with *c.*24+ on 24th January, involving *c.*12 running towards Will Pits Scrape and 12+ along Fisons' Road. There were 18 on Goole Fields on 11th April, 39 (10 males and 29 females) in the 'southern fields' during the night of 2nd–3rd May, and 22, again on Goole Fields, on 21st May. On 25th December, "1 male and 9 female Red Deer with some young [were] in a clearing between Collis's and Elmhurst Tram". Records of roaring males at Will Pits and Pony Bridge Wood from late September–mid-October did not suggest more than one vocal male in each location, but this was probably misleading.

Natural England sponsored a thermal imaging survey over two nights in April, to attempt an assessment of the Thorne Moors area. In sum, 3251ha were involved. Of these, 1905ha of moor and agricultural fringe were surveyed. Thus, within the greater area, 1346ha were not covered, because the amount of vegetation prevented any practical surveying by thermal imaging. The missing hectares mostly comprised much of Thorne Waste (including Will Pits), Crowle Moor and the north-western and northern margins of the Moors. However, as the fieldwork was nocturnal, it was expected that a majority of the Red Deer would not be hidden on the Moors but feeding in peripheral fields. The results were mapped, and in the surveyed parts 210 Red Deer were shown, 128 (61%) in fields surrounding the southern half of Thorne Moors. Twenty-eight more (a further 13%) were on Goole Fields adjoining Goole Moor. By extrapolating from these results, an estimate of the total Thorne Moors area population in April was tentatively put at 250 individuals (JSm). The numbers involved "were much higher than were anticipated" (*Thorne Moor Deer Management Policy, Draft 2*).

European Roe Deer *Capreolus capreolus*. Abundantly reported, but on only two dates in January. There were day-counts of up to four, with five or six on dates in most months. Larger totals were seven on 20th April and 27th November, eight on 25th/27th April, nine on 11th February, 3rd May, 7th June and 21st July, and 10 on 16th February, 31st October and 7th December. Females with one or two small kids were seen in June–July, with a female and two older kids on 3rd September. In April, the thermal imaging survey mapped 84 Roe Deer over the 1905ha examined, with 53 of them (63%) concentrated in fields to the north-west of Thorne Moors and east of Crowle Moor. Compared

with Red Deer, it is likely that a higher proportion of the Roe population was missed during the survey, but an extrapolated estimate of the total number in April was not thought to be realistic (JSm).

REPTILES

†**Common Lizard *Lacerta vivipara***. The first was at Mill Drain at Green Belt (SE719163) on 2nd April. Next day, one was at Green Belt (SE716162), with another at the Southern Canals on 10th. The other April records involved singles in mown grass between Swinefleet Warping Drain and Will Pits Scrape (SE744148) on 22nd, and an immature (hatched 2012) at Natural England's shed at Will Pits on 25th. One was at the side of a drain at Will Pits (SE747157) on 22nd May. A gravid female at English Nature's shed on 26th June was the only other record in the first half of the year. A wood-pile alongside the shed attracted single lizards in July on 3rd, 8th/11th (both gravid females) and 22nd. Records in August began with one along Collis's Tram (SE714149) on 5th and one on Crowle Moor on 7th. On 19th August there were three juveniles on the wood-pile at Natural England's shed. There were eight recorded on 22nd August: five juveniles at Mill Drain in the Green Belt area (SE717164), two juveniles at Green Belt (SE714162) and an adult at Natural England's shed. There were then single juveniles on 27th (the Rhododendron Path at SE713161) and 28th (on the wood-pile at Natural England's shed). All the remaining records were from September, three of them being juveniles from the wood-pile next to English Nature's shed: 3rd (one), 9th (three) and 18th (one). On 2nd, two juveniles were seen at the western end of Blackwater Dike (SE720176, SE721176), one of them on a "pile of bog wood". Two days later, there was one juvenile along Fisons' Road at Green Belt (reported as SE724162) and one immature (hatched 2012) on the Angle Drain boardwalk (SE740148). There were three on Crowle Moor on 22nd. On 26th, 18 Common Lizards were logged, commencing with one at the Rhododendron Path (SE713161). On three "log piles" along Angle Drain (SE735149, SE734149, SE735149), 16 juveniles occurred. Finally, a juvenile was on a "pile of bog wood" at the west end of Blackwater Dike (SE720176).

†**Adder or Viper *Vipera berus***. Many of the records emanated from the Green Belt area, where there is a known hibernaculum. Here, the first of the year was a male at Green Belt (SE714162) on 5th March, described as a morning of thick fog and cold. At Green Belt (SE714162) there were three on 15th/30th and five on 29th. There was also a March record from "Johnson's Wood" (SE723180), where three were recorded on 30th. At Green Belt, April records commenced on 1st with eight (including two males and four females) at SE716162 and SE717162. There were seven males in that area on 2nd (SE716162, SE717162, SE717164) and eight males on 3rd (SE714162, SE715162, SE716162, SE717162). There were then up to six individuals on subsequent dates in April–early May (including SE715162, SE716161, SE717163, SE719162). Other April sightings commenced on 2nd, with one male in the Long Meadow area at SE710168. On 21st, one female was at the Viewing Platform, and one (described as "Green marked") was at "Johnson's Wood". Next day, two males were between Swinefleet Warping Drain and Will Pits Scrape, and one male was along Angle Drain. Of particular note in April was a black Adder photographed on 28th (see Figure 1 on page 5) at SE740155, close to Will Pits (RWa). On 7th May, a female was between Swinefleet Warping Drain and Will Pits Scrape, with a single on 9th on the Thorne Colliery spoilheap. On 14th, there was a male at Pony Bridge Wood (SE735136) and a female close to the Pony Bridge (SE741141). Also at Pony Bridge Wood (SE735136), there was a small male (31cm) sloughing on 20th. The last May record was a female on the northern edge of Goole Moor on 22nd. June sightings were obtained on 9th (one on Fisons' Road), 19th (one along Blackwater Dike close to Will Pits), 25th (one female at English Nature's shed), 26th (one gravid female at Natural England's shed), 27th (one female along Middle Moor Tram) and 30th (two males close to Fisons' Road at SE731160).

More records were received for July–August, from the Green Belt area (including SE715163) and the adjacent stretch of Fisons' Road. These records were mostly of singles (including a dead female on Fisons' Road on 6th July), but two females were at Green Belt on 23rd August. What may have been a single female occurred on Fisons' Road at SE724163 on 7th July and at SE724165 next day. On 4th July, there was a female at Natural England's shed and a brick-red immature female (born 2012) on a nearby track (SE747154). What may have been the latter immature was seen again on 4th September. There was also a male, inside the shed, on 11th July. August records with localities were

from Crowle Moor (one on 7th), between Swinefleet Warping Drain and Will Pits Scrape (one female on 19th), along Mill Drain (two juveniles at SE717164 on 22nd) and in the Green Belt area. In the latter, records involved two females close to the Rhododendron Path (in SE7116) on 23rd, and a male on Fisons' Road (SE725163) on 27th.

There were five September records (including the above immature), beginning on 2nd with a juvenile "on [a] pile of bog wood" at the western end of Blackwater Dike (SE721176). In the Yorkshire Triangle, a female was close to Warping Drain Bridge (at SE746147) on 7th, and one was reported from Crowle Moor on 22nd. A female was along Mill Drain (SE718164) close to Green Belt on 26th. All the October records were from Green Belt, beginning on 14th with a male at SE716162. On 23rd, there were single females at SE714162 and SE718164, and these were the last of the year.

†**Grass or Ringed Snake *Natrix natrix***. Reported on eight dates May–August, five of them from one region. These latter were on 1st May (Bank Top), 6th May (Natural England's shed), 11th July (Bank Top), 7th August (Will Pits Scrape near Warping Drain Bridge) and 19th August (immature hatched 2012, between Swinefleet Warping Drain and Will Pits Scrape). Elsewhere, there were singles on 22nd May along Mill Drain in the Green Belt Scrape area (at SE717164), and 22nd July at the western edge of Green Belt (SE713162). Finally, on 20th June one was on old brickwork at Bell's Pond.

AMPHIBIANS

†**Common Frog *Rana temporaria***. On 2nd April, a small amount of spawn was detected between Will Pits and Will Pits Scrape. Vocal and mating adults on 7th were present at Mill Drain Marsh (six+) and Will Pits Scrape (four+). Next day, in a small pool along Goole Moor Tram near Bank Top, there were 31 adults and four clumps of spawn. Also on the same day, in flooded workings along Fisons' Road at Middle Moor Tram, there were three adults and four clumps of spawn. The Goole Moor Tram location held 19 adults on 10th. The last spawn was in the boundary ditch south of Pony Bridge Wood on 16th. On five dates 20th–25th April, Common Frogs were seen in the Bank Top–Will Pits area, one–two on each date, except 25th when "several Frogs [were] scattered in Swinefleet Warping Drain alongside Will Pits". On 17th June, a Common Frog was at the eastern edge of Pony Bridge Wood (SE717164). There were two September records, on 18th (Pony Bridge Wood at SE738136) and 29th (an adult at Will Pits Scrape), with one at Mervyn's Tram on 6th October. Later in that month there was a dead individual on Fisons' Road on 23rd.

†**Common Toad *Bufo bufo***. On 18th July, a large example was in the scrape at Chadwick Field.

†**Smooth or Common Newt *Triturus vulgaris***. Present in spring in Canal 6 (Southern Canals), and larvae were in reedswamp between Will Pits and Will Pits Scrape on 16th April. Also, one was photographed along Mervyn's Tram on 6th October.

FISH

[**Pike *Esox lucius*** In late May, a Grey Heron was disturbed north-west of the Swinefleet Works, where the road crosses a drain at SE764177. It dropped a fish, possibly a small Pike].

Ten-spined Stickleback *Pungitius pungitius*. On 8th October this species was encountered in the surviving length of Durham's Warping Drain near the Paraffin Cuttings (MH).

ADDITIONS AND CORRECTIONS 2008–12 (EXCLUDING REPTILES)

2008

Bean Goose. On 18th February, six 'Tundra' race individuals flew from Goole Fields and landed on Goole Moor (MHo). The first record.

2009

†**Common Crane.** Present on many dates 23rd April–27th September, especially in August–September. Although sometimes seen singly, the records were often of a pair during the period 11th May–16th September.

†**Common Frog.** On 15th March, spawn was found along the northern edge of Will Pits Scrape (SE742152) and on the northern side of Fisons' Road. On 29th September, a Common Frog was seen at Whaley Balk (SE711161).

†**Smooth or Common Newt.** On 15th March, a female was along Middle Moor Tram at SE735158.

2010

†**Common Crane.** A pair regularly from 2nd April–30th August. On 2nd August an additional bird flew west.

2011

†**Marsh Harrier.** Nesting occurred in this year. Adults were nest-building on 14th/20th April, with a sitting bird on 30th. Nest material described: "...carrying...[what] looked like reed stalks and dried cotton grass"; "carrying twigs". Two juveniles produced (JGH, BPW).

Osprey. The bird recorded on 22nd October did not fly out of Swinefleet Warming Drain, but out of a drain at SE764177.

†**Common Crane.** After three heading east on 5th March, there were two from 8th March and nesting was attempted for the first time. The eggs were predated on 23rd April, possibly by Carrion Crow. Beyond 11th May the number of records dropped sharply, with the last on 15th August. There were then several occurrences of two Cranes during 7th–17th November. In addition to the breeding pair, some records of flying Cranes may have referred to a non-breeding pair present in the Thorne–Hatfield district.

Avocet *Recurvirostra avosetta.* On 6th June, there were four, possibly five, at flooded workings (DWS, BM, TM).

2012

Pink-footed Goose. On 9th October, c.750 flew over Goole Moor. Six skeins, totalling c.800, flew south-east over Goole Fields in the late morning of 27th November.

Canada Goose. On 26th September, c.300 flew north-west from the Moors.

Barnacle Goose. On 26th September, one was with the above Canada Geese (TCL). The fifth record.

†**Marsh Harrier.** On 26th September, seven (two males, two females and three juveniles) crossed Goole Fields and headed for Goole Moor in the first few hours of light. They were apparently leaving a roost along the River Ouse or at Blacktoft Sands.

Hen Harrier. Males were on Goole Fields on 25th September, 24th October and 11th December, and on Goole Moor on 27th November.

Merlin. Juveniles were on Goole Fields on 9th/24th October and 11th December.

Peregrine Falcon. On 9th October, an adult female flew on to Goole Moor. In November, a juvenile female was on Goole Moor on 15th and on Goole Fields on 27th.

Spotted Crake. Two males were calling nocturnally in SE7416 on 21st June (RM). The third record.

†**Common Crane.** A pair was intermittently observed from 16th January, and regularly from 1st April. They attempted to breed, with chicks probably present on 7th May. A chick was definitely glimpsed on 10th, and then two chicks on 13th. As juveniles, they were last noted on 8th June, perhaps predated by Fox. A second pair was established by 16th April. One or both of their chicks were probably hatched by 29th May, and the two were definitely active on 30th. These two juveniles were observed to 4th June, but with only one by 18th June, and that was last seen the next day. After these breeding failures, both pairs of adults remained, being encountered irregularly to the end of October. There was also a pair on 1st/15th November. During 2012 the only blank months were September/December. Additionally, in April, on 17th a third pair flew off west, and on 20th a third pair may also have been present. There were eight Cranes on 28th April, as four arrived from the west, additional to the resident birds. On 8th May, a third pair was again present and six Cranes flew north-east. Any overlap between these six and the three pairs is not known.

Dunlin. On 27th November, six were at a flooded field on Goole Fields.

Yellow-legged Gull. Recorded on Goole Fields on 12th September (three adults with c.60 **Lesser Black-backed Gulls**) and 9th October (six adults with c.80 **Lesser Black-backed Gulls**) (TCL).

Herring Gull. At dusk on 15th November, c.900 flew north-east over Goole Fields to a roost.

Short-eared Owl. Singles were on Goole Fields after dark on 25th September and 11th December.

Twite *Carduelis flavirostris.* Seen with Linnets in the Shipcole Drain–Goole Fields Reservoir area (TCL). On 24th October there were two Twite with 100+ **Linnets** (SE752187), and on 15th November there were three with c.250 **Linnets** (SE745189).

Lapland Bunting *Calcarius lapponicus.* On 24th October, one was with Skylarks close to Goole Fields Reservoir (TCL). The second record.

Brown Hare. In the 'southern fields' there were 33 nocturnally on 3rd June.

†**Common Frog.** On 22nd March, two colonies were discovered, with c.10 adults in each, and both with large clumps of spawn. The first was on the northern side of Fisons' Road (SE729162) near the junction with Middle Moor Tram. The second was south of Fisons' Road, south-west of Will Pits and towards Mervyn's Tram (SE738157). A few days later, on 26th, six adults and five small amounts of spawn were at Inkle Moor Pond. Eight adults with spawn were in Blackwater Dike close to Bank Top (SE751163) on 1st April, and were seen again during the next few days. On 6th April, Common Frogs and spawn were observed at Will Pits Scrape, with up to three adults in a nearby minor drain (SE744150) in early April. Finally, an adult was at Will Pits on 2nd July.

REPTILES 2009–12 (WITH ADDITIONS AND CORRECTIONS 2007–08)

†**Common Lizard**

2007: Singles basked on stored timber at English Nature's shed (SE746153) on 22nd June and 2nd August. A female was on the Viewing Platform boardwalk on 29th August.

2009: In March, first recorded on 18th when one was "north of Elmhirst Tram", with another basking on Crowle Moor on 21st. There were three singles on 1st April, along Eastern Boundary Tram, Elmhirst Tram and at the southern edge of Will Pits (SE743156). A few days later, on 5th, three singles were seen on Crowle Moor, one of them basking on a "bog oak [*Quercus*] log". Later in the year, there were singles on 13th August (along Middle Moor Tram) and 24th September (one basking on a fence post on Crowle Moor at SE755151).

2010: Reported on only five dates, three of them in April: 20th (two along Mill Drain at SE727161), 21st (one at Green Belt at SE7116) and 28th (three at Green Belt). In August, there were singles on 18th (SE7214) and 19th (SE7216).

2011: There were March singles on 14th (SE709171) and 20th (SE713161), with another on 30th April (SE740140). An isolated record involved two (no location) on 11th June. In August, there were singles on 3rd (SE715163) and 15th (no location), and five on Crowle Moor on 29th. Further singles were encountered in September, on 5th (SE723143) and 29th (an adult at SE714162).

2012: On 29th March at Natural England's shed, four were basking on "timber stacks". One was on Rawcliffe Moor (SE721185) on 23rd May, and on 18th June at SE722175 one was seen on "piles of bog wood". On 27th June, again at Natural England's shed, seven were basking on "fencing and timber stacks". On 10th August, one was "found dead in beetle trap" at SE722184. Later, on 22nd, three were reported without details. On 13th September, at SE752166, one was seen "on sleepers next to diesel pump" along Swinefleet Warping Drain. Finally, on 22nd September there were nine at 'Middle Moor', including three juveniles.

†Adder or Viper

2007: On 26th February, for "west of Green Belt" read "east of Green Belt".

On 7th July, there was a male along Jones' Cable and a female on the western boundary of the Southern Canals.

2008: For "two males at Mill Drain Marsh on 10th" add "April" (not March). 30th March correct.

On 10th April there were two males at Mill Drain Marsh. On 9th May a female was at the eastern end of Jones' Cable, with a further female at Bank Top on 6th August.

2009: The records of 2009 can be categorized as those from Green Belt (SE7116) and those from the rest of Thorne Moors. At Green Belt, observations centred around a hibernaculum site. The first record was obtained on 24th February, when there were five males, followed by single males on 25th-26th. The peak count, of 18 males, was obtained on 13th March. There were other notable March totals on 18th (16, including six together) and 27th (10 males, two of which, by their distended bellies, had recently fed). There were also occasional single males in April, plus four (not sexed) on 7th, and a final male on 6th May. Elsewhere, the first was on 1st March (one female between the Entrance Bridge and the Rhododendron Path), with other records from that month on 13th (one along the Rhododendron Path), 15th (one female along Mervyn's Tram), 27th (one male on a bank near Paraffin Tram at SE712171) and 31st (one male at the western end of Blackwater Dike). In addition, on 21st March, Crowle Moor held two males and one female basking singly, and three (not sexed) coiled together. On 1st April, there was one male along Elmhirst Tram and an entwined pair at the southern edge of Will Pits (c.SE743156). On 14th April, a male was on the Moors close to the Entrance Bridge (SE712161). There was then a single on 16th between the Entrance Bridge and the Rhododendron Path, and a dead male on 22nd by Mill Drain. A male along Collis's Tram on 25th appeared to be digesting prey. What was thought to be the same individual was subsequently found dead there on 2nd May. The only other May record involved a female on 25th along Fisons' Road, and there was none in June except two males on Crowle Moor (SE748152) on 3rd. Reported in July on 7th (one male and two females in the Durham's Garden area at SE714158), 8th (one by the Western Boundary Drain at SE713155) and 14th (one on Crowle Moor at SE749151). Interestingly, the latter was very dark coloured, almost black, with its markings therefore largely obscured (RB). In August, single males were seen on 3rd (on Fisons' Road west of the junction with Middle Moor Tram) and 13th (at Bank Top, close to the site of the Fire Tower). There was an August female at Will Pits on 30th. The final sighting of the year was a female and juvenile at the Entrance Bridge on 25th September.

2010: Green Belt area records mainly concerned the hibernaculum site, beginning with 10+ (including a female) on 2nd March, on which date there was some snow on the ground. Other March counts at the same site were five on 9th and 11 on 27th (five of them in one group). There were many April records from Green Belt and Mill Drain to the east (SE716163, SE717163, SE718162, SE727161). The maximum was an exceptional 27 males and two females on 6th; these included 26 males along the hibernaculum balk (SHi). Other high totals from that area were eight males and four females on 13th and nine males on 15th. Two males were watched 'fencing' on 26th (hibernaculum site) and 28th

(Mill Drain). The last in this area was a male along Mill Drain on 11th May. There were few additional records from other parts of the Moors. On 20th May, a male was under a corrugated metal sheet along Angle Drain (SE734149), with a second male along Middle Moor Tram (SE733152). There were May records of singles from SE7118 (5th), SE7314, SE7317 and SE7318 (all 12th), plus, on an unrecorded date in August, one at the field edge at SE708167.

2011: The earliest were 11 at the Green Belt hibernaculum site on 1st March, with nine males there on 11th. In a slightly wider area, there were 14 males on 20th March. On this latter date there were also four males alongside Angle Drain at SE738148. One was at SE728160 on 21st April. A few days later, on 30th, there were single males at the Green Belt hibernaculum site and by the side of Elmhirst Tram (SE723143). Seen in August on 3rd (a female basking on Fisons' Road at SE714166) and 15th (one at SE7115). There were four September records, commencing with four juveniles together at Shoulder o' Mutton Tram (SE725170) on 2nd. The subsequent dates were 14th (a female basking on Fisons' Road), 24th (one male) and 29th (one juvenile along Angle Drain at SE738148).

2012: The first were five at the Green Belt hibernaculum site on 1st March. Eleven males were there on 9th March. There were other March records from the Green Belt hibernaculum, including 10 males on 15th and six males and three females on 21st. There were also occasional males there in April/June, although the last were single females on 7th/15th June, plus six (unspecified) at Green Belt on 9th June. On Crowle Moor, there were records in March on 7th (one male) and 21st (one male and two females). On 12th there were three in the area of "flooded workings and central moors". On 29th March, single males were seen "crossing a mown track" at SE727145 and alongside Pony Bridge Tram at SE732142. On 23rd May, a female was basking along Fisons' Road. On 19th July, an Adder was seen on Inkle Moor (SE701167). On 10th August, a female was on Fisons' Road North near the Moorends (Paraffin) Works. On 18th August, there were two at SE729156 and six on Crowle Moor. One was recorded on 22nd August but lacked details. On 28th August, a male was on Middle Moor Tram close to Fisons' Road, a female was at Green Belt, and one (unspecified) was basking at SE737151. On 8th September, a female was along Mervyn's Tram and an immature (25cm long) occurred at 'Middle Moor'. Another was at 'Middle Moor' on 22nd September. On 29th September a female was at the base of the Thorne Colliery spoilheap (Durham's Garden area). There were two October dates. On 4th, one was along Blackwater Dike (at SE746165) basking on an old sleeper, and one was on Crowle Moor at SE755140. Finally, on 12th, there was a female at SE7315.

†Grass or Ringed Snake *Natrix natrix*

2007: On 26th March, for "west of Green Belt" read "east of Green Belt".

2009: One was on Crowle Moor on 5th April. Otherwise restricted to a small specimen on 24th June, "disappearing at side of main path leading to Viewing Platform".

2010: In April, singles were recorded on 13th (Entrance Bridge) and 21st (a small example near the junction of Fisons' Road and Middle Moor Tram). One was at SE7315 on 11th August.

2011: The first was one on 6th April towards the western moor edge at SE713164. On 29th September, a juvenile was at SE714162.

2012: A relatively good year, with the first being one on Crowle Moor on 7th March. One (c.60cm long) was seen on 10th May on the northern boundary of Goole Moor close to Swinefleet Gate. Next day, one was at Inkle Moor Pond (SE698168). Also in early May (no date), one was in Blackwater Dike (new length). Later, singles were at Green Belt on 9th June and at "Green Belt Cuttings" (SE712165) on 3rd July. The last occurred at Will Pits Scrape (SE7415) on 17th September.

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THE ESTABLISHMENT OF BLACK-NECKED GREBE by Martin Limbert

INTRODUCTION

Black-necked Grebes *Podiceps nigricollis* appeared on Thorne Moors from 1998, and observers were urged to provide details of every sighting. By 2007, data had accrued for a ten-year period, with breeding reported in several of those years. Also in 2007, a significant paper on the changing national breeding status of this rare species was published (Martin & Smith 2007). However, the paper was inadequate in its reporting. It offered variable coverage for Yorkshire, with insignificant or no attention to some sites including those around Doncaster. As a result of ten years' data from Thorne Moors, and the regional deficit in Martin & Smith (2007), an overall summary of Thorne records was considered timely. The data were presented as a descriptive chronology covering 1998–2007 (Limbert 2008). That summary is now extended to 15 years and the project brought to a close. The resultant paper provides an overview of the colonization at Thorne, together with a descriptive chronology detailing the entire period of occurrence to 2012.

ESTABLISHMENT AT THORNE

In documenting Black-necked Grebes on Thorne Moors, understanding events at the nearby Lower Derwent Valley NNR is necessary (Ralston 2005; C.S. Ralston *in litt.*, pers. comm.). At this NNR, between York and Howden, Black-necked Grebes colonized the site in 1992 and began to breed annually. They built up to a maximum of 15 pairs, producing 31 fledged young in the best year. This was mainly at Wheldrake Ings, where water levels were favourable and there was the attraction of a large colony of Black-headed Gulls *Chroicocephalus ridibundus* (2000+ pairs). Black-necked Grebes often deliberately associate with small gulls when nesting (Cramp & Simmons 1977, Martin & Smith 2007). At Wheldrake, there was a change in water level management in 1997, and the grebes breeding at the NNR became more sporadic and opportunist. Also, the Black-headed Gulls ceased to nest there. The appearance of Black-necked Grebes on Thorne Moors, 30km from Wheldrake, mirrored what happened at the Lower Derwent Valley NNR. Black-necked Grebes started to occur on Thorne Moors following the changes at Wheldrake. Perhaps some Black-headed Gulls also relocated from Wheldrake to Thorne Moors (Ralston 2005). One ringed as a *pullus* at Wheldrake on 22nd June 1997 was found dead on Thorne Moors on 2nd June 2001 (Ralston 2005, Limbert 2014).

SUMMARY OF OCCURRENCE AT THORNE

Introduction

It is of interest to note that 13 Black-necked Grebes were ringed at the Lower Derwent Valley NNR (four of them also colour-ringed). Although none of these was subsequently encountered on Thorne

Moors, the results are relevant. They showed that the Derwent Black-necked Grebes were very site faithful, but moved on quickly when their requirements could not be met. This suggests that once the grebes did move on and some apparently transferred to Thorne, they would establish and develop a permanent presence here if suitable conditions were found and they persisted.

The pioneering phase

There was a Black-necked Grebe on Thorne Moors on two dates in April 1998. In the following year, records spanned 8th April–26th June plus an isolated report on 18th July. Day counts never exceeded two, so the presence of more than one pair was not established. Display was observed on 9th May, and it is possible that nesting was attempted that year but remained undetected. In 2000 there was a minimal presence, with grebes on single dates in April (two birds), May (one) and June (one).

The breeding population

During the years 2001–12, Black-necked Grebes returned each year, although the evidence for breeding must be regarded as minimal for a species often secretive and difficult to locate. During the twelve years, first dates varied from March to May, but in five years they were in March (earliest 18th, in 2011) and in two years in the first week of April. The latest records (including juveniles) were in August in four years (latest in 2002, a juvenile on 26th). The maximum number of adults *per* year varied from two to seven, including six in 2006/2011 and seven in 2005. The number of breeding pairs exceeded two in 2011, when three were noted. Nesting was proven in seven out of the twelve years, with display observed in a further two. What may have been passing grebes, not part of the Thorne population, were encountered in 2001, 2005 and 2009. By contrast, a juvenile picked up in Moorends in 2010 might not have travelled far.

Black-headed Gull is a long-term breeder on Thorne Moors. Throughout the years 2001–12 the gulls maintained a robust population, except in 2011 when the season was a failure (annual reports). That year, despite an unprecedented three pairs of Black-necked Grebes being present, there was no evidence of successful nesting by them. That was the first failure of the Black-headed Gulls since 1998 (coincidentally the first grebe year), when "Probably no more than five pairs managed to breed" (Wainwright 1999).

DESCRIPTIVE CHRONOLOGY OF RECORDS 1998–2012

1998: The first Black-necked Grebe was seen on 18th/24th April, at the flooded workings.

1999: The number of records increased significantly in 1999, with a permanent presence in the breeding season. Recording spanned the period 8th April–26th June, with an isolated but probably linked record in mid-July. Again, sightings were obtained from the flooded workings, but also for the first time from Will Pits Scrape. This latter site held the first grebe, on 8th April, with other singles there on 28th April and 1st May. However, the flooded workings provided the bulk of the records, with one grebe, and sometimes two, from 18th April–26th June. Display was observed on 9th May. The July bird was at the flooded workings on 18th.

2000: The initial momentum was checked, with only three sightings. Two were at the flooded workings on 30th April, with one at Will Pits Scrape on 22nd May. Also, one was recorded on Thorne Moors on 18th June (Degnan & Dobbs 2002).

2001: The early part of 2001 was affected by access restrictions imposed by the national outbreak of foot-and-mouth disease, with the first evidence of Black-necked Grebes obtained on 7th May, when two were at Will Pits Scrape. All other records during the season were from that same water, and extended to 21st August. The first proof of breeding on Thorne Moors was gained on 5th June, when one bird of the resident pair was seen to have two juveniles riding on its back. There were relatively few sightings during the rest of June, merely comprising single adults on 9th/14th/17th. However, on 9th July an adult was seen with a lone juvenile, its age consistent with hatching sometime before 5th June. On 18th/26th July, both adults were with a juvenile, but on 27th/29th the total was two summer-plumaged adults with two well-grown young, and one winter-plumaged adult. In view of the relatively advanced moult of the latter, this grebe was perhaps a transient failed breeder or non-

breeder. There were two records in August, of an adult and the two juveniles on 10th and the juveniles alone on 21st.

2002: Will Pits Scrape remained the centre of attention, where breeding by a pair was again proven. After a single bird here on 23rd March, two were in occupation the next day. On 29th March, there were two grebes at Will Pits Scrape and two more at the flooded workings, with all four at Will Pits Scrape on 30th. April records at Will Pits Scrape involved up to three grebes, except two pairs on 14th. There was also one individual at the flooded workings on 27th. A pair was seen throughout May at Will Pits Scrape, with one juvenile being carried on a parent's back on 19th and visible again on 27th/31st. One, sometimes two, adults and the juvenile were watched during June–July, including all three on 26th July, the last date in that period. In August, an adult was at the flooded workings on 4th, and the juvenile was found at Will Pits Scrape on 26th.

2003: Records featured two breeding pairs in 2003. They were again concentrated at Will Pits Scrape, where the first bird was recorded on 19th March. This was followed by two on 30th March and three on 4th April. After one on 7th April, three were again located on 12th, and display was noted. Two grebes were then found on three subsequent April dates to 18th. On 19th, one was at Will Pits Scrape, but two more were at the flooded workings. An adult was visible at Will Pits Scrape on six succeeding dates to 11th June, plus both an adult and a juvenile on 19th. A few days later, on 26th, at the flooded workings there was an adult with two juveniles, proving the occurrence of a second active pair. There were, however, no later records from either water, despite continued observation.

2004: The season began on 11th April, when two were found at Will Pits Scrape, succeeded by three here on 17th, and two at the flooded workings on 22nd. May sightings included one or two grebes at Will Pits Scrape on 7th, but with all other records in that month from the flooded workings. These latter involved up to two birds, except on 24th (five, including two pairs), 27th (same five) and 28th (three). At these workings, June records were obtained on 5th/13th (three on both dates) and 19th–20th (one). Towards the end of the month, on 25th, there were three at Will Pits Scrape. In July, all records emanated from Will Pits Scrape, commencing with a pair on 5th and three adults on 11th. However, on 20th one of the pair present was seen to be carrying young on its back. A week later, on 27th, this pair was accompanied by two young birds. Despite this, there were no subsequent records except singles observed in August on 7th (at the flooded workings) and 15th (Will Pits Scrape).

2005: The first were singles at Will Pits Scrape on 29th March and several dates in April. Two were present at the flooded workings from 16th April. Here, there were then at least four on 2nd May, on which date there were also three at Will Pits Scrape. Subsequent May records included maximum counts of adults at Will Pits Scrape of three on 5th/10th/14th, four on 20th/28th, and six on 12th. On 17th May, a pair had a small juvenile at this water. At the flooded workings, May totals decreased to two on 20th and one on 24th. Here, records in June–July occasionally involved one bird, but with two on 28th June and 3rd July, and three on 26th July, with the final grebe here on 2nd August. At Will Pits Scrape, June sightings included three on 2nd and two adults and two juveniles on 25th. Here in July, records were obtained on 3rd (two adults), 7th (two adults and one juvenile), 21st (two adults and two juveniles), 26th (three adults and two juveniles) and 30th (two adults and two juveniles). Two adults and a "fully grown" juvenile were observed on 2nd August, with further records during the month of one adult and the juvenile on 9th/12th/19th. In summary, the largest daily count of adults was seven on 2nd May, with the highest total at one water being six at Will Pits Scrape on 12th May. However, there was evidence of only one pair hatching young, at Will Pits Scrape, and of these latter, only one was apparently reared. In addition, an adult at Will Pits Scrape on 24th July was in almost full winter plumage. Again, as in 2001, this may have been a passing bird not otherwise associated with Thorne Moors.

2006: All records were from Will Pits Scrape. The first of the year was one on 2nd April, followed by one on 15th April and three (including a pair) on 21st. There were two pairs on 23rd–24th, one of them displaying. By 26th April there were six birds, the year's maximum. Subsequent records to 23rd June peaked at three on several scattered dates.

2007: All records were again from Will Pits Scrape. In April, there was a pair from 6th, with display observed from 17th; also three birds on 18th. There were up to four in May, and display was again noted, but with few subsequent records. However, these included an adult carrying a juvenile on 11th June, the year's only evidence of breeding. Beyond June, the last were adult grebes on 10th/17th July.

2008: Mainly recorded in May, with the first at Will Pits Scrape on 6th. All subsequent May records were obtained from the flooded workings, involving three on several days and five on 21st. In June at Will Pits Scrape, there was a pair on 17th, followed by a singleton on 27th.

2009: In May at the flooded workings, there were two pairs on 24th–25th and three birds on 27th. Singles were present at these workings on 9th/12th June. At Will Pits Scrape, there was one on 26th May, and – two months later than all the other records – one on 13th August, that once again might have been a passing bird. Its plumage state is not known.

2010: From this year, records at the flooded workings extended to both north and south of Fisons' Road. These observations are, however, not differentiated here, but united as the flooded workings. The grebes may have been present at Will Pits Scrape on 26th April. However, all certain records were from the flooded workings, where two were recorded 7th May–18th June. At a location to the south of Fisons' Road, two young were observed from 2nd June, but on 18th there was only one well-grown young bird, with no subsequent records of the adults or juvenile.

Of related interest, a juvenile Black-necked Grebe picked up in Moorends was released at Thorne Delves fishponds. Here it was present 5th–9th August. Its origin can only be conjectured.

2011: Most records were obtained during 2nd April–1st June. There were very few sightings outwith that period, and no evidence of successful breeding. There was an isolated March record, of a single bird at Will Pits Scrape on 18th. Many of the subsequent sightings were from 'Woodside floods'. On 2nd April, two were seen there, with four on 9th; "courtship display" was witnessed on the latter date. On 14th/16th/21st–22nd, two were watched at 'Woodside floods', with the addition on 22nd of a further pair at Will Pits Scrape. The year's maximum count was obtained on 23rd, with six in total. This involved pairs at 'Woodside floods', Will Pits Scrape, and at further flooded workings near this scrape, the only record from there. During the remainder of the month, there were occasional reports of single grebes at 'Woodside floods'. No May sightings were notified until 11th, when one was at 'Woodside floods'. On 14th, single birds were encountered at 'Woodside floods' and Will Pits Scrape, and on 20th–21st singles were observed at 'Woodside floods'. Towards the end of the month, one was at Will Pits Scrape on 27th, and two were at 'Woodside floods' on 28th/31st. In addition, 'Woodside floods' held two on 1st June. There were three later dates, 9th/20th June (singles at Will Pits Scrape) and 2nd July (one at 'Woodside floods').

2012: One at Will Pits Scrape on 24th March was the first by a month, eventually followed by two at 'Woodside floods' on 28th April. In May, one was at the 'Thousand Acre floods' on 14th, with two at flooded workings along Fisons' Road on 16th and singles there on 18th/21st. Also in May, two occurred at 'Woodside floods' on 12th/19th, plus one on 20th. Breeding was proved here on 1st June, an adult being seen with a juvenile 'aboard'. In June, 'Woodside floods' held two on 4th/6th and singles on 13th/27th/29th. There were three July records, beginning on 1st, when there was a single at 'Woodside floods'. The two remaining July records were from the 'Thousand Acre floods': two on 3rd, followed by a juvenile on 21st.

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MARSH HARRIERS 1990–2003 by Martin Limbert

INTRODUCTION

Modern bird recording on Thorne Moors began in 1966, and during the subsequent years there has been a major alteration in the status of Marsh Harrier *Circus aeruginosus*. It has transformed from being a sought-after raptor at Thorne to becoming a relatively familiar resident and visitor. This has culminated in breeding from 2011. Initially, the species was described as a scarce passage migrant and visitor, being recorded in 21 years 1966–89 on 66 dates (Limbert *et al.* 1986, Limbert 1990). During the 14 years 1990–2003, the species continued to increase in both frequency and numbers, especially from 1994. In 1995 alone there were records on 66 dates. Since 2004, records have become even more commonplace, with a permanent presence established (Wainwright 2010) and, as noted, nesting birds.

Following the review of earlier Marsh Harrier records in Limbert *et al.* (1986) and Limbert (1990), records from 1990 onwards are available in the annual Thorne Moors bird reports. Those reports covering the years 1990–2003 contained lists of sightings but provided no yearly summaries and analysis for the more productive years. Further, from that middle period, some additional records have since become available. It is therefore the purpose of this paper, based on the annual reports, to provide annual digests of Marsh Harrier recording on Thorne Moors for the period 1990–2003. The digests allow Thorne Moors to be presented in total 1966–2013 as a usable case-study, illustrating the transformed occurrence of Marsh Harrier in the region.

PRESENTATION OF DATA

In the digests given below, the birds are cited as described in the annual bird reports, or as given by the observers for the additional records. Over the years (and to the present) it has sometimes been bewildering – and impossible – for recorders to make full sense of the data submitted. Individual male harriers have been variously described as male, immature male, first-, second- and third-year male, near adult male and adult male. Other harriers have been female, 'creamcrown', juvenile 'creamcrown', immature 'creamcrown', immature female, first-summer female, second-year female, sub-adult female and adult female. The remainder have been immature, juvenile and "brown birds". Sometimes, views have been inadequate to specify details, and at other times observers have been content merely to record a day-count. Additionally, the accuracy of the designations given has sometimes seemed questionable, not least because observers are inevitably variably experienced, precise and careful. However, unless qualifying information is available, most records have to be taken at face value. This has generally been followed by the recorders compiling the annual reports. It is inevitably reflected here, and the digests have to be read with this in mind. Further, caution is urged when ageing and sexing all Marsh Harriers – except classic adult males – solely from their appearance. The sexual

polymorphism demonstrated by Blanc *et al.* (2013) not only complicates, but may even partially invalidate, the kind of documentation attempted here.

BEHAVIOURAL NOTES

Behavioural details are included here from the annual reports, usually of Marsh Harriers connecting with prey or interacting with non-passerines and corvids. Routine behaviour is not part of casual recording, with most harriers merely seen when actively avoiding the observer or intent on seeking prey. Sometimes harriers landed, even repeatedly, or perched up to keep watch. At other times individuals came together when airborne, with a maximum of six (females) on 19th August 2002. Virtually all harriers were typically low when watched in flight, especially lone quartering birds. However, this did not apply when harriers interacted with each other or with different species. Under these circumstances, flying became more erratic or evasive. Occasionally, Marsh Harriers passed at altitude, although descending or climbing when initiating a change of behaviour.

ANNUAL DIGESTS

1990: No records.

1991: One male was observed on 9th May.

1992: There was a single spring record, an immature male on 10th–11th May. A male was seen hunting on 19th August, followed by a female on 5th September and an immature male high overhead on 12th October.

1993: The first record was vague, involving an adult in early March. On 3rd May, a female was seen displaying before flying north-west. In August, two 'creamcrowns' occurred on 21st, with an unspecified bird on 31st. In addition, three adults were reported at the end of August. September birds were seen on 6th (one male) and 11th (one male and – separately – two immatures).

1994: Following the first record, a female flying west on 1st May, there was a large increase in sightings, obtained on 47 dates. These extended from 1st May–11th December, as follows (number of dates bracketed): May (14), June (five), July (two), August (three), September (10), October (eight), November (four) and December (one). The favoured months were therefore May and September–October. Most of those reported were described as females/'creamcrowns', although some were characterized as immatures/juveniles. These latter were reported in May (up to two), June (one on 10th), July (one on 17th), September (up to two immature females), October (one immature female), November (one on 25th) and December (one on 11th). There were probably only two males during the year. The first was observed on three dates during 14th–18th May; the second occurred on three dates during 11th–22nd September, with what was probably the same male on 12th October. Overall, day-counts were usually of one or two, occasionally three, with four on 14th/16th/24th May and 21st September.

On 7th June, a 'creamcrown' was mobbed by a Eurasian Curlew *Numenius arquata*. On 2nd October, a female was mobbed by a Common Kestrel *Falco tinnunculus* and Carrion Crows *Corvus corone*.

1995: Recorded on 66 dates, in each month except December. From 14th January there were sightings on 13 dates to mid-March, all one or two *per* date, comprising single females, immatures and a 'creamcrown' on 5th March, plus a male on 29th January. A female on 5th February departed high to the east. There were 25 dates during April–May, often involving single females/'creamcrowns' and immatures, but with reports of two immatures on 30th April, two females on 14th May and two 'creamcrowns' on 9th/18th May. In April, there was a male on 1st and a first-year male on 22nd/27th. June–July records were fewer (only three in July), with an immature on 16th June and occasional reports of a female/'creamcrown'. There were two males on 16th June, a second-year male on 19th June and single males on 21st June and 24th July. One unspecified bird was high overhead on 7th July. There were single males on 13th/15th/20th August and 14th/16th September. During August–

September, up to two females/'creamcrowns' appeared, plus single immatures in September. Subsequently, there were 'creamcrown' on 16th October and 18th November.

In February, an immature was with a female Hen Harrier *Circus cyaneus* on 18th, and on 25th a female and immature were mobbed by a male Peregrine Falcon *Falco peregrinus*.

1996: There were fewer records this year, with half of the 41 dates being in August–September. There was an absence in January and November–December. In the remaining months, there were maxima of three dates each except May (five dates). During February–July, records were obtained of single females/'creamcrowns' and immatures, plus two immatures on 28th July. There were males on 3rd February (one immature), 29th/31st March (one), 5th/7th April (one immature), 3rd May (one immature), 26th May (one) and 11th July (one immature). August–September records concerned single females/'creamcrowns' and immatures. However, there were two immatures on 24th August, up to two females/'creamcrowns' in September, and three females on 5th. Single males occurred in August on 4th/17th/27th. In October, a 'creamcrown' was seen on three dates to 30th.

On 31st August, an immature clutched prey (possibly a Water Vole *Arvicola terrestris*), which it dropped at Will Pits Scrape, and then carried to feed on in a field south of Crowle Moor. On 7th September, a 'creamcrown' was airborne with three Common Kestrels, a male Merlin *Falco columbarius* and an adult Peregrine Falcon. Later in the month, on 23rd, a 'creamcrown' was mobbed by a Peregrine Falcon.

1997: There were records on only 18 dates, and no males. Apart from an immature female on 25th May, all records spanned 5th August–12th October. They comprised single females/'creamcrowns', immature 'creamcrowns' and unspecified immatures, plus two immature 'creamcrowns' on three dates 5th–14th September.

On 5th August, a hunting female landed briefly after being mobbed by Carrion Crows and Northern Lapwings *Vanellus vanellus*. An immature 'creamcrown' was mobbed by a Hobby *Falco subbuteo* on 7th September. A week later, on 14th, two immature 'creamcrowns' flushed a female Eurasian Sparrowhawk *Accipiter nisus*, and were later mobbed by a large flock of Meadow Pipits *Anthus pratensis*. An immature heading west on 5th October was mobbed by a Carrion Crow.

1998: Seventy dates was the highest annual total so far. There were no records until 13th March and none after 11th October. Records in March–April included single females/'creamcrowns' occasionally, a second-year male on 13th March and 11th–12th April, plus an old male "with a distinct silver white tail" on three dates 11th–25th April. Records were much more numerous in May–June, but amounted only to single females/'creamcrowns' and immatures, plus occasional males. These latter occurred during 5th–16th May and on 5th June, with an immature male on 19th/28th June. After a female on only three July dates, almost as frequent in August–September as in May–June. During the former two months, beyond single females/'creamcrowns' and immatures, there were two 'creamcrowns' on 30th August and single males on five August dates. September records included four on 12th (one female, two immatures and one unspecified), three immatures on 13th, four on 19th (one near adult male, one immature male, one female and one immature), and single males on 20th/26th. The four October records included single male, female and immature on 3rd and single female and immature on 11th.

During May, a female was mobbed by two Eurasian Curlews on 13th, and an immature was mobbed by a Common Kestrel on 25th. June interactions began with a female mobbed by a Carrion Crow on 22nd, with an immature mobbed by a Hobby on 27th. Similar behaviour was observed in late August–early September. First, a female was mobbed by two Peregrine Falcons on 24th. A male was mobbed by a Hobby and an immature was mobbed by three Common Kestrels, both on 31st, with a 'creamcrown' mobbed by Eurasian Jays *Garrulus glandarius* next day. On 15th August, a male was seen to land, and then carry off what was reported as an Adder *Vipera berus*, a unique observation on Thorne Moors (Limbert *et al.* 2008).

1999: Although records were obtained on 85 dates, there were only six records outside April–September. These comprised a female on 14th March, a 'creamcrown' on 27th March, a female on 2nd October, a 'creamcrown' on 3rd October and a male on 28th–29th March. During April–July there was

a peak in sightings in May. Most records during the four month period centred on single females/'creamcrowns', one of them soaring high overhead on 13th May. There were males on 15 dates, plus an immature male flying south on 11th April. The 18 August dates involved up to two females/'creamcrowns', with an immature in the second half of the month and a juvenile on 12th. Males were reported on 14th/24th, plus an immature male on 15th. Numbers were higher during 1st–23rd September, with maxima of three females on 1st and four 'creamcrowns' on 5th, and maxima of three immatures on 8th/11th. The only male was very high overhead on 4th. Beyond that dated period there were only single females/'creamcrowns' reported, but one of each on 25th September.

On 27th March, a female was mobbed by an immature male Peregrine Falcon, with a male mobbed by Northern Lapwings on 18th April. Nesting Black-headed Gulls *Chroicocephalus ridibundus* targeted females in May on 17th/19th. On 22nd May, a female killed a Moorhen *Gallinula chloropus* and flew off with its prey. In August, an immature was mobbed by a Eurasian Sparrowhawk on 16th, with a female mobbed by a Northern Lapwing on 21st. On 22nd, two females mobbed a Honey-buzzard *Pernis apivorus*, and what were presumably the same females were observed locking talons in the air. On 23rd, a female was high overhead with a Common Buzzard *Buteo buteo*, and a female mobbed a Common Buzzard on 29th. On 5th September a female mobbed a Peregrine Falcon, with role-reversal on 11th. On 20th September a female dived at unspecified prey.

2000: There were sightings on 88 dates. During 16th February–26th March, the records on eight dates involved singles in the following categories: immature males on 16th February and 5th March, males on 16th/26th March and immatures on 20th/25th February. The remaining records, all from March, were of single females or unspecified birds. There were also single males and females/'creamcrowns' in April, with an extra female on 27th. During May–July, records again centred on single males and females/'creamcrowns', but with two females/'creamcrowns' on three dates, an immature male on 4th June and 16th July, plus occasional immatures (two on 16th June). Records in August involved up to two females/'creamcrowns', an immature male (on four dates), and a juvenile during 15th–22nd. The 19 September dates often featured up to two females/'creamcrowns', but with four 'creamcrowns' on 3rd/9th. There were single males on 9th/23rd–24th, and two on 21st. On this latter date there was also an immature male, additionally present on 10th/27th–28th. Up to two juveniles/immatures occurred on five dates. There were single females/'creamcrowns' in October to 21st, with an immature on the following day.

A male on 25th June carried a Water Vole. Two juveniles on 28th September scavenged on a long-dead immature Lesser Black-backed Gull *Larus fuscus*. In October, a 'creamcrown' had a "dispute" with a Peregrine Falcon on 1st, and a 'creamcrown' was mobbed by two Northern Lapwings on 7th.

2001: There were only 68 dates during the year, with the first harrier being a male as late as 21st April. However, there was then a continuous presence to 4th November. Single males and females occurred in late April, with single males again during the first week of May and an immature male on 19th May. In this month there were up to two females, and what was described as a second-year female appeared on 19th May. In June–July, there were single females/'creamcrowns', although with males on 3rd/9th June and a first-summer female on 29th July. There were three unspecified birds on 3rd July. During August, single females/'creamcrowns' were eclipsed by two 'creamcrowns' on 24th. There was a male on 24th/28th, a second-year male on 26th/29th, and occasional juveniles/immatures, plus two juveniles on 20th. Records during September–November mostly involved lone females/'creamcrowns', but with two 'creamcrowns' on 7th/29th September, a male on 12th September, and occasional juveniles/immatures in September and on 9th October.

On 21st May, a female was "causing havoc amongst the breeding Black-headed Gulls". On 17th June, a female struck a juvenile Black-headed Gull, "but grabbed poorly, and then tried drowning it and eventually killed it". A female was mobbed by a male Common Kestrel on 3rd June, as was a 'creamcrown' by an unsexed Common Kestrel on 20th August. A 'creamcrown' flew with a Common Buzzard on 28th August.

2002: The number of dates dropped again, to 58, with few outwith April–October. The five records in March commenced with an immature on 3rd, with the rest comprising single females. During April–

July there were sightings on 21 dates, nine of them in May. The April–June birds mostly concerned single females/'creamcrowns', although with immatures on four dates during 1st April–5th May. One male and two females were present on 27th May, one of the latter described as "probably a moulting second-year". The July dates concerned a male on 7th, a female on 21st, two 'creamcrowns' on 27th, an immature on 7th and a juvenile on 13th. The latter was described as descending from a great height. The most productive period was August–September, the 11 August dates including a record number of females/'creamcrowns'. Beyond occasional reports of singles and two, there were four on 18th/24th, and six soaring together on 19th. Five harriers on 26th probably included at least three females. There were also reports of single juveniles/immatures, with two juveniles on 17th. There was also a male on 24th. September counts reached four+, although with five (unspecified) on 2nd. There were two males on 1st/8th and single males on 7th/15th/23rd–24th. A September maximum of at least two females/'creamcrowns' also included 1st October. In the former month there were single juveniles/immatures on 7th/23rd/29th and two juveniles on 24th. During the rest of October there were lone females/'creamcrowns' on four dates, followed by a 'creamcrown' on 15th November.

On 4th May a 'creamcrown' flushed breeding Black-headed Gulls. A 'creamcrown' was mobbed by a Common Buzzard on 8th September, and a female was mobbed by Carrion Crows on 17th October.

2003: With records on 77 dates, the first were a male and female on 24th February. There were also females/'creamcrowns' on three dates from 8th–14th March. During April–May, most sightings were of single females/'creamcrowns', although with an immature male on 28th/30th April and lone males on five May dates. June–July birds were a 'creamcrown' on 1st June, a male next day, a second-year male on 25th June, and a juvenile on 25th July. The 17 August dates included single females/'creamcrowns', but with three at the end of the month. Males occurred on 14th/18th/29th, with single juveniles on at least seven dates. September records comprised single juveniles and females/'creamcrowns' intermittently, occasionally two or three 'creamcrowns', and a male on 3rd. The seven October dates mostly featured lone females/'creamcrowns', but with a second-year male on 13th and a juvenile on 17th. In November, there were 'creamcrowns' on four dates, and also immatures including three on 27th. December records comprised a 'creamcrown' on 14th and an immature on three dates from 18th.

In September, on 5th two 'creamcrowns' were mobbed by a Eurasian Sparrowhawk, and on 27th a 'creamcrown' was mobbed by a Common Kestrel and Carrion Crows. On 11th October an unspecified bird was mobbed by 20 Carrion Crows.

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BLACK-HEADED GULL RINGING: FIRST INSTALMENT OF RESULTS

by Martin Limbert

INTRODUCTION

Modern bird recording on Thorne Moors began in 1966. In parallel, there have been periods of bird-ringing since 1969. Over the years, there have been several episodes of ringing juvenile (*pullus*) Black-headed Gulls *Chroicocephalus ridibundus*. Ringing interest in the breeding gulls has extended

irregularly over 44 years. The resultant data have been extended by returns from ringed Black-headed Gulls found dead on Thorne Moors. The first of these was in 1974. The present paper represents the first instalment of results derived from gull ringing, giving information provided by Philip Bone. This fieldwork covered 2001–05, and activity included some colour-ringing in 2002.

TABLE OF RESULTS FROM PHILIP BONE

Ring number	Ring age	Finding details	Dates	Details
EG56551	<i>pullus</i>	hit wires (alive)	02/06/01 27/06/01	Thorne Moors Goole, East Yorks. (9 km, N, 25 days)
EG56560	<i>pullus</i>	dead	02/06/01 06/09/12	Thorne Moors Wyberton, Boston, Lincs. (93 km, SE, 11 years 96 days)
EG81011	<i>pullus</i>	sighted	02/06/01 26/11/03	Thorne Moors Galway, Co. Galway, EIRE (542 km, W, 2 years 177 days)
EG81057	<i>pullus</i>	dead	02/06/01 11/08/02	Thorne Moors Grune Point, Skinburness, Cumbria (212 km, NW, 1 year 70 days)
EG81115	<i>pullus</i>	dead	17/06/01 27/02/02	Thorne Moors St Laurent-sur-Sèvre, Deux-Sèvres, FRANCE (808 km, S, 255 days)
EG81123	<i>pullus</i>	dead	17/06/01 02/07/01	Thorne Moors Stourton, Leeds, W. Yorks (43 km, WNW, 15 days)
EG81184	<i>pullus</i>	sighted sighted	15/06/02 30/12/04 20/10/09	Thorne Moors Silloth, Cumbria (214 km, NW, 2 years 198 days) Silloth, Cumbria (214 km, NW, 7 years 127 days)
EG81189	<i>pullus</i>	sighted sighted sighted sighted	15/06/02 20/03/03 20/03/03 05/05/03 31/05/03	Thorne Moors Slimbridge, Glos. (231 km, SSW, 278 days) Wapley Common, Yate, Glos. (257km, SSW, 278 days) Blacktoft Sands, E. Yorks. (14 km, NE, 324 days) Blacktoft Sands, E. Yorks. (14 km, NE, 350 days)
EG81190	<i>pullus</i>	sighted sighted	15/06/02 29/05/03 08/06/03	Thorne Moors Marton Mere, Blackpool, Lancs. (140 km, W, 348 days) Wyre Estuary, Skippool, Thornton, Lancs. (140 km, W, 358 days)
EG81195	<i>pullus</i>	dead	15/06/02 04/08/05	Thorne Moors Swillington Ings, Swillington, W. Yorks. (46 km, WNW, 3 years 50 days)

EG81199	<i>pullus</i>	sighted	15/06/02 17/12/02	Thorne Moors Gloucester Landfill Site, Glos. (217 km, SSW, 185 days)
		sighted	02/01/03	Gloucester Landfill Site, Glos. (217 km, SSW, 201 days)
		sighted	01/03/04	Gloucester Landfill Site, Glos. (217 km, SSW, 1 year 260 days)
		sighted	02/11/04	Gloucester Landfill Site, Glos. (217 km, SSW, 2 years 140 days)
		sighted	05/12/05	Gloucester Landfill Site, Glos. (217 km, SSW, 3 years 173 days)
		sighted	20/11/06	Gloucester Landfill Site, Glos. (217 km, SSW, 4 years 158 days)
EG89703	<i>pullus</i>	sighted	15/06/02 02/12/05	Thorne Moors Seaham, Durham (138 km, NNW, 3 years 170 days)
EG89754	<i>pullus</i>	dead	31/05/03 05/06/05	Thorne Moors Thorne Moors (2 years 5 days)
EG89756	<i>pullus</i>	dead	31/05/03 13/06/08	Thorne Moors Kippax, Castleford, W. Yorks. (32 km, WNW, 5 years 14 days)
EG89896	<i>pullus</i>	sighted	31/05/03 22/09/03	Thorne Moors Galway, Co. Galway, EIRE (542 km, W, 114 days)
EG91374	<i>pullus</i>	sighted	19/06/03 28/12/03	Thorne Moors Strathclyde Country Park, Motherwell, N. Lanark. (314 km, NW, 192 days)
EG91378	<i>pullus</i>	sighted	19/06/03 30/11/03	Thorne Moors Tynemouth, Tyne & Wear (160 km, NNW, 164 days)
EL53534	<i>pullus</i>	dying	05/06/05 03/11/09	Thorne Moors Kirkby, Liverpool, Merseyside (131 km, W, 4 years 151 days)
EL53586	<i>pullus</i>	sighted	05/06/05 21/06/10	Thorne Moors Killington Lake, Kendall, Cumbria (138 km, NW, 5 years 16 days)
EL53588	<i>pullus</i>	sighted	05/06/05 15/03/06	Thorne Moors Amble harbour, Northumb. (196 km, NNW, 283 days)
EL53602	<i>pullus</i>	sighted	05/06/05 11/04/06	Thorne Moors Amble harbour, Northumb. (196 km, NNW, 310 days)
		sighted	19/04/06	Amble harbour, Northumb. (196 km, NNW, 318 days)
EL53671	<i>pullus</i>	dead	05/06/05 06/07/09	Thorne Moors Nr Wakefield, W. Yorks. (38 km, W, 4 years 31 days)
ER92902	<i>pullus</i>	dead	09/07/95 17/06/01	Nr Lound, Retford, Notts. Thorne Moors (32 km, N, 5 years 343 days)
ET30984	<i>pullus</i>	dead	14/06/97 02/06/01	Hatfield Woodhouse, Doncaster, S. Yorks. Thorne Moors (9 km, NNE, 3 years 353 days)
ET53810	<i>pullus</i>	sighted	31/05/03 08/02/05	Thorne Moors Amble harbour, Northumb. (196 km, NNW, 1 year 253 days)

		sighted	01/01/11	Amble harbour, Northumb. (196 km, NNW, 7 years 215 days)
ET56702	<i>pullus</i>	dead	22/06/97 02/06/01	Wheldrake Ings, Wheldrake, York, N. Yorks. Thorne Moors (30 km, S, 3 years 345 days)

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A REVIEW OF FISH IN SWINEFLEET WARPING DRAIN by Martin Limbert

INTRODUCTION

Between Swinefleet and Old Goole, Swinefleet Warping Drain curves gradually SSW from the River Ouse at Swinefleet Clough. The Drain is 8km long. It runs alongside the eastern edge of Goole Fields, and penetrates Thorne Moors as far as the Pony Bridge. Its course is then extrapolated for over 1km by Swinefleet Line Dike, which stretches as far as Thorne & Crowle Road Drain. The cumulative fish fauna recorded from Swinefleet Warping Drain may amount to as many as 19 species, but is presumably somewhat less, and many do not occur naturally. Further, not all will be permanently, or currently, resident. Although Swinefleet Warping Drain is almost 200 years old, the earliest fish *record* is only dated 7th April 1968. Information on the fish fauna forms a combination of anecdotes, reports and sightings by anglers, naturalists and peat workers. Additionally, an electrofishing exercise by the Environment Agency in 2008 represented a so-far unique opportunity for investigation. For background details of this latter, including 10-figure map references, see Limbert (2013). More conventionally, Swinefleet Warping Drain is a recognized haunt for local anglers, with all known activity in one stretch of the Drain, known locally as 'The Quay'. This is the section under tidal influence, closest to Swinefleet Clough. It extends alongside Quay Lane and up to *c.*100m south of where the lane turns south-east. Several anglers have furnished information from there *via* Peter Hinks. The most notable is Eric Henderson, who has provided written details extending back 48 years. Originally from Marshland, he has been a Goole angler for some years, and in recalling fishing in Swinefleet Warping Drain from the mid-1960s to the present, he writes:

[I] have seen huge changes to fish populations and species in that time; when I began we caught mainly Eels, small Perch, Rudd, Roach and occasional jack Pike (probably mainly due to inability, incorrect tackle etc. rather than lack of [other] fish!). Chub are also present.

He adds that many of the fish now in the Drain were introduced from Fisons Angling Club's pond (SE768168) at the former Swinefleet Works. This had been dug as a 'fire pool' and became stocked by the Club. In the first half of the 1980s, fish were introduced from there into the Drain (due to drought?), with the transferred species named as Common Bream, Crucian Carp, Grass Carp, Roach, Tench, Pike and Perch.

In Swinefleet Warping Drain, the character of the water is variable. For much of the year it is deep brown and contains peat, because water is pumped in from Thorne Moors. In late winter, considerable amounts of river water can get into the Drain, especially at high tide, through the supposedly closed gates at Swinefleet Clough. Due at least to the effects of water pressure and silting-up on the river side, the gates leak throughout the year. However, the late winter ingress can significantly raise the water level at Quay Lane. This is a favoured time for angling (P. Hinks *in litt.*). In addition, there is much run-off into the Drain in winter at times of high rainfall or melting snow.

THE FISH FAUNA

Limbert *et al.* (2008) detailed 12 species of fish known from the Thorne Moors area. These included European Eel, Pike, Perch and possibly Roach from Swinefleet Warping Drain. Roach is now confirmed and 12 new species are documented (all asterisked). Additionally, four unconfirmed species are listed but square-bracketed. Two of these, Bleak and Flounder, are included partly to draw attention to them and thereby possibly elicit further information. Additional species could be released into Swinefleet Warping Drain, or even occur naturally, for example lampreys from the River Ouse. Nomenclature throughout this paper follows Davies *et al.* (2004), which however excludes Dab.

SPECIES LIST

European Eel *Anguilla anguilla*. Eel-netting in the River Ouse used to include Swinefleet Clough (P. Hinks *in litt.*). Here, Geoffrey Tune operated from the early 1960s to c.2005, though he caught few European Eels in his last years. He still catches them in the Ouse by rod-and-line. In better times, his largest netted fish weighed up to 5lb each. In the 1980s, Graham Ford began netting, and did so until his death in 2013. He too caught very few European Eels latterly, but did take increasing weights of both River Lamprey or Lampern *Lampetra fluviatilis* and Sea Lamprey *Petromyzon marinus*.

Within Swinefleet Warping Drain, European Eels were reported in the 1970s (Limbert 1980). Reflecting the more recent diminution in numbers, Eric Henderson states that European Eels used to enter Swinefleet Warping Drain but have not been caught recently (but see below). The only dated record involves a European Eel carried by a Grey Heron *Ardea cinerea*, which flew from Swinefleet Warping Drain (opposite Pony Bridge Marsh) on 23rd May 1995 (Roworth 1996). Interestingly, a small European Eel, only ounces in weight, was hooked in May 2013 by Lee Ward (P. Hinks *in litt.*). No European Eels were encountered during electrofishing in Swinefleet Warping Drain by the Environment Agency on 15th February 2008 (Limbert 2013). When Swinefleet Warping Drain was sampled, efficiency was lowered by high turbidity and impaired visibility. One consequence of these conditions concerns those species that do not come to the surface when subjected to an electric current. Such a species is European Eel, which often stays near the bed of a waterbody, and in poor clarity may therefore be missed.

In view of the general decline of European Eels, there has been recent interest by Natural England in the possible occurrence of the species in the Thorne Moors area (C. Evans *in litt.*, pers. comm.). However, the lack of records has discouraged any kind of action.

***Silver Bream or White Bream *Abramis bjoerkna*.** A specimen was caught in Swinefleet Warping Drain by Paul Adams sometime during 2009–10. There has been at least one other record of this species being taken, by Gary Whitfield (1990s–early 2000s?). Silver Bream were presumably introduced to the Drain, although there is no record of this.

***Common Bream *Abramis brama*.** Put into Swinefleet Warping Drain from the fishing pond at the Swinefleet Works (E. Henderson). Anglers occasionally take Common Bream in the Drain (P. Hinks *in litt.*), with Eric Henderson having taken many 'skimmer' (*i.e.* immature) Bream up to around 2lb in weight. However, the only specific record of occurrence concerns 15th February 2008. During the electrofishing on that date, Common Bream were encountered at SE766211 (one in a 100m length) and SE765218 (three in a 480m length) (Limbert 2013).

During the springs of 2012–13, cyprinid hybrids, only ounces in weight, were caught in Swinefleet Warping Drain by Lee Ward. They were Common Bream x ?Roach (P. Hinks *in litt.*).

[**Bleak *Alburnus alburnus*.** In 2005 (probably early summer), an unfamiliar fish taken in Swinefleet Warping Drain by Paul Adams was tentatively identified as a Bleak (P. Hinks *in litt.*). The same catch included Dace and 'golden' Tench, suggesting recent liberation].

[**Goldfish *Carassius auratus*.** The 'golden' variety (at least) of this species was stocked in the fishing pond at the Swinefleet Works (B. Thompson *per* P. Hinks *in litt.*). It was present when the works were operated by Fisons (ended 1994). There is no evidence that any Goldfish specimens were transferred to Swinefleet Warping Drain, although this remains a possibility. Goldfish is included here merely to document its local presence, which parallels its past occurrence in the Thorne Colliery cooling ponds (Limbert *et al* 2008)].

***Crucian Carp *Carassius carassius*.** Introduced into Swinefleet Warping Drain from the fishing pond at the Swinefleet Works (E. Henderson). "Small" specimens were caught by Eric Henderson.

***Grass Carp or Chinese Grass Carp *Ctenopharyngodon idella*.** This alien species is cultured for farming and repressing weed biomass in enclosed situations, but is subject to strict legal controls. Grass Carp were added to Swinefleet Warping Drain from the fishing pond at the Swinefleet Works (E. Henderson). There is an undated (but probably late 1980s) report of one being caught in the Drain,

as noted by Paul Adams (P. Hinks *in litt.*) and Eric Henderson. It may also be recorded that another fishing pond of Fisons Angling Club was Decoy Pond (SE725220). This was also stocked with Grass Carp to restrict weed growth. In the 1980s, the pond was re-dug and re-profiled to become two adjoining ponds. At that time, some of these Grass Carp may have been transferred to Swinefleet Warping Drain (P.Hinks *in litt.*).

Gudgeon *Gobio gobio. There is an undated report of this species (1990s–early 2000s?), obtained from Swinefleet Warping Drain by Gary Whitfield (P. Hinks *in litt.*).

Chub *Leuciscus cephalus. Known from Swinefleet Warping Drain (E. Henderson). Eric Henderson has caught examples, occasionally to around 2lb in weight.

Dace *Leuciscus leuciscus. Has occurred in Swinefleet Warping Drain (E. Henderson). Paul Adams captured a Dace in 2005 (P. Hinks *in litt.*).

Roach *Rutilus rutilus. Fished for in Swinefleet Warping Drain (E. Henderson; P. Hinks *in litt.*; Limbert 2009). This includes a 6oz. example obtained by Paul Adams in 2006 (P. Hinks *in litt.*). On 15th February 2008, during the electrofishing, almost 30 specimens were encountered. These were at SE766211 (three in 100m), SE766212 (10 in 100m) and SE765218 (15 in 480m) (Limbert 2013). An excellent "true" Roach specimen was obtained by Trevor Whitehead in July 2010, weighing slightly under 1¾lb (E. Henderson). The occurrence of cyprinid hybrids is unclear.

Rudd *Scardinius erythrophthalmus. Reporting information from Peter Hinks (*in litt.*), Limbert (2009) noted that Rudd was fished for in Swinefleet Warping Drain. The species has been reported by Eric Henderson, who has landed specimens up to about 1lb in weight.

Tench *Tinca tinca. Introduced into Swinefleet Warping Drain from the fishing pond at the Swinefleet Works (E. Henderson). Separately, there are also two records of 'golden' Tench, an ornamental orange-yellow or reddish variety. Paul Adams captured one in 2005 (P. Hinks *in litt.*), and Eric Henderson has seen photographs of one weighing 6lb caught by Mark Jackson in 2006.

Pike *Esox lucius*. Anglers have fished for Pike in Swinefleet Warping Drain for at least half a century (E. Henderson; P. Hinks *in litt.*; Limbert *et al.* 2008, Limbert 2009). The first record obtained by naturalists concerns a specimen c.30cm long on 7th April 1968, seen in Swinefleet Warping Drain (Limbert 1980) somewhere in the Bank Top/Will Pits area of Thorne Moors.

Occasional specimens of Pike on Goole Moor and in Mill Drain may have reached Thorne Moors from Swinefleet Warping Drain. In 1973, two tides were admitted into Swinefleet Warping Drain, date unrecorded, by the opening of Swinefleet Clough. This was to provide water for fire-fighting on Thorne Moors. Blackwater Dike and connecting drains were also affected, and as a result two Pike were noted in a drain on Goole Moor immediately afterwards (Limbert 1980, 1998). Similarly, in July of that year, heavy rainfall coincided with high tides, and led to three 'jack' Pike being found in inundated peat workings on Goole Moor, fairly close to Bank Top (Limbert *et al.* 2008). Limbert *et al.* (2004) reported that there had been occasional vague reports of Pike in more recent years in drains in the north-east part of Thorne Moors. Also, a dead Pike measuring c.45cm was removed from a pump inlet in Mill Drain during the spring of 1998 (Limbert *et al.* 2008). The origin of this fish can only be conjectured.

In January 2000, Eric Henderson caught a Pike in Swinefleet Warping Drain weighing 19¾lb. In the following years he took Pike weighing up to a little over 16lb. In November 2008, Trevor Whitehead captured an 18lb 6oz fish (E. Henderson). One hooked by Philip Woollass on 27th February 2010 at SE766203 (Figure 1) weighed 5½lb, the bait being a chunk of Sea Lamprey from the River Ouse (P. Hinks *in litt.*). A Pike estimated to weigh 22lb was taken by Philip Woollass in November 2011 (E. Henderson; P. Hinks *in litt.*). This is the heaviest Pike reported, although Eric Henderson considers that Pike of 30lb or more are present in Swinefleet Warping Drain. The electrofishing on 15th February 2008 yielded single Pike at each of the three locations (Limbert 2013).



Figure 1. Philip Woollass, a Goole angler, holding a Pike *Esox lucius* he caught in Swinefleet Warping Drain on 27th February 2010. Photograph © Brian Smith.

[**Three-spined Stickleback** *Gasterosteus aculeatus*. Although recorded in drains on Goole Fields, especially Goolefields Cross Drain (Limbert *et al.* 2008), there is no record of this familiar fish from Swinefleet Warping Drain].

***Ten-spined or Nine-spined Stickleback** *Pungitius pungitius*. Described by Martin Hammond as "numerous" on 17th September 2012 in Swinefleet Warping Drain. This was on Thorne Moors near Warping Drain Bridge (Bailey Bridge) at SE743145 (Limbert & Wainwright 2013). There is no previous record of this species from the 'Thorne Moors' reach of Swinefleet Warping Drain, and this is the most southerly record of any fish actually *in* the Drain (see European Eel).

***Ruffe or Pope** *Gymnocephalus cernuus*. There is a vaguely dated record of this species (1990s–early 2000s?) being captured in Swinefleet Warping Drain by Gary Whitfield.

Perch *Perca fluviatilis*. In the 1970s, Perch was reported from, and caught in, Swinefleet Warping Drain (Limbert 1980, Limbert *et al.* 2008). It has also been fished for in recent years (P. Hinks *in litt.*; Limbert 2009). Perch is reported by Eric Henderson, who has taken specimens weighing up to slightly over 2lb. He has heard of heavier fish, maximum over 3lb. As a result of the electrofishing on 15th February 2008, a single example was identified at SE766212 (100m length) (Limbert 2013).

***Dab** *Limanda limanda*. Has occurred in Swinefleet Warping Drain (E. Henderson). Dab were a regular by-catch in Graham Ford's eel-nets (P. Hincks *in litt.*).

[**Flounder *Platichthys flesus***. This catadromous fish is said to have been caught in Swinefleet Warping Drain, but may have been confused with the foregoing (P. Hinks *in litt.*). As the Flounder is the only flatfish Pleuronectidae regularly entering fresh water, it may turn up in Swinefleet Warping Drain. It is detected far inland from the Humber (Bunting *et al.* 1974), even in the River Don at Doncaster and on nearby Potteric Carr, where the possibility of aquarists' cast-outs was raised (Bird & Carroll 1998)].

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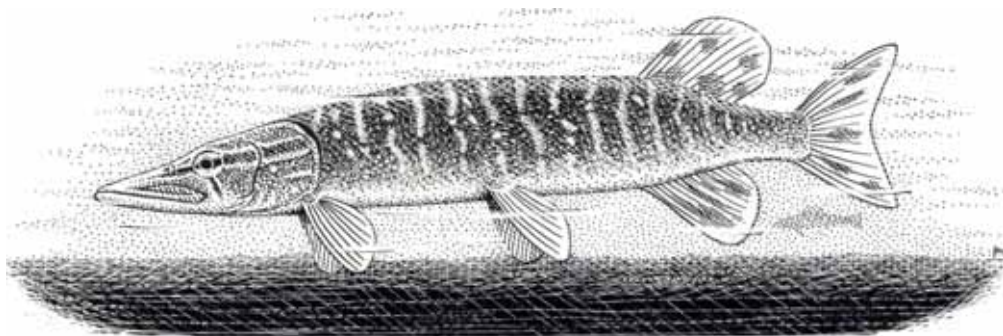
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