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The Contribution that the Management of Land for Sporting Purposes has made to Conservation in Lincolnshire

Where Elephants once Roamed

Lincolnshire Grasslands

The Joe Duddington Archive

Unusual Big-headed Fly found in Lincolnshire



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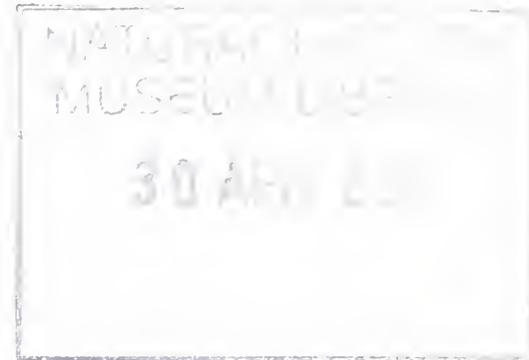
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IAN MACALPINE-LENY

LNU PRESIDENT 2013-4



Ian Macalpine-Leny's life-long interest in natural history, particularly birds, began at his prep school, Taverham Hall in Norfolk. At Uppingham he ran the school Field Club and by the time he left he was a trainee ringer with the late Peter Prince, one of the best field ornithologists that Lincolnshire produced in the 20th Century. The late 60s were totally dedicated to bird ringing: joining Clive Minton on the Wash Wader Ringing Group; winter roost ringing with Peter Prince and then in 1968 ringing 1,000 *Acrocephalus* warblers in Lincolnshire with Peter, a feat that even surprised the BTO. In 1969 he organized a 5 week ringing expedition to the Ebro delta in Spain with Mike Payne and Peter Prince. Graduating from Birmingham University with a degree in Biological Sciences, he began a Ph.D studying the relationship between heart rate and oxygen consumption of the Redshank, *Tringa totanus*, using radio telemetry, but resigned after two years to take up a career in the City. On retiring back to Lincolnshire in 2000 after 30 years in London and New York, he rejoined the LNU having first becoming a member in 1965 and chaired the Executive Committee for 8 years, stepping down in 2014. He was born and raised in Lincolnshire.

THE CONTRIBUTION THAT THE MANAGEMENT OF LAND FOR SPORTING PURPOSES HAS MADE TO CONSERVATION IN LINCOLNSHIRE

Ian Macalpine-Leny

This paper might well be subtitled "Other Men's Flowers", which comes from a quotation from Montaigne: "I have gathered a posie of other men's flowers, and nothing but the thread that binds them is my own." A huge number of people have contributed to it, and I am deeply grateful to them all.

A few things before we start. "Sporting" in this paper refers to field sports, and not to those eccentric landowners who for some reason best known to themselves have always wanted a cricket pitch outside the drawing room windows, or have diversified by laying down a golf course or a cross country course. Secondly, this is not a discussion on the ethics of field sports. Thirdly, I tend to think of things in acres, but everything these days is in hectares (ha). 100 hectares is roughly equivalent to 250 acres.

When I look back at the Presidential Addresses delivered over the last 110 years, they have been given by many distinguished people who were all extremely knowledgeable about their chosen subject. Many of the early presidents were country parsons, such as Woodruffe-Peacock, or Blathwayt. Blathwayt was at one time rector of Doddington, and I actually sleep in what was once his bedroom. I on the other hand could never be described as extremely knowledgeable, or distinguished for that matter, and being a generalist, and a founder member of the Dilettante Society when I was at University, I paint with a pretty broad brush. But I am none-the-less passionate about one thing: seeing conservation, farming, and game shooting working together to solve some of the pressing problems affecting our countryside

today.

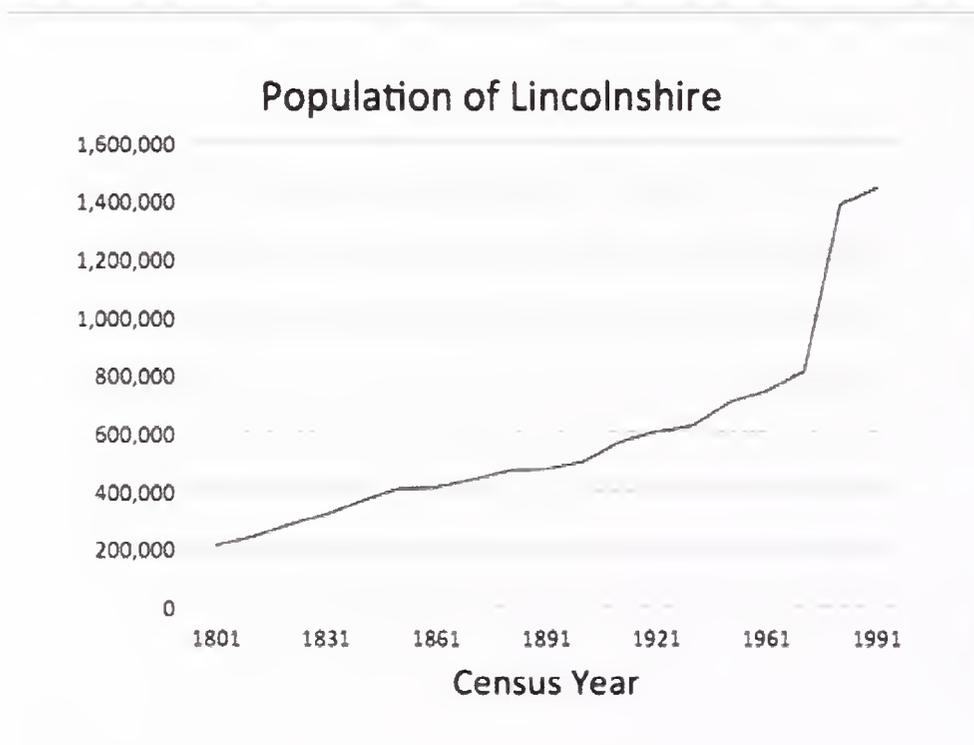
The Lincolnshire countryside has changed out of all recognition over the last 200 years. Look at this, from *The Field* of November 1886:-^[1]

“The country extending from Market Rasen towards the town of Caistor, in the county of Lincoln, for a distance of about six miles in length and three in breadth, comprises about 10,000 acres. Within this area were formerly great tracts of poor, uncultivated land, consisting of moors or commons covered with gorse, heather and fern, and in times of flood, with small lakes or pools, the resort of wildfowl. On either side of the main road between Rasen and Caistor were extensive populations of Scotch and Spruce fir, larch and birch. As might be expected, the roads were in a primitive condition – nothing but sand. I well remember our advent to that part of the country in the year 1821. The whole family had to dismount from the carriages, and to travel on foot through the deep sand for three or four miles before reaching our destination at the village of Usselby.

The barren moors and commons were almost continuous, separated chiefly by plantations and comprised within several parishes of Market and Middle Rasen, Walesby, North Willingham, Tealby, Osgodby, Usselby, Claxby, North Owersby and Holton-le-Moor, ten in number. These great tracts of unproductive land, as may be supposed, were the resort in great abundance of all kinds of wildlife. Here were to be found pheasants, partridges, woodcock, snipe, landrails, quail, wild fowl of all kinds, plovers and their eggs in proper season. We had foxes, badgers, polecats, stoats, weasels, rats, hedgehogs, carrion crows, magpies, jays and hawks of all kinds: kites, buzzards, hen harriers, falcons, sparrow hawks, hobbies, merlins and kestrels had undisturbed possession. No vigilant keeper with gun or trap to molest them. As for foxes, the district swarmed with them and supplied other parts of the Brocklesby country, not being a good hunting country, cubs were generally removed when required elsewhere.” (sic)

Today there is farmland as far as the eye can see, although some of the woodland remains. And the A46 from Market Rasen to Grimsby is now a busy road.

A good idea of the immense number of wildfowl in Lincolnshire before the draining of the fens can be obtained from looking at the catch figures from duck decoys. The last to still operate out of the 38 in Lincolnshire was at Ashby near Scunthorpe, which between 1833 and 1868 sent 99,000 ducks to Leadenhall Market in London ^[2]. And this wasn't an activity that was carried out in the far flung corners of the county: the nearest decoy to here, just a mile down the road at Skellingthorpe, was probably one of the oldest in the county ^[3].



What has brought about these changes in our countryside? The increase in the population, and the need to feed it.

The population of Lincolnshire has increased seven fold from 208,500 in 1801 to 1,442,000 in 1991 (0.2 per acre to 0.6 per acre) but this takes into account the inclusion of all of Humberside from 1974 ^[4]. Without this, the increase is very much in line with the six-fold increase in England and Wales from 10 million to 60 million in 2001 (1 per acre).

As is immediately obvious when you travel by car, the principal industry in the county is farming, and it probably accounts for 85% of the land area. So what has happened to farming over the last 200 years has had a major impact on the biodiversity of the county.

After repeal of the Corn Laws in 1849, successive governments have had one consistent policy – to make food as cheap as possible to help the new industries conquer foreign markets by reducing the cost of industrial labour. Free trade and cheap food have been the policy ever since. This had the effect of sending farming into decline and decay, only to be saved by the need for food production in the First World War. Once it was over, all government support was withdrawn and farming as a business again fell into decline, only to be revived with the desperate need to feed the nation in World War II.

But our government, and those in Europe too, had learnt its lesson, and haunted by the fear of food shortages caused by the war, introduced systems of support for farm prices and measures to encourage farmers to maximize production. “Food from our own resources” was the title of the UK Government’s White Paper. To intensify production, 60% grants were available in the 60s to cover the cost of drainage and removal of hedges, and many took advantage of this. As part of the intensification of farming encouraged by the Common Agricultural Policy when the UK joined the European Union, the Farm Support Scheme initially paid farmers per ton of production, so the more they produced, the greater their support. Although this was subsequently altered to be based on the area planted, the inevitable happened and there was over production resulting in a grain mountain. This led in 1988 to compulsory Set-Aside, originally 15% of arable land but subsequently reduced to 10%, to take land out of cultivation. It was then discovered that this had considerable environmental benefits. Most farmers initially did their Set-Aside in blocks, but a Lincolnshire estate realised that the compacting on turning headlands resulted in much less productive ground so did their Set-Aside in a series of grass strips. This was initially criticised by environmental groups, but later put forward as good practice.

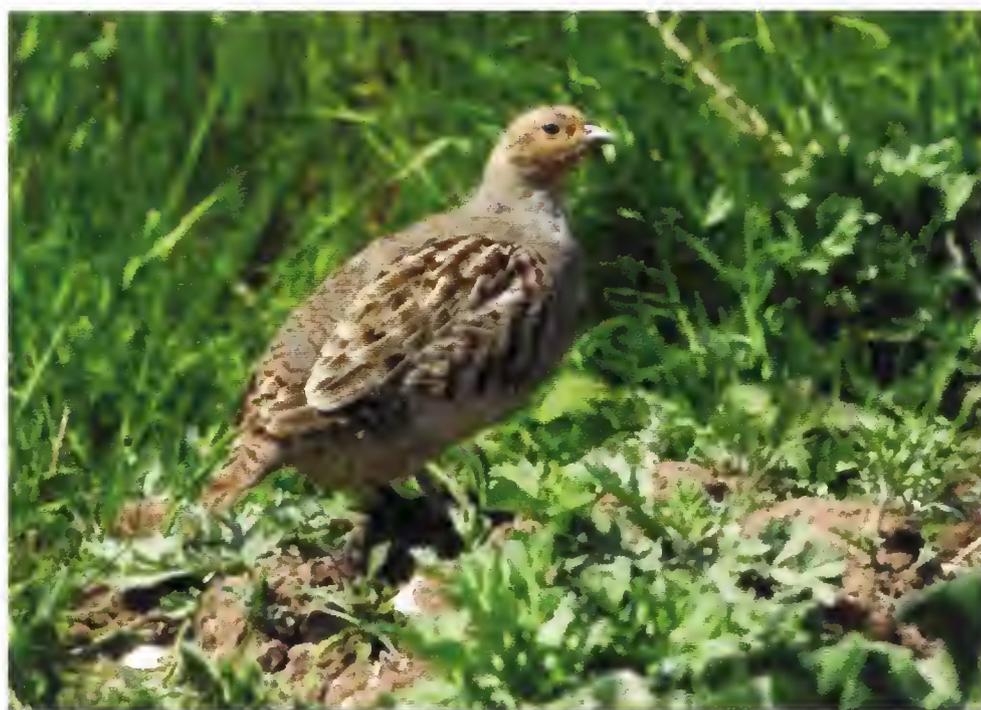
In 1991 the government introduced the Countryside Stewardship Scheme, which rewarded farmers who took steps over and above good farming practice that would benefit the countryside and add to its enjoyment. The aims were to improve the beauty and diversity of the countryside, enhance, restore and recreate targeted landscapes, their wildlife habitats and natural features, and improve public access. This in turn was superseded in England by Environmental Stewardship which has essentially two levels: Entry Level Stewardship (ELS) which is open to everyone and pays a flat rate provided the farm can accumulate a certain minimum number of points; and Higher Level Stewardship (HLS) which is more complicated, is only available in certain areas, and is competitive, so the farmer has to bid for it. Payment depends on the number and ecological value of the options the farm can deliver. This included an option designed to benefit 11 farmland bird species that were declining at that time.

But in spite of these measures, most farmland birds and many mammals, amphibians, insects and plants have continued to decline, and this has been blamed by conservationist groups on ever more intensive farming without substantive evidence. There can be no better account of the extent of this decline in Lincolnshire and some of the reasons for it than the late Frank Lammiman’s Presidential Address of March 1992, in which he described the depressing sequence of events over 70 years in his home parish of Ludborough between Louth and Grimsby^[5].

It is easy to assume that the effect on our wildlife from the increasing intensification of farming is all deliberate, but this of course is not the case. Most farmers are conservationists at heart. But farming is a business like any other, and has to be done profitably, otherwise it is not sustainable. Farmers that have not responded to pressure from Europe to become more and more intensive have not survived on income from their farms alone. And on top of frequent changes in direction from Westminster and Brussels, they also have to contend with the weather. And as in any business, what is gone is gone – there is no going back.

This paper is largely going to focus on birds, because to quote Roger Tory Peterson, birds are akin to ecological litmus paper. They have a high metabolic rate and geographical range and so can quickly reflect changes in the environment. Most of them are highly visible or audible and unlike micro-moths, you don't have to dissect their genitalia to identify them. Thanks to intensive study over many years by an army of enthusiasts both amateur and professional, much is now known about the abundance and distribution of British birds and how this has changed over the last 20 years. This has been summarized in the recent landmark publication of the BTO's Bird Atlas 2007 – 2011. But it is one thing to record change and put forward possible reasons for it, and quite another to demonstrate what the determining factors concerned are and show the effect of reversing them. This requires scientific study over a considerable period of time. Fortunately we have this with the Grey Partridge.

The Grey Partridge has shown the most dramatic decline of almost any of our farmland birds. From once being very common it has declined by more than 90% since the mid 60s, and now appears on the Red List of birds of conservation concern. It is also a priority species identified by the UK Biodiversity Action Plan, and one of 19 species included in the Farmland Bird Indicator – one of the UK Government's biodiversity indicators for the natural environment. But being a quarry species, the Grey Partridge differs from all other birds on the list in being of economic importance, and so funds have always been available for research.



Grey Partridge

Neil Smith

Research in the UK has been led by what is now the Game & Wildlife Conservation Trust (GWCT). This started life in the early 1930s as the ICI Game Research Station led by Major Eley, whose family business had been making shotgun cartridges, so he had a vested interest. More recently, the research has been carried out by a team led by the GWCT's former Director General, Dick Potts, who has spent 40 years studying Grey Partridges. This work has been mainly done in the south of the country, so I would ask you to step outside Lincolnshire for a moment.

The key factors resulting in the decline of the Grey Partridge have been known for some time:-

- Removal of hedges and field margins as field size increased resulting in reduction in nesting and brood rearing cover;
- Use of pesticides leading to a reduction in insect food of chicks;
- Reduction in predator control resulting in an increase in nest predation.

Where there is no predator control, nest losses increase with nest density because the nests are easier to find. The key work was done on Ministry of Defence land on Salisbury Plain from 1984 – 1991. Two separate study areas of 564 ha and 496 ha were set up and after a lead-in year, legal predator control was carried out for three years on the first area and none on the second. Predator control broke the relationship between nest predation and nest density and the number of broods hatching increased with the number of pairs of birds. The same game keeper then carried out predator control on the second study area for the next three years and nothing on the first, and the results were reversed ^[6].

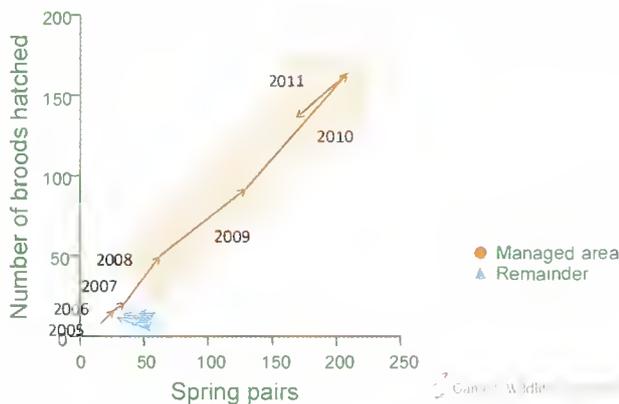
Where nest predation is such an important issue for partridges, it begs the question why they continue to nest on the ground. "Because there is more of it", was the answer offered by Dr David Lack. As an aside, I should mention that Moorhens in my Aunt's garden at Skellingthorpe have taken to nesting 10 feet up in a holly tree to avoid the unwelcome attention of her rather fat cat.

But it's no good increasing the number of broods hatching if the chicks then starve to death. The key work on herbicides was done on the Manydown Estate near Basingstoke from 1982-1987. The approach was to set up six blocks of 90 ha of cereals. Half were controls with conventional use of pesticides; the other half were treatments that were sprayed conventionally apart from the outer 6 m which were sprayed selectively; no insecticides were used on these headlands and herbicides were restricted to those that were specific to Black-grass, Wild Oats and Couch Grass but did not kill broad leaved weeds. The trials were a spectacular success, almost doubling chick survival rates, and the resulting management technique of "conservation headlands" became a key option in the government's HLS scheme [7]. The GWCT have studied the Grey Partridge on a study area on the Sussex Downs since 1968. In 2003 one land owner, the Duke of Norfolk, set out to restore Grey Partridge numbers originally on 220 ha, extending this to 1,000 ha in 2007, using all possible habitat management techniques and legal predation control measures. The remaining 2,200 ha of the study area acted as a control [8].

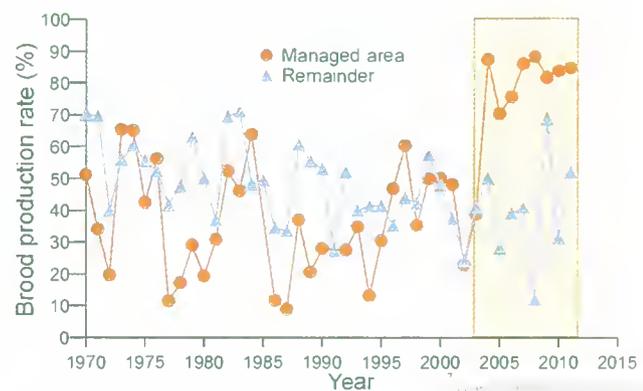
These measures included:-

- Increasing nesting cover by the addition of 25 km of beetle-banks and hedgerows;
- Increasing brood-rearing cover by the addition of 97 ha of conservation headlands (9% of total area);
- Additional winter cover through wild bird cover strips;
- Fields sown wherever possible in autumn on one side of a field boundary and in spring on the other;
- Feeders containing wheat along field boundaries (2 per pair; 40 / 100 ha) from October to June;
- 3 game keepers controlling predation by Foxes, Stoats, Weasels, Brown Rats, Carrion Crows and Magpies from February to July.

Predation control: brood production

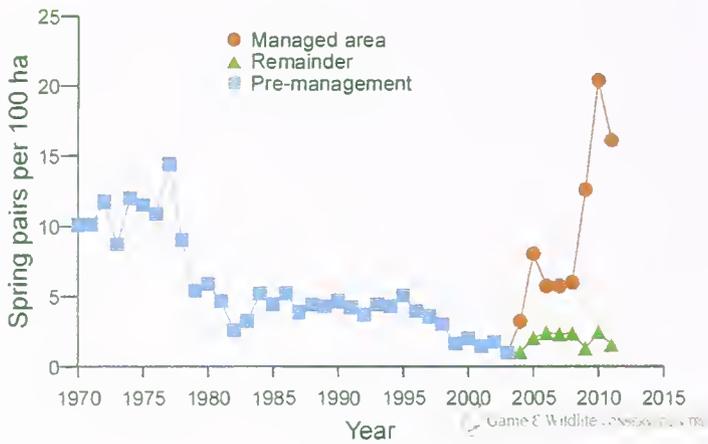


Nesting cover & predation control



The results were spectacular. Predation control resulted in the percentage of pairs hatching chicks increasing from 38% to 86%. There was no increase in the control area. Nesting success almost doubled due to predation control and extra nesting cover. Improvement in the number of chicks hatched plus the higher survival rate due to conservation headlands (brood size 1.8 x higher) led to large increases (initially +50% per annum) on the managed area. There were no such recoveries in the control area.

Grey partridge breeding abundance



It shouldn't come as a surprise that when management changes are put in place to restore the fortunes of one farmland species, they also have a beneficial effect on others. Bird counts by Dick Potts on the study area showed that 11 of the 12 monitored species on the Red List were stable or increasing compared to only one nationally ^[9].

Pairs of Lapwings increased 10-fold on the managed area while continuing to fall on the control area. The major factor was thought to be fox control.

There was an almost 5-fold increase in the number of Skylarks on the managed area from 10 pairs / 100 ha to 47 pairs / 100 ha compared to a continuing decrease on the control area. With susceptibility to nest predation, reliance on insects at the chick stage, and a diet based on stubble weeds in winter, the skylark behaves like a miniature partridge. Hardly surprising therefore, that it shows such a major benefit from the management changes on the control area.

There were substantial increases in the number of Corn Buntings although a drop in 2011. Again nest predation appeared high where ground predators were not controlled.

Song Thrushes increased enormously in winter and spring, but there was no increase in breeding pairs.

Again Yellowhammers increased enormously in winter and spring with birds feeding at the partridge feeders, but the breeding population did not increase.

Linnets also showed a strong increase.

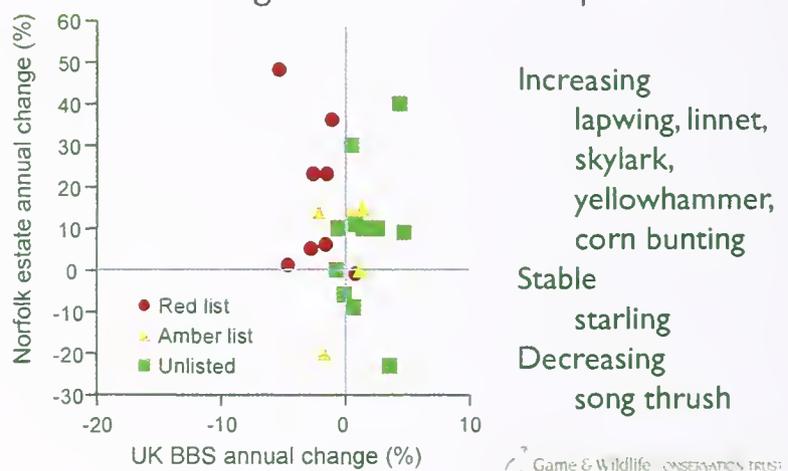
One of the least expected changes on the managed area was a five-fold increase in the number of raptors and owls seen. Clearly there had been a significant increase in the small mammals that make up their diet, but perhaps this also indicated a shortage of food elsewhere.....

What is particularly interesting is that the greatest change was shown by the Red Listed species.

Of the mammals, the most marked effect has been on the Brown Hare. Hares are fascinating animals, to which anyone who has had the privilege of observing them at very close quarters will attest. Work at the GWCT study farm at Loddington in Leicestershire has shown that removal of predation by Foxes on young leverets resulted in numbers increasing by a factor of 21 ^[10]. This is not always welcome, because too many hares can cause a lot of damage. So long term study of the Grey Partridge has shown that putting in place management changes to conserve one species results in benefit to a number of species.

So back to Lincolnshire. Before we look at partridge and pheasant shooting we should perhaps

Breeding birds: red-listed species





Lapwing

Neil Smith



Corn Bunting

Neil Smith



Skylark

Neil Smith



Song Thrush

Neil Smith



Yellowhammer

Neil Smith



Linnet

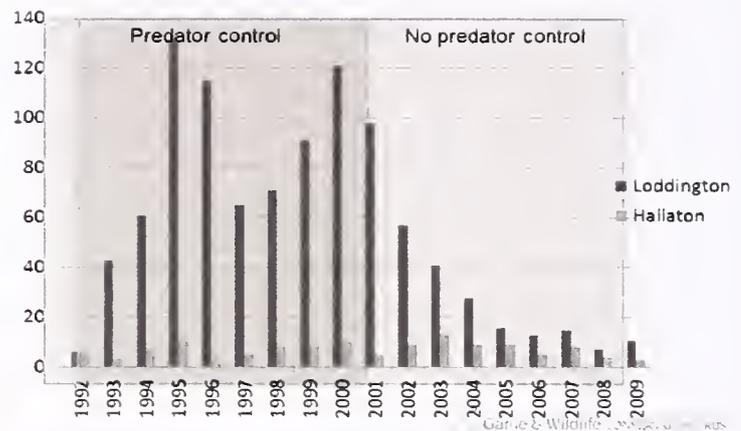
Neil Smith



Brown Hare

Neil Smith

Hares at Loddington



remember that Lincolnshire is the coarse fishing capital of the world. But management of lowland river systems has a limited effect on overall conservation so is outside the scope of this paper. Gravel Pits are an important man made habitat in this part of Lincolnshire, many of which have been used for fishing. What is now known as

Grebe Lake on Whisby Nature Park was stocked with brown trout by my family for 50 years, but the lake was never actively managed as such so again doesn't qualify for inclusion. Similarly wildfowling: the Wash is one of the great locations for wildfowling, but because no management is undertaken, it is again outside the scope of this paper. Suffice to say that many wildfowlers are dedicated naturalists and conservationists, the most obvious example being Sir Peter Scott, who started out wildfowling on the Wash with Kenzie Thorpe.

Although hunted for sport in medieval times, deer today, despite their grace and fascination, can be considered a serious nuisance in Lincolnshire, as anyone who grows roses will know. And they do untold damage to woodland. Those who attended the joint BTO / Lincolnshire Bird Club conference in November 2013 will remember Graham Hopwood mentioning the positive correlation between the increase in Muntjac in the Lime Woods with the decrease in Nghtingales. Again, deer are outside the scope of this paper, but I would recommend anyone who wants further information to read Chris Manning's excellent book, *Deer and Deer Parks in Lincolnshire*^[11].

When reading Oliver Rackham's *History of the Countryside* you get the impression that much of what we see today was laid out by the Anglo Saxons^[12], but that is not entirely correct in Lincolnshire. Much to the surprise of some conservationists, there were no hedges in Lincolnshire until after the land was enclosed. From the beginning of the 18th Century, foxhunting became the social hub of rural life and the principal amusement of the landed gentry. The earliest records of the Burton Hunt go back to 1672, making it one of the oldest packs in the country. To improve the sport, small woods were planted as well as areas of gorse. A glance at an Ordnance Survey map will show many examples of "Fox Covert" or "Fox Holt" or "Such-and-such Gorse", indicating that these were originally planted for fox hunting. Planting has continued with land being put down to grass for the benefit of hunting. Perhaps more importantly, woodland has been maintained where it otherwise would have been felled, cleared and ploughed up.

Although there has been partridge shooting in Lincolnshire for many years, by the middle of the 19th Century woods were being planted for pheasant shooting. Most of the woods on the Scrivelsby Estate outside Horncastle were planted in the 1850s. A more recent example is the Stenigot Estate on the Wolds where the present landowner's father increased the strip of woodland that ran along the edge of the escarpment from 100 acres to 400 acres, thereby creating one of the best pheasant shoots in Lincolnshire. It also created a wildlife corridor between Bluestone Heath at the top of the escarpment and the river. The conversion to organic farming some 15 years ago brought in over-wintering stubble

that gave a major boost to the bird population. There are high numbers of Corn Buntings, Chaffinches and Tree Sparrows up on the heath in winter, and Snipe and Woodcock down by the river. There is no regular shooting on the estate today but still some measure of predator control.

As with fox hunting, pheasant shooting has ensured that woodland has been retained where much of it otherwise might have been clear felled and ploughed up.

When it comes to conservation, the Lincolnshire Wildlife Trust, which started life as the Nature Reserves and Wildlife Conservation Committee of the LNU, has led the way in Lincolnshire. It now has more than 25,000 members and its almost 100 nature reserves add up to over 3,500 ha. But to quote the Head of Nature Reserves, Dave Bromwich, this represents about 1% of the historic county when the tide is out, reducing to 0.5% when it is not. So the future for conservation in the county is very much in the hands of the estimated 85% that is farmed and the 4% to 5% that is woodland, especially as it is now realized that conservation has to be on a landscape scale to be really effective. This is not to belittle the important part played by nature reserves – even with some bird species – Bitterns being a good Lincolnshire example.

It may seem ironic that conservation can be particularly effective when carried out in conjunction with shooting. The reason for this is that there has to be a motive for landowners to put the necessary management changes in place. Sometimes this is simply a passion for conservation, and HLS can provide the funds to achieve some of the management changes, but it is unlikely that a landowner is going to provide predator control or winter feeding out of his own pocket unless there is a cost benefit from shooting. And many landowners do not go into HLS in the first place for a variety of reasons: they may not have enough points to qualify; they find it too proscriptive, too time consuming to administer, or they can make more money out of farming the land.

At the present time (March 2014), 78% of qualifying land in Lincolnshire is in an Environmental Stewardship scheme, of which 30% is in HLS. ^[13]

The work carried out by the GWCT in Sussex and elsewhere has clearly shown that to farm for the Grey Partridge can result in a recovery of a whole ecosystem.

It is not known how many organized shoots there are in Lincolnshire, and estimates vary between 150 and in excess of 200. It is also difficult to compare results between different estates because there is a lack of quantitative data. But a number of trends emerge from comparison of farms contributing to the GWCT's Partridge Count Scheme (in which advice is provided on restoring Grey Partridges in return for counting spring pairs and returning shooting statistics) with similar farms that don't. Of the 1,400 farms in the scheme across the country, about 100 are in Lincolnshire:-

- Total bird abundance was 24% higher and on average there were 5 more species detected on Partridge Count Scheme (PCS) farms than on non-PCS farms. ^[14]
- Many PCS farms also have a pheasant shoot. Rides make up 13% of woods in which pheasants are released compared with only 8% in non-game woods. ^[15]
- A study in East Anglia showed that butterfly numbers were 2.2 times higher and the number of species 1.5 times higher in game woods compared with non-game woods. ^[16]
- Game estates have up to 65% more hedgerows per square kilometer than farms with no game shooting. ^[17]

Such numbers need to be viewed cautiously, but the message is clear: where there is game shooting there tends to be greater biodiversity because of the management practices in place. Predator control, which has been shown to be a key factor in the nesting success of ground nesting species, has always

been an emotive subject. There is no question that game keepers in the first part of the 19th Century played a major part in the extermination of a number of raptor species. But this was an age in which the accepted method of bird identification was by shooting, and large collections of stuffed birds, eggs and butterflies were made as a matter of course. The LNU's collection of stuffed birds currently residing in my attic are unlikely to be road kills. Happily those days are long gone and the vast majority of game keepers are more enlightened. Many are also excellent naturalists. With rural crime on the increase, they also perform an important security function as a deterrent to trespassers, escaped dogs and illegal coursing – a particular problem in Lincolnshire.

The gold standard for management of land for conservation in Lincolnshire has been set by Sir Richard Sutton's Settled Estates. They have demonstrated that it is possible to farm profitably and farm for the environment. This has been driven by a passion for conservation on behalf of Sir Richard himself and his former manager, Chris Dowse. It is a big operation: 8,500 acres in Lincolnshire, of which almost 10% is given over to conservation by taking the poorer land out of production. This includes 100 acres of wild bird seed mix and 400 acres of 6 meter wide field margins, which incidentally makes the use of big machinery much easier because there is no problem going under trees or negotiating tight corners. What the impressive vision statement brochure doesn't tell you is there is also a very successful commercial shoot on the estate, with 30 days shooting a year over 4,000 acres. This adds a further 55 acres of game cover, making 155 acres of bird feed in all. And the whole operation is managed for the long term.

But it is not necessary to farm on such a large scale to farm profitably and farm for the environment. Geoffrey (that's not his real name) farms about 650 acres, 300 of which are ring fenced. His objectives in running his farm are (i) to make a jolly good living, (ii) to encourage Grey Partridges, and (iii) to give something back to the environment. And he wouldn't have done any of this if he hadn't been a keen shooting man and passionate about his Grey Partridges.

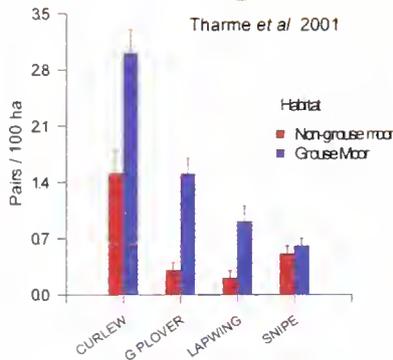
The farm was bought by his father in 1952, who in the 60s started to take out hedges. When Geoffrey took over in 1980 he started to replant. He planted a hillside spinney, a disused railway line, every available corner of redundant land, and he replanted the hedges. He now has 20 acres of wild bird cover, 10 acres of maize, a pond, a small marshy area, and currently 18 pairs of Grey Partridges, although this has been as high as 30 pairs on 400 acres. The whole farm is HLS and Geoffrey does all the keeping himself.

The next door farm to Geoffrey is owned by George – that isn't his real name either. George is into chickens and pigs in a very big way and farms every inch of his land intensively. He is not a shooting man. Now you don't need to do a BTO Common Bird Census to see the difference in the bird life between these two farms. If you take a walk across Geoffrey's farm, the hedges in winter are full of Blackbirds and Song Thrushes; there is a covey of some 30 Red-legged Partridges in the maze and pair of Grey Partridges get up from the conservation headland. There are flocks of Chaffinches and Linnets out on one of the stubble fields, pigeons everywhere, a Buzzard calling somewhere overhead and a Kestrel complete with her lunch lifts off from a wooden picnic table. Everywhere there are newly planted hedges. If you take a walk on George's farm, most of the hedges have been removed and all the dykes have been mown. You are lucky if you see a Magpie and a pair of Carrion Crows.

The scientific work carried out by the GWCT has demonstrated the dramatic effect that predator control has on ground nesting birds. Employing a full time keeper on a 2,000 acre farm in the fens that has been consistently recognized as being farmed for the benefit of the environment for many years resulted in a doubling of the bags on its wild pheasant shoot, and a three fold increase in the number of Lapwing pairs in four years. Hares also increased, Skylark and Yellowhammer numbers remained stable, but Corn Buntings continued to decline.

The significant effect of controlling predators of ground nesting birds has also been demonstrated by the GWCT's Otterburn Project.

Waders occur at higher densities on grouse moors compared to non-grouse moors



The number of breeding pairs of waders was between two and three times higher on kept grouse moors than on non-kept moors. [18]

The problem with anything is some of the people that do it. It was Oscar Wilde who famously described those that went fox hunting as "the unspeakable in full pursuit of the uneatable". And regrettably, there are rotten apples in every barrel. I had two police officers lie to me under oath during a trial at Lincoln Magistrates Court, which doesn't exactly fill you with confidence. The number of partridges and pheasants that can be released on a given

acreage and the size of a release pen relative to the size of a wood have all been laid down, but such standards need to be rigorously enforced. All too often bad practices creep in, generally as a result of greed, and the perpetrators get away scot-free. This quite rightly plays into the hands of those that do not support field sports.

Financial issues also cause concern in a number of conservation charities from the National Trust to the RSPB. Workers on the ground in the latter are among the most knowledgeable and dedicated in conservation, but those that direct the charity are very nervous of anything that might upset the membership or deter prospective members and hence adversely affect membership income. All too often the number one enemy of garden birds is curled up asleep on a chair next to the direct debit holder. It has been estimated that the nation's 9 million cats account for 170 million birds annually. And like the pharmaceutical industry, the RSPB has sometimes been guilty in the past of only releasing those scientific results that support its aims.

Although it may come as a surprise to many, the management of land for sporting purposes makes a very real contribution to conservation in its wider sense in Lincolnshire. This is by:-

- Preserving natural woodland and planting additional woodland, some to provide wildlife corridors;
- Preserving, replanting and extending hedges and field boundaries;
- Infilling unproductive corners of land with spinneys and ponds;
- Planting conservation headlands and beetle-banks;
- Providing additional food from October to April;
- Controlling predators of ground nesting birds.

This has been shown to result in:-

- A reversal in the decline of the Grey Partridge;
- An increase in abundance of the following red listed birds against a continuing decline elsewhere:-
 - Lapwing
 - Skylark
 - Linnet

- Yellowhammer
- Corn Bunting
- An increase in abundance of Brown Hares;
- Management changes aimed at reversing the decline of one species result in benefits to many species.

If you would like to know more about the scientific work on which this is based, I recommend that you read *Partridges – barometer for the countryside* by G.R. Potts (Collins New Naturalist Library, 2012). This ends with a very telling statement. “*Finally, I am absolutely convinced that a great deal of countryside biodiversity can be regained without compromising food production and with public acclaim. It can only happen however if the agribusiness, protectionist and hunter lobbies co-operate to solve the vexed issues. Too often these tribes play marbles in the middle of the road unaware of the juggernaut.*”

Now as a postscript, can I just say that I fully understand that a lot of people don't agree with fields sports, particularly shooting. That's absolutely fine – we all have things we don't like or don't agree with. But it is important to at least try and see the other side of the argument – the other point of view. It always helps if you can understand why people do things, or don't do things, as I have tried to find out from the farmers and landowners that I have interviewed. Why people do field sports is particularly difficult to understand unless you do them yourself, although I have tried to address this in my recent book.^[19] It has taken me a long time to understand why people play golf – after all, you can't even eat the thing at the end of the day. But I hope you have seen from this paper that the management of land for sporting purposes, particularly game shooting, *has* made a contribution to conservation in Lincolnshire, and that much more can be achieved if the conservation, farming and shooting lobbies work together in the future.

Acknowledgements

I would like to acknowledge the considerable help and support I have received from the staff of the Game and Wildlife Conservation Trust, particularly Dr. Julie Ewald, who now heads up the Sussex Project; numerous landowners, farmers, farm managers and Nature Reserve managers who have given their time and advice; several game keepers, ecologists and ornithologists; Neil Smith who supplied the stunning wildlife photographs, and Jamie Macalpine-Leny who put together the accompanying PowerPoint presentation.

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WHERE ELEPHANTS ONCE ROAMED!

Helen Gamble

The Lincolnshire Geodiversity Group (LGG) and the Lincolnshire Wolds Countryside Service (LWCS) hosted an event on Saturday 25th May 2013 at the disused gravel and sand quarry at Welton le Wold, Louth. The event was promoted via the Lincolnshire Naturalist Union, various Geological Societies and other interested organisations and was an opportunity to look at the work that has taken place over many years led by the late John Aram and others.

The morning was spent looking at the western exposure, under private ownership, whilst the afternoon was spent looking at the eastern exposure owned and managed by the Lincolnshire Wildlife Trust. Many of those attending had visited the site in the past, with the aim of rediscovering the geology, archaeology and ecology of the site.

The day before was vile – it was so bad we couldn't set up the tent! However Saturday dawned clear, bright and turned very hot and sunny. The day attracted over 40 geologically minded people from a variety of places and organisations, with members from Yorkshire, Hull and the East Midlands Geological Societies joining with members of the Lincolnshire Naturalist Union and students from Horncastle Queen Elizabeth Grammar School to explore this varied site. Last year the students helped the LWCS update the education pack for this site and we look forward to welcoming more students to this site in future.

We would like to send a special thanks to the landowners of the western side, Simon and Elizabeth Brook, and the owners of the eastern side, the Lincolnshire Wildlife Trust, for allowing us to hold the event and visit both sides to gain a better understanding the story of the various chapters of the Ice Age story in the Lincolnshire Wolds. Members of the LGG brought along displays of the history of the site and Lincolnshire's geology, and provided excellent leadership, explaining all aspects of the site to all who came along. Carol Aram, John's wife and Jane, their daughter, came along to support the event in memory of John and helped raise funds for the Marie Curie cause by purchasing maps and books, £141.30 was the total raised! Carol was totally amazed by the generosity shown.

The sites are private but are available for groups to visit with prior permission and the LGG and LWCS are currently looking at hosting another similar day during May 2015. If anyone is interested in Welton le Wold, please contact Helen Gamble on 01507 609740 or via helen.gamble@lincolnshire.gov.uk

Welton le Wold Disused Quarry

Setting

The village of Welton le Wold is located approx. 5 miles west of Louth, in the district of East Lindsey, Lincolnshire. The disused quarry faces are located north to north east of the village and accessed via the A631 road directly to the north.

The remaining exposed faces are split by the road which joins the A631 to the north with the A157 road to the south. The face west of the road is in private ownership, with access provided by the owners by prior arrangement with the Lincolnshire Wolds Countryside Service (LWCS). The face east of the road is owned and managed by the Lincolnshire Wildlife Trust (LWT), with permitted access by prior arrangement.

Land-use – Past

Quarrying initially started on site in the early 1800s, with material from small scale excavations used to dress drives at houses such as Welton Manor and The Rectory. Records show that just before the Second World War the site was owned by John Charlton and permission was granted to father and son Amos and Tom Hodson to extract sand and gravel. They did this using hand tools and a riddle to separate the materials. At the onset of the War, the rights to extract were bought by Stan Darby who expanded the operation to supply material for the Wolds airfields. Men and machinery were brought in and a washing and grading plant was built, with dams in place to raise the level of the beck for washing before being discharged downstream. The operation was sold to Stephen Toulson & Sons Ltd., who constructed a weighbridge and adjoining offices.

After the War, demand for building materials, including Cold War bunkers, grew and the quarry expanded to over 120 acres. However, due to the increasing amounts of overburden of soil and chalk needed to be moved to reach the aggregates, the excavations became deeper. The cost of moving the overburden also increased until, in the early 1970s, the operation became financially unfeasible and quarrying ceased. At the height of operation, the quarry faces were over 10 metres high from ground level and often 10 metres deep, stretching over 2 kilometres. In the final years of operation it was run by Amey Roadstone Corporation (ARC) who bought out Stephen Toulson & Sons Ltd. The site finally ceased excavations in the mid 1970s but, as the gravel bench remained, aggregate was sold as 'raised gravel' (i.e. ungraded) for over a year until it was exhausted by mainly local farmers for use on farm tracks, etc.

For further information on quarrying development on the site, visit: <http://www.old-maps.co.uk/maps.html> Here you can view maps from 1891 & 1907, that show the small scale operations on site, to 1956 when excavation was at its busiest and finally to 1978, when the quarry was closed and the face boundaries that we see today were established and mapped.

Present

The site as seen today has been managed for farming and wildlife but aspects of its old use remain. The weighbridge remains, with the timber site office adjacent to it and the brick building adjacent to the road, once used as a quarryman's home.

As the site was never reclaimed or landscaped after excavations ceased, the land shows marked differences in surface material. Patches of sand sitting next to clay and gravel proved difficult for arable farming. Eventually, following poor cropping of linseed and use as set aside land, the present owners entered an agri-environment scheme. This provides a contribution towards farmers and other land managers in England to deliver effective environmental management on the land. The owners of the western side went into their first scheme in 2000 and have continued with the current Environmental Stewardship Scheme.

Land management options currently used at Welton le Wold include hedgerow restoration, parkland and tree management, educational access provision and numerous grassland options such as hay cutting and aftermath grazing of species rich semi-natural grassland. For more information on Environmental Stewardship, please visit: www.naturalengland.org.uk/ourwork/farming/funding/es

Geological and Archaeological context

Initial interest in the geological & archaeological context of Welton le Wold started in the late 1960's as the site was being worked. Local school boy Chris Alabaster (he later grew up to become a professional geologist and published the finds) found 3 Acheulian type hand axes, a flake and a collection of faunal remains from strata at a depth of 2-3m into the gravels. Some of these were identified at the time as the remains of straight-tusked elephant, bison, red deer and horse. Archaeological material of this antiquity, contained within a sequence of layers is extremely rare and almost unknown in the Midlands and northern Britain. The artefacts are kept at The Collection in Lincoln, please see: <http://www.lincstothevast.com>

Previously exposed faces at the former quarry show a sequence of up to 13m of glacial tills overlying some 10m of silts, sands and flint gravels. In the eastern face, the gravels are overlain by a grey brown Welton Till and finally a red Devensian till. In the western face, the latest Devensian till is absent, yet there is a third creamy brown Calcethorpe Till present in the exposure here that occurs stratigraphically between the lowest Welton Till and the latest Devensian deposit.

The lowest, the Welton Till, is a grey coloured chalky till with mostly locally derived fragments. There are some, possibly sub-glacial, varve deposits. Above this is the brown coloured Calcethorpe Till. This contains erratics, some very large, of a variety of rock types from North Yorkshire, Northumberland and Scotland. The uppermost, Devensian Till, only occurs in the eastern part of the quarry. This seems to have been laid by ice moving southwards down the North Sea and then pushing westwards into the Wolds but reaching no further than the eastern end of the quarry. Again there are erratics from northern Britain but there has been no positive identification of Scandinavian material as has sometimes been supposed. It may be that northern ice was pushed westwards by Scandinavian ice in the North Sea area.

The existence of the latest till in only half of the quarry suggests that the limits of the last major ice sheet in eastern England occurred within a few hundred metres of the quarry at Welton-le-Wold. The dating of the lower two tills is unresolved and controversial. These issues and the completeness of the glacial sequence make Welton-le-Wold one of the most important geological sites in the region for Pleistocene studies.

Developments

Involvement via the Lincolnshire Wolds Countryside Service (LWCS) with the landowners of the western face started in 1999, during the application for entry into the Countryside Stewardship Scheme. The LWCS recognised the opportunity for access for educational groups and, through involvement with the then Lincolnshire Regionally Important Geological/Geomorphological Sites (RIGS) Group, the wider geodiversity community of Lincolnshire became involved.

Initial work was undertaken via an English Nature 'Face Lift' grant during the summer of 2001. This involved clearing sections of the face to re-expose sections of the Welton & Calcethorpe tills that had become hidden by weathered and slumped material and vegetation, installing steps for access and installation of an interpretation panel.

Following the success of this work, and changes in ownership of adjoining land, the Lincolnshire Wildlife Trust purchased the eastern side in 2001, with grant aid including landfill tax credit and it became the Trust's first geological reserve. A further 'Face Lift' grant was obtained from English Nature to clear sections of the eastern side, with the Welton & Marsh tills now exposed.

In 2003 Heritage Lincolnshire obtained Aggregate Levy Sustainability Funds (ALSF) from English Heritage for new investigation into the archaeology of the Welton gravels, whilst English Nature made an ALSF grant for borehole investigation and landscape work to create more permanent exposure of the sequence in 2004.

This investigation was planned to utilise opportunities and data found to fully describe the characteristics of the different sediments present, their physical and temporal relationships and attempt to resolve problems relating to their genesis and ages.

Logged sections and borehole data were combined to determine a stratigraphic sequence and their depositional environments, physical properties of the sediments and their depositional and erosional features and their contacts were examined, post-depositional structures, including deformation, folding and faulting were recorded and absolute dating of key individual beds attempted using OSL techniques where suitable sediments were available.

Conclusion

The 2003 re-investigation of the artefacts places them as being of local origin and probably only been transported a distance of approx 250 m in the gravels. The gravels were deposited in a relatively fast-flowing braided stream channel in a small chalk valley during a cool, temperate climate.

Preliminary dates suggest that the gravel from just below the artefacts was deposited approx. 365,000 years ago. This date places the likely age of the artefacts and fossils to between 330,000 and 200,000 years old. This is the oldest stratified evidence of human occupation in the region.

Whilst the borehole, OSL, and other samples were interesting, the dating could not be defined as absolute and only preliminary date ranges could be obtained for the Welton gravels. These ranged from >242ka BP in the upper part to >550ka BP in the lowest.

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Welton le Wold Site Designations

Geological Conservation Review (GCR) Site

The Geological Conservation Review (GCR) was initiated by the Nature Conservancy Council in 1977 to identify, assess, document and eventually publish accounts of the most important parts of Great Britain's rich and varied geological heritage. GCR sites were selected on the basis of their scientific value rather than any educational or historical importance and in general only one site was selected as the best example of each aspect of geology under consideration. The sites selected - GCR sites - form the basis of statutory geological and geomorphological site conservation in Britain;

Welton le Wold (site no. 1916) is one of 76 sites within a suite for the CGR block *Quaternary of East Anglia*. The Quaternary Period is the most recent major subdivision of the geological record, spanning the late Cainozoic Era. Traditionally, it is divided into two intervals of epoch status – the Pleistocene and Holocene. The Holocene Epoch occupies only the last 10 000 years of geological time and is the warm interval or interglacial in which we now live. Consequently, it is often regarded as part of the Pleistocene rather than a separate epoch. In a strict geological sense, the base of the Pleistocene Epoch (and therefore that of the Quaternary Period) is defined in Italy at the type locality of Vrica, where it is dated to about 1.64 Ma (million years ago); it is now well established that the current warm period, the Holocene



Figure 2a. Site location in relation to the former quarry, Devensian ice limits and meltwater channels. Figure modified from Alabaster and Straw, 1976, Figure 1 and Straw, 2005, Figure 1.

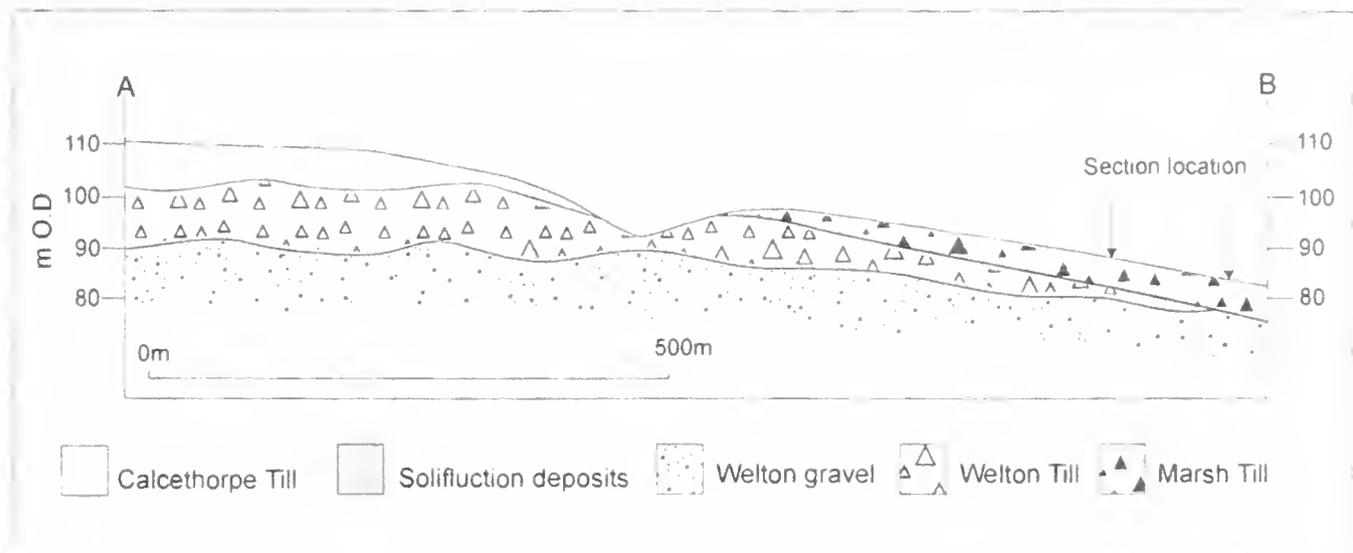


Figure 2b. Section location in relation to cross section of Pleistocene deposits recorded in the former quarry. Figure redrawn from Alabaster and Straw, 1976, Figure 2 and Straw, 2005, Figure 2.

Epoch, is simply the latest interglacial in a long series of profound climatic fluctuations that have characterized the last 2.4 Ma.

This GCR Block encompasses sites that merit conservation because of their significance to the geomorphological evolution and Quaternary history of East Anglia. Sites important for coastal and fluvial geomorphology, in the sense of modern landforms and processes, and large-scale mass-movement features are encompassed by other GCR Blocks.

Within the general regional framework, the approach adopted was to identify networks of sites that represent the main landscape features, distinctive aspects of Quaternary history and the principal research themes. Such features and themes were recognized at two levels: (a) those relating to the specific characteristics of the area in question; and (b) those relating to national interests or distributions (e.g. pollen biostratigraphy and sea-level changes during the Holocene) for which regional representative sites were required. It should be noted that this categorization relates to the occurrence of the interests and does not imply differences in the importance of sites in the different categories. Thus sites selected for a regionally occurring interest are nevertheless of national importance.

For East Anglia, the site networks considered are those representing:

- long-term landscape evolution
- Pleistocene sea-level changes
- periglacial landforms and deposits
- key sequences of deposits for interpreting the distinctive Quaternary history of the region
- Holocene vegetation history

For more information, please visit:

<http://jncc.defra.gov.uk/page-2947>

Site of Special Scientific Interest (SSSI)

Samples of the best of the UK's geological sites are legally protected through their designation as SSSIs. SSSIs are notified under the Wildlife and Countryside Act, 1981. The Countryside and Rights of Way Act (CRoW) 2000 greatly strengthened the legislation relating to the conservation of geology in England and Wales; placing emphasis on the positive management rather than just conservation of SSSIs. The CRoW Act also makes it an offence to knowingly or recklessly damage a SSSI, including by irresponsible mineral or fossil collecting. The network of SSSIs in England is the responsibility of Natural England.

Welton-Le-Wold was designated a SSSI in 1986, being a site of the highest importance for Pleistocene studies in Britain. The critical significance of the deposits lies in their geographical position and the links they provide between the stratigraphical successions of East Anglia, the Midlands and Holderness. Together, the sections reveal three till units, overlying gravels (Welton Gravels) containing derived Hoxnian mammal fossils and Acheulian artefacts. The lowermost till (Welton Till) is generally accepted as Wolstonian in age and has been correlated with the Basement Till of Holderness; the uppermost till is Devensian. The stratigraphical position and age of the chalky middle till, the Calcethorpe Till, are controversial and have generated considerable debate because of their profound implications for inter-regional correlations. According to one interpretation, the till is Wolstonian in age and a correlative of the chalky till of the Midlands. The alternative view is that the chalky till at Welton-Le-Wold is soliflucted and relates to the chalky till of East Anglia, which is demonstrably of Anglian age and that the chalky tills are coeval. The sections at Welton-Le-Wold are therefore of crucial importance for facilitating further work to elaborate a regional Pleistocene stratigraphy for central and eastern England.

For more information, please visit:

<http://www.naturalengland.org.uk/ourwork/conservation/designations/sssi/default.aspx>

Local Geological Site (LGS)

The first surveys of Local Geological sites (LGS) began in 2008 by looking at the Regionally Important Geological and Geomorphological Sites (RIGSs), which were the predecessors of LGSs and were designated in the 1970s and 80s. These sites were then assessed against a set of locally applied, national agreed criteria by an independent panel who recommend their designation as LGS to the Greater Lincolnshire Nature Partnership for endorsement, before being passed to the local or unitary authorities for inclusion in their Local Plan. Formal designation, and monitoring, of the site comes from the local planning authority via the planning system.

Welton le Wold was designated a LGS in 2010 following surveys undertaken in 2008/09 and is in addition to the GCR & SSSI status. Whilst the LGS survey recognises the scientific value of the site, the designation is also based on the cultural, educational and ease of use of the site from an access & safety aspect.

For more information, please visit:

<http://www.glnp.org.uk/partnership/local-sites/local-geological-sites.php>

Local Wildlife Site (LWS)

Part of the western face (2.3 ha) was notified as a Local Wildlife Site in 2009 following surveys in 2005, passing on neutral grassland 1 and standing water 2 criteria.

The steeper land supports a range of characteristic plants, such as Bird's-foot Trefoil, Black Medick, Common Centaury, Field Forget-me-not, Colt's-foot and Glaucous Sedge. Of more interest, and perhaps indicating a slightly calcareous soil, is the additional presence of Tor-grass, Bee Orchid and Fairy Flax. The pond and surrounding marshy ground are home to Bulrush, Broad-leaved Pondweed, Horned Pondweed, Pink Water-speedwell, Water-cress, Common Spike-rush, Celery-leaved Buttercup and Stonewort. Damp areas nearby hold Southern Marsh-orchids, which also occur a surprising distance up the apparently dry adjacent slopes.

THE JOE DUDDINGTON ARCHIVE INTERIM REPORT

Allan and Annette Binding

The Joe Duddington Archive is held in three boxes containing the letters, papers and diaries of the late Joe Duddington who was the Lincolnshire Naturalists' Union Lepidoptera recorder from 1973 to 1986. There are also three ledgers of the Lincolnshire Naturalists' Union County Lepidoptera.

A brief look into the boxes and ledgers had revealed a wealth of information and records of Lincolnshire Lepidoptera, especially moths. We offered to extract the information on butterflies and any other miscellaneous invertebrates but excluding the moths of which there are thousands of records in the archive still to be listed.

The Ledgers.

Ledger No.1 contains a list of all LNU county recorders/secretaries from 1893 – 1986. There is also a comprehensive list of places and the county divisions in alphabetical order. There are indexes to the English names of the butterflies and moths, the families and specific names.

Ledger No. 2 contains the records of all the butterflies on pages 1 – 78 and part of the moth records listed on pages 79 - 300.

Ledger No.3 completes the moth list on pages 301 – 650.

Interim Results.

We began the work of extracting the butterfly records and entering them onto the database in late 2012. Although the work has been done intermittently, we have completed two of the boxes of records and all three of the ledgers.

The records in the ledgers were checked against those already on the computer database and new information was added to about a third of these. There were a number of records which were not already on the database including records of some of the rarer county species such as Grizzled, Dingy and Chequered skipper. We were also able to add more accurate site locations and co-ordinates and place names from the very comprehensive list of places in the ledgers, e.g. Owlet Plantation used to be known as Morton Carrs. There were places listed, for example Ding Dong, which we had never heard of and cannot find on the OS Maps but we now know the division it is in.

As with the records in the ledgers, all the records in the letters and papers in the two boxes were checked against those already on the database. Only about 10% of new information was added from letters and papers in the first box but a huge amount of new information was found in the papers in the second box.

The third box is yet to be done. It holds all the diaries and notebooks. This will take considerably longer to do as every record will have to be written out on a recording form before the data can be put on the computer because the lists in the diaries are mixed moths and butterflies with abbreviations and other notes. This makes it impossible to extract the records directly from the diaries, whereas with most of the records entered so far have been done directly from the letters, papers and ledgers.

HAZEL POT BEETLE – *Cryptocephalus coryli* UPDATE

Annette and Allan Binding

After a gap of seven years *Cryptocephalus coryli* has been found again at the Whisby Nature Park introduction site. On the 16th June 2013 Richard Davidson contacted us to say that he had found a beetle which looked like *C. coryli*. Later that day Richard brought the insect to show us and we were able to confirm that it was indeed a female *C. coryli*. On the 17th June with the first beetle still in captivity, Richard found a second female *C. coryli* at the same site.

C. coryli was introduced to the site at Whisby in 2000-2001 as part of an English Nature/Leeds University study after Annette managed to breed hundreds of them. Some were introduced as larvae in 2000 and others as adult beetles in 2001. The site has been visited at least once a year by ourselves and others and the last known sightings were in 2005. By 2013 although we intended to keep looking we assumed that the release had been ultimately unsuccessful. We are delighted to be able to report otherwise.

C. coryli is a very rare and endangered beetle known from only a few sites in the country. There are old records for Nottinghamshire and in recent years the beetle has been found in Sherwood Forest Country Park by Trevor and Dilys Pendleton who have done more research into the habitat requirements of the beetle. It was thought that *C. coryli* preferred only small birch and, although we found beetles on mature birch at both Linwood Warren and Kirkby Moor at that time, this was not thought to be a typical place for them. However, using a cherry picker to look at the tops of the mature trees in Sherwood, Trevor Pendleton has been able to confirm that the beetles spend most of their time in the tops of the birch trees. (T.Pendleton pers. comm.) So although no beetles were seen at the Whisby Nature Park site between 2005 and 2013 they were obviously there somewhere. We had wondered if the trees at the

Whisby site had become too tall but this does not appear to be a problem for the beetles just for the invertebrate biologist monitoring them!

We visited the Whisby introduction site on the 18th June but were unable to find more beetles.

Although we were unsuccessful in finding more beetles at the Lincolnshire site, to our great surprise Allan found a single male *C.coryli* on a birch at the edge of one of the heathland areas at Clumber Park, Nottinghamshire while we were doing our annual two weeks voluntary field work for the National Trust. As far as we can ascertain this is a new site for the beetle. We have been looking for *C.coryli* at various places in the Park since we began working with the species in 1998.

In 2013 the beetle was also reported from known sites in the south of the country so it appears that 2013 was a good year for *C. coryli*.

OBITUARY **LILLIE CAVE 1925 - 2012**

Jane Ostler

Mrs Cave was known by her friends as Lee. After qualifying as a Science teacher in the 1940s she spent her whole career as Head of Biology at Kesteven and Grantham Girls School, Grantham. On her retirement she was their longest serving teacher, a record still held. It was my great good fortune to start my career as a Biology teacher in her department in 1972. She was everything to which a good teacher aspires. She had a detailed, extensive knowledge of her subject, teaching the skills of microscopy, dissection and, most important, species identification and field work - now lost to the National Curriculum. She had a care for her pupils, identifying and encouraging their abilities, and a seemingly infinite capacity for hard work and attention to detail. Every spring we took the sixth form pupils to Northumberland to study rock pools at Bamburgh, hill streams in the Cheviots, and sea birds and seals on the Farne Isles. Lee was well known in the area, having stayed for many years at the Monk's House Bird Observatory, Eric Ennion's Field 'House on the Shore'. Here she and her husband helped with bird ringing and other studies. They went out regularly on the boat 'Glad Tidings', the first of several of that name. Later ones are still in operation today.

Lee was an accomplished artist. She transferred this ability to blackboard and chalk - anything from a diagram of the cranial nerves of a dogfish to comparative sketches of shag and cormorant. She wrote poetry and made clothes. As tenants in the 1970s, she and her husband cared for Woolsthorpe Manor. An authority on Isaac Newton, she would show visitors from all over the world, by appointment, round the rooms in which she also lived. When she moved (appropriately) to the village of Newton, she played an active part in village affairs, particularly the church. A competent botanist, she completed a 10km survey of roadside verges which she passed to the Lincolnshire Wildlife Trust. She believed in the power of education and knew that a detailed knowledge of species is a necessary basis for wildlife conservation. At her funeral the church was full of past colleagues and pupils of several generations and of the villagers for whom she had done so much.

This obituary should of course have appeared in the previous volume of The Lincolnshire Naturalist and the editor apologises to Lee's family and acquaintances for this omission.

LINCOLNSHIRE GRASSLANDS – AN OVERVIEW

Richard G Jefferson

Introduction

The historic county of Lincolnshire (including North and NE Lincolnshire) covers an area of 2657 square miles (6959 km²). Its varied geological substrates and superficial deposits, topography, soils and land use have resulted in the development of a diversity of semi-natural habitats including grasslands. For example, there are the calcareous grasslands of the undulating chalk Lincolnshire Wolds, and the Jurassic Limestone ‘uplands’ extending from Stamford in the south to the Humber in the north, the neutral grasslands of the low-lying areas of the clay vales and coastal plain and the acid grasslands, inland dunes and dune grassland of the coversands.

What types of grassland occur in Lincolnshire?

Table 1 provides a breakdown of the types of high value semi-natural grassland and related habitats present in the county.

Table 1: Grassland types occurring in Lincolnshire		
s.41 Priority Habitat	NVC types ¹ present in Lincolnshire	Notes
Lowland meadows	MG4, MG5, MG8	All types are now rare in the county MG4 is confined to stream/river floodplains, MG5 occurs on clay loam soils and MG8 in areas with a seasonally high water table.
Lowland calcareous grassland	CG2, CG3, CG4, CG5, CG7	Largely confined to the Jurassic Lincolnshire Limestone and Cretaceous Chalk of the Wolds including areas in disused quarries, roadside verges, ancient earthworks and green lanes
Lowland dry acid grassland (including inland dunes and dune grassland)	U1, U2, U4, SD9, SD10, SD12	Occur in areas of sandy drift deposits (e.g. Coversands of north Lincolnshire) or more rarely on sandstones or other acid rocks
Purple moor-grass & rush pastures	M22, M23, M25	These marshy grasslands are rare in the county. They occur on humic or peaty soils in areas with seasonally high water tables around springs, seepage lines and on river floodplains
1 Full descriptions of these grasslands and related habitats, including their distribution, habitats and species composition, can be found in British Plant Communities (Rodwell 1991, 1992 & 2000) and Rodwell <i>et al</i> 2007		

Historical perspective

At a national level, the loss and degradation of semi-natural grasslands since World War 2 has been well documented (see Fuller 1987, Bullock *et al* 2011). Although data is very limited, the pattern for Lincolnshire is similar. By the mid-20th century Lincolnshire was already a county with a higher proportion of arable than the national average, due mostly to favourable environmental and economic conditions for arable cropping. In 1966, there were 9 English counties, all in eastern England and including Lincolnshire (Smith 1969), with less than 20% of their agricultural acreage under permanent grass and rough grazings. Between 1963 and 1966 nearly all these counties had suffered a loss each year of between 4.1 and 6% of

Table 2: Condition of grassland within Lincolnshire SSSIs

SSSI	Grassland NVC type(s) recorded	Condition of grassland interest features, 2014	SSSI area
Allington Meadows	MG4, MG5	F	2.78
Arcoaster Valley	CG5	F	10.29
Barcroft Meadows	MG5	F	2.26
Calceby Marsh	MG8, M22	UR	3.81
Candleby Hill	CG3, CG4, CG5	UR	1.84
Claxby Chalk Pit	CG3	F	2.24
Cleatham Quarry	CG3, CG7	UR	5.75
Cliff House	CG5	UNC	4.75
Copper Hill	CG5	UR	7.1
Eastoft Meadow	MG4, MG5	F	0.83
Great Castlegate Road banks	CG5	UR	0.39
Gomasthorpe Park	MG5, CG5	UR*	116.41
Hainton Sheepwalk	U1	UR	2.54
Haxey Grange Fen	M22	UD	13.26
Hewson's Field	MG4	UR	0.49
High Barn, Goxwold	CG3, CG5	UR	8.25
High Dyke	CG5	UR	6.77
Holwell Banks	CG3, CG5	F	6.1
Horington Camp	CG5	UR	1.4
Jenkins Carr	M23	Not assessed	3.6
Kingerby Beck Meadows	MG5	F	5.49
Loughton Common	U1, SD10, SD11	UNC	54.77
Lee Marsh	MG4	UNC*	27.56
Little Scrubbs Meadow	MG5	UR	1.99
Manton & Twyngmoor	U1, M25	UR*	33.33
Mavis Enderby Valley	M22, U1	F	15.69
Messingham Heath	U1	UR	17.77
Moor Closes	MG5, MG8, M22	UR	6.31
Moor Farm	U1	UR	46.89
Normanby Meadows	MG4	F	4.13
Porter's Lodge Meadows	MG5	F	9.63
Red Hill	CG3, CG4, CG5	UR	3.02
Risby Warren	U1, CG4, SD9, M22	UR	157.11
Rush Fenong	MG5	F	0.43
Ryhall Pasture & Little Warren Verges	CG3, CG5	UR*	6.24
Sutton Beck Fields	U2*	UR	16.75
Silverdale Meadows	M23, U1	UR	6.2
Skedduby Fisher Banks	CG3	UD	0.89
Sotby Meadows	MG5	F	7.2
Surfleet Lows	MG12 [†]	F	3.44
Swarby Valley	CG3, CG4, CG5	UD*	3.4
Swallow Wold	CG2, CG4	UNC	4.27
Swinstead Valley	CG5	UR	3.9
The Hermitage	MG5, M22	UR	4.4
Justices Hill	SD10, U1	UR	12.47
Willoughby Meadow	MG5	F	0.54
Wilston & Blaxby Warrens	CG4	UR	57.42
Wilston Heath Quarry	CG4	UD	16.19
Woodcock valley	CG3, CG4, CG5	UR	9.65
Wrayby Moor	U1	UR	13.47

F = Favourable, UR = Unfavourable recovering UNC = Unfavourable no change UD = Unfavourable declining

* One or more grassland units are in Favourable condition but this area amounts to less than 75% of the total grassland area so site condition is classified as unfavourable

† 1 unit is in UNC condition but > 75% of the site is in UR condition

* Although these two NVC types are not included in the priority habitat definitions, they have been included in lowland dry acid grassland and lowland meadows respectively for the purposes of Figure 1

their area of permanent grassland. However only a proportion of this is likely to have been semi-natural grassland.

During the post-war years, neutral grasslands were a particular focus for agricultural intensification and Smith (1969) reports that in 1965 Dr Martin Ball surveyed 30 sites where *Anacamptis (Orchis) morio* had been recorded in the previous 30 years. Of these, 50% had been converted to arable or reseeded, others had been agriculturally improved, and in the remainder, *A. morio* could only be found in 5 sites. These 30 sites are likely to have conformed to MG5 *Cynosurus cristatus* - *Centaurea nigra* grassland (Rodwell 1992). Ratcliffe (1977), Smith (2007) and Sheail (1998) document the loss to ploughing in the early 1970's of Corby Pastures and Worlaby Meadows, two calcareous clay loam pastures (MG5) and Waddingham Common, which probably contained, in part, some calcareous fen meadow (M22). Both Worlaby and Waddingham were SSSIs. Gibbons (1975) also reports the loss of neutral grasslands to ploughing. There is also likely to have been a parallel decline in grassland plant and animal species closely associated with such grassland in a similar manner to that of *A. morio*, (Gibbons 1975).

Blackwood & Tubbs (1966) found that only 91.1 ha of calcareous grassland remained in Lincolnshire comprising 12 fragments between 5-50 acres, including only 0.2% of land on Chalk.

Realisation of the scale of loss of wildlife habitat during the 1960s and 1970s led to a succession of statutory and voluntary measures, commencing with the Wildlife & Countryside Act 1981. This is fully documented elsewhere (Sheail 1998). In Lincolnshire, measures such as the (re)- notification of SSSIs and entry of grassland into agri-environment scheme options have been employed to conserve grasslands from the 1980s onwards.

Current status of semi-natural grasslands in Lincolnshire

Table 2 (page 171) lists the 50 existing Lincolnshire SSSIs that contain lowland grassland interest features, including their NVC affiliation, total site area and current condition status. Table 3 provides an overall summary.

Condition category	% sites	Combined %
Favourable	29	84
Unfavourable recovering	55	
Unfavourable no change	8	16
Unfavourable declining	8	

The most usual cause of unfavourable condition is a lack of grazing. By comparison to the Lincolnshire data in Table 3, the National data show that 91% of sites are in favourable condition (33% favourable, 58% unfavourable recovering) and 16% are in unfavourable or unfavourable declining condition.

Figure 1 shows the number of SSSIs supporting the different Priority Grassland Habitat types. The total area of SSSI is 652.98 ha, of which the grassland area is likely to be around 55%. The total area of these 50 sites comprises only 0.09% of the land area of the county and the grassland area around 0.05%. Numerically the most frequent grassland types in SSSIs are lowland calcareous grassland and lowland meadows, but although no complete figures are available for the grassland area in the SSSIs, Table 2 does suggest that lowland calcareous grassland and lowland dry acid grassland have the greatest area.

Table 3 provides an estimate of the total extent of semi-natural grassland and the proportion within SSSIs. It shows that lowland meadows are the largest resource of all semi-natural grasslands.

Strategy for conservation

1) SSSI Condition

A key requirement is to ensure existing grassland SSSIs are brought into favourable condition. There is no data on the condition of the grassland resource that is not SSSI, but a recent national sample survey suggests that the proportion that are in favourable condition will be lower than their SSSI counterparts (Hewins *et al* 2005).

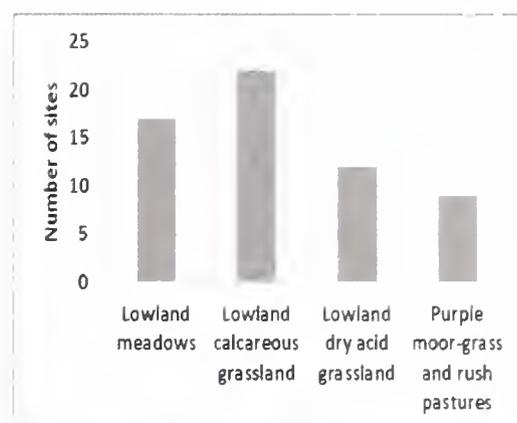


Figure 1

s.41 Priority Habitat	Extent (ha)	% of area within SSSI
Lowland meadows	607	13
Lowland calcareous grassland	421	47
Lowland dry acid grassland	165	90
Purple moor-grass & rush pastures	114	32
Total	1,307	

¹ Source: Natural England Priority Habitat Inventory

2) Grassland resource and condition data.

Of the remaining grassland resource, there is an urgent need to collate data on the location, extent and composition from previous surveys (e.g. Blake 1990) including the roadside verge resource (<http://www.lifeontheverge.co.uk/>) and ad hoc records. Roadside verges are a significant resource in a county that has so little grassland in the rest of the countryside. The next step would be to assess the current status and condition of the grassland.

3) Put in place appropriate conservation measures for the remaining semi-natural grassland resource.

This is likely to involve a mixture of SSSI notification, targeting sites for entry into appropriate agri-environment scheme options and possibly site acquisition. Increased sustainability of the resource could be achieved by site expansion through targeted grassland restoration and creation and increasing connectivity as recommended by Lawton *et al* (2010).

Acknowledgements

I thank George Hinton for the supply of Priority Habitat data and John Creedy and Morwenna Christian for comments on the text (all Natural England).

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THE G.W. WHATMOUGH COLLECTION OF PSEUDOSCORPIONS AND HARVESTMEN

Annette and Allan Binding

There is a small collection of pseudoscorpions and harvestmen held in the Lincolnshire County Archives. In March 2013 we borrowed the collection in order to extract any data from specimens and to check their condition. The collection was made by George W. Whatmough somewhere between 1948 and 1984 (the date on the earliest and latest specimens).

Pseudoscorpions

There were twenty-three tubes containing pseudoscorpions in the collection. Twelve of these had no data, only the name of the species. A further three had incomplete data, only the name of the species and the determiner. Of the eight tubes with data, three were from Nottinghamshire. The remaining five were from Lincolnshire and included two which were already on the county database and three new records. We were able to add information as to the whereabouts of the voucher specimen to the records already on the database.

Harvestmen

There were seventy-nine tubes containing harvestmen species. Thirty-three of these had no data except the name of the species. The remaining forty-six consisted of thirty-five from Lincolnshire, four from other English counties, four from Scotland and three from Encamp, Andorra. Both of the species from Andorra can be found in Great Britain of these *Phalangium opilio* has been found in Lincolnshire. *Nelima gothica* has not. Of the thirty-five specimens from Lincolnshire twenty-eight were new records and seven were already on the county database. To these seven we were able to add the information that the voucher specimens are held in the Lincolnshire County Archive. Fourteen of the specimens were identified by J. H. P. Sankey who wrote 'British Harvestmen' with T. H. Savory published in 1974.

Concluding notes

There are no Red Data Book or Notable species of either pseudoscorpions or harvestmen although some are uncommon. There were no new county records. All the records generated through our research including those from Scotland other English counties, have been sent to the National Recording

Schemes.

As with Whatmough's collection of spiders (see report in Lincolnshire Naturalists Union Transactions) most of the specimens of harvestmen and pseudoscorpions are held in rubber-topped glass tubes. None of the rubber lids had perished to the same extent as some of those in the spider collection but some will need the alcohol topping up. Like the spider collection the tubes will need checking from time to time.

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UNUSUAL BIG-HEADED FLY (PIPUNCULIDAE) FOUND IN LINCOLNSHIRE

John Flynn

The Big-Headed Flies (Diptera, Pipunculidae) are so called due to the very large eyes which cover most of the head. They are generally small flies (2-5mm) that are parasitoids of adult leaf-hoppers and plant-hoppers (Hemiptera, Auchenorrhyncha). Eggs are inserted into the host with the aid of a sclerotised piercing ovipositor situated at the tip of the female abdomen. The larvae devour the host from within, resulting in the host's death, whereupon they leave the host and pupate in the soil.

However, species of one genus, *Nephrocerus*, are unusual, being much larger (9mm) and utilising adult Crane Flies (Diptera, Tipulidae) as their hosts, (Koenig & Young 2007). Two species occur in Britain but have only been confirmed in Southern England and South Wales. Both species are uncommon/rare.

Nephrocerus flavicornis has been found in a malaise trap sample taken in July 1993 from private woodland near Grimsby. This is much further north than its previously recorded range but is to be expected as it also recorded from Denmark and Southern Sweden. One confirmed host is the Cranefly *Tipula unca*, (Lehlmaier & Floren 2009), which has also been recorded from Lincolnshire.



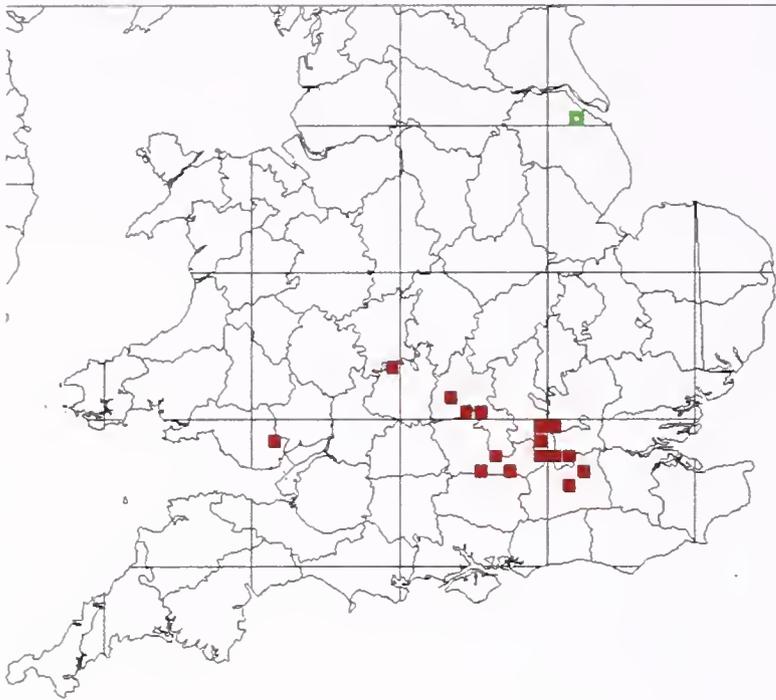
Nephrocerus flavicornis

John Flynn

References:

KOENIG & YOUNG 2007. First observations of parasitic relations between Big-Headed Flies, *Nephrocerus* Zetterstedt (Diptera: Pipunculidae) and Crane Flies, *Tipula* Linnaeus (Diptera: Tipulidae: Tipulinae), with larval and puparial descriptions for the genus *Nephrocerus*. *Proc. Entomol. Soc. Wash.* 109(1), 2007 52-65

KEHLMAIER & FLOREN 2009. Pipunculidae (Diptera) collected by canopy-fogging in the Bialowieza Forest (Poland), including first host records and larval descriptions of two Palaearctic *Nephrocerus* Zetterstedt. *Studia Dipterologica* 16, 2009 169-181.



Nephrocerus flavicornis
records

(D.Gibbs, Pipunculidae
Study Group)

EDITORIAL

Phil Porter

There are a number of changes in the layout of The Lincolnshire Naturalist this year as I received some justifiable comments regarding last year's volume.

Last year The Executive Committee asked for the volume to be produced to a budget of £500. This meant limiting the number of folded pages that featured colour. There were 64 items with colour submitted. As a result, the pictures were grouped and because of the generous page margins that have characterised The Lincolnshire Naturalist in recent years, they were small. A number of members commented unfavourably on this.

As a result I have reduced the margins, so that pictures can be larger when grouped, and there are fewer pages, helping to relieve the pressure on maintaining the budget.

The second major change involves the house style. Having received a request from a section recorder to capitalise common English species names, I consulted with the Executive Committee regarding this, as I had independently come to the conclusion that I preferred this approach myself. The Committee advised me to go ahead with the change.

I know that this will offend some members so I will briefly outline the arguments as I see them. Overall, I accept that there is no logical argument that will comprehensively resolve the difficulties on either side of the old controversy of capitalised initials or not, and either system can be made to look ridiculous by detractors. I now favour capitalised initials as providing clarity of meaning against traditional grammar. Many heavily contrived sequences wildlife names involving common adjectives have been put forward over the years to illustrate the sort of confusions that can arise (common gulls as against Common Gulls etc. etc.). On the other hand I admit there were problems in the text of Ian Macalpine-Leny's Presidential Address, such as whether or not I would capitalise 'fox hunting'. I chose not to on the basis that a particular fox was not alluded to in this instance. One might equally query whether that 'fox-hunting' should be hyphenated, in which case I would suggest that the word was not referring to a fox at

all but simply the activity of chasing one! Our language is strikingly complex and rich and, above all, diverse in its sources, including Germanic roots where of course the initial of all nouns is capitalised. I hope any dissenters will at least be able to take the reasoning at its face value. In any event opinions will be valued.

FUNGI

Ray Halstead

This year, (2013), has been an average year for the mycota in Lincolnshire. Though there was little to show for the spring fruiting season due to the exceptionally dry conditions the traditional autumn season produced moderate numbers of fruiting bodies but with quite a diverse range of species.

I am always grateful for records from people from all over the county and this year some very interesting species have been found and duly recorded.

From the south of the county John Lamin found *Volvariella bombycina* growing in his garden on an old walnut tree, *Juglans spp.*, not a real rarity but with only four records to date on our database but definitely most noteworthy.

Rhodotus palmatus was another of John's finds, this time from Bourne Wood, again not particularly rare



Volvariella bombycina

John Lamin



Rhodotus palmatus

John Lamin

with several scattered records from around the county, but certainly a most welcome record; *Geastrum floriforme*, however, is a first for Lincolnshire and John found this growing in the Christmas tree plantation at South Bourne Fen.

John Davison is a regular with enquiries regarding fungi that he has found on his travels, most notably *Helvella queletii* from Messingham Sand Quarry. This is one that will be observed closely in the future. At Broughton Woods John found *Leotia lubrica*, which goes by the common English name of jelly babies and he was able to supply me with good photographic evidence too. This one has not been recorded in Lincolnshire for over twenty years and is, therefore, a most welcome find.

Wendy Handford continues to supply me with a number of records every year from the Caistor area,

many of which are from her own garden. *Sowerbyella radiculata* was a real surprise for me. I had expected there to be a number of records for this species on the database given its preferred environment of conifer woodland and the proliferation of conifer plantations in Lincolnshire. However, this is a first for Lincolnshire found growing in a relatively small conifer plantation in Wendy's garden. The reference books state that it is seldom recorded so perhaps its status is actually quite rare. It is easily distinguished from other yellow cup fungi by the cream coloured granular outer surface and the obvious rooting stem, lacking in most other Pezizales.



Geastrum floriforme

John Lamin

Another very important find, (and another first for Lincolnshire), in Wendy's garden this year was



Sowerbyella radiculata

Geoff Handford



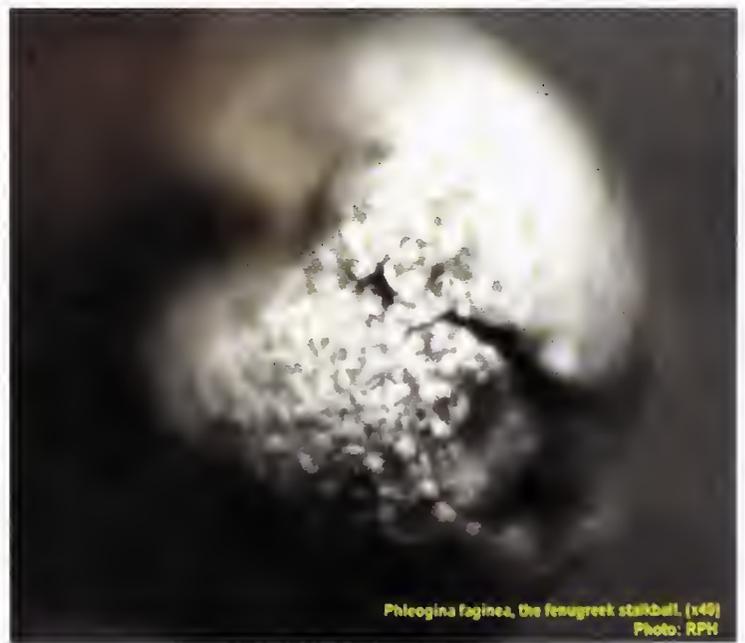
Leotia lubrica

John Davison



Phleogina faginea

Geoff Handford



Phleogina faginea

Ray Halstead

Phleogena faginea, found fruiting on the dead bark of a felled branch of alder, *Alnus glutinosa*. It is mentioned in only one of my reference books with its status being listed as “occasional in S. England”; in CATE2; its most northern location is Norfolk. To fully appreciate the beauty of this miniature puffball with its chrome effect, marbled cap, a good hand lens is required or a microscope at X40 magnification.

The LNU foray this year took place at Snipe Dales CP and NR on 13th October which coincided with National Fungus Day, (organised nationwide by the British Mycological Society). In the morning I took a group of ten reserve volunteers and a Watch group around the Country Park, followed, in the afternoon, by 15 LNU members around some of the CP and then up to the woodland on the Nature Reserve. A very tiring but rewarding day, we recorded in excess of eighty species in total, enjoyed some lovely autumnal weather, beautiful surroundings and very pleasant company.

I am indebted to the many people who have forwarded their enquiries and records to me and to those who have joined me on the public forays whether to learn a little more about mushrooms and toadstools or whether to assist with the recording of the mycological data, you all help to put the ‘fun’ into fungi. Thank you.

MOSSES, LIVERWORTS AND LICHENS

M. R. D. Seaward

Although this has been a disappointing year in terms of fieldworkers and records from a bryological point of view, the county’s lichens have received considerable attention. However, lichenologically there is good news and bad news. The biodiversity of many epiphytic assemblages increases, particularly in respect of fruticose (e.g. *Ramalina farinacea*, *R. fastigiata* & *Evernia prunastri*), foliose (e.g. *Parmelia* s.lat.) and crustose (e.g. *Lecanora* spp.) lichens, but trees subjected to the effects of chemicals derived from agricultural and animal husbandry sources (hypertrophication), although coated with golden and silver lichens, mainly *Xanthoria* and *Physcia* species respectively, lack such diversity due to the dominating role of a relatively few ‘unnatural’ species. Further intensification/extension of such practices and the forecasted loss of ash trees, a major feature of the Lincolnshire landscape, will have a profound effect on the lichen ecology of our woodlands, parklands and roadsides.

Further lichenological work on churches and churchyards furnished several additional records, as well as interesting ecological and distributional data, particularly of locally or regionally species. During the past year, the author visited twenty more churchyards for the first time and six others were revisited. To date, 626 (representing 91.5% of the C. of E. churchyards in the county) have now been lichenologically surveyed. Of those studied for the first time, it was pleasing to note the presence of some regional rarities, such as *Ramalina capitata* (on tombstones), *R. pollinaria* (on church walls) and *R. subfarinacea* (on tombstones); in the case of *R. capitata*, a national rarity found only in Lincolnshire and Yorkshire, the newly found site significantly extends its range within the county. Sadly, in the case of many of those churchyards revisited, there has been a noticeable decline in the saxicolous lichen assemblages of both church walls and tombstones, not only in terms of biodiversity, but also in the coverage and abundance of certain species. Such changes are mostly as a consequence of factors referred to in last year’s report, particularly vandalism and insensitive management (e.g. excessive re-pointing of church walls and undue cleaning and re-erection of gravestones); furthermore, the creation of ‘wild’ areas often promotes rank vegetation (which can harbour invertebrate grazers detrimental to lichens) that generates unfavourable shaded conditions for the establishment and development of aesthetically pleasing lichen mosaics. The status of particular lichen species and assemblages continues to be monitored by the author in numerous churchyards throughout the county.

All the bryophyte records have been contributed by R.Harding (RH) for the period 2007-2010 and all the lichen records by M.R.D.Seaward (MRDS) for 2013; as a consequence of their work, one county (*Lecanora sambuci*), two vice-county (*Caloplaca ulcerosa* & *Rhizocarpon geographicum*), 33 divisional and numerous grid square records have been added to our registers. Lichens records have been confirmed or identified by B.J.Coppins and A.Orange.

Mosses

Aloina aloides (Koch ex Schultz) Kindb. + 17 (RH 2008)
Campylopus introflexus (Hedw.) Brid. + 17 (RH 2009)
Eurhynchium striatum (Hedw.) Schimp. + 17 (RH 2010)
Microbryum davallianum (SM.) R.H.Zander + 17 (RH 2008)
Syntrichia ruralis var. *ruraliformis* (Besch.) Delogne + 13 (RH 2010), 17 (RH 2007)

Liverworts

Plagiochila porelloides (Torr. ex Nees) Lindenb. + 15 (RH 2010)

Lichens

Arthonia radiata (Pers.) Ach. + 5 (MRDS)
Caloplaca crenulatella (Nyl.) H.Olivier + 11 (MRDS)
C. oasis (A.Massal.) Szat. + 3 (MRDS)
C. ulcerosa Coppins & P.James + 5 (on *Fraxinus*, Aug.2013, MRDS, **VCR**)
Clauzadea monticola (Ach.) Hafellner & Bellm. + 5, 11 (MRDS)
Collema fuscovirens (With.) J.R.Laundon + 6 (MRDS)
Hypotrachyna afrorevoluta (Krog. & Swinscow) Krog & Swinscow + 5 (MRDS)
Lecanora carpinea (L.) Vain. + 5 (MRDS)
L. chlarotera Nyl. + 5 (MRDS)
L. intricata (Ach.) Ach. + 1 (MRDS)
L. persimilis (Th.Fr.) Nyl. + 5 (MRDS)
L. saligna (Schrad.) Zahlbr. + 5 (MRDS)
L. sambuci (Pers.) Nyl. + 5 (On *Acer*, Norton Place, Aug. 2013, MRDS, **NCR**)
L. symmicta (Ach.) Ach. + 2, 5, 11 (MRDS)
Lecidella elaeochroma (Ach.) M.Choisy + 5 (MRDS)
Micarea denigrata (Fr.) Hedl. + 2 (MRDS)
Opegrapha calcarea Turner ex Sm. + 10 (MRDS)
Peltigera neckeri Hepp ex Müll.Arg. + 10 (MRDS)
Porpidia crustulata (Ach.) Hertel & Knoph + 1 (MRDS)
Punctelia jeckeri (Roum.) Kalb. + 2 (MRDS)
Ramalina subfarinacea (Nyl. ex Cromb.) Nyl. + 11 (MRDS) – only the second record for Lincs.
Rhizocarpon geographicum (L.) DC. + 15 (on gravestone, Stroxton, July 2013, **VCR**)
Trapelia coarctata (Sm.) M.Choisy + 11 (MRDS)

BOTANY

Paul Kirby

Eight field meetings were held in 2013:

April 28	Broughton Far Wood SSSI & Clapgate Pits LWT Reserve, SE91
May 19	Hills and Hollows Quarry, Harrowby, SK93
May 25	Welton le Wold Quarry SSSI, TF28 [Joint Meeting with Lincs Geodiversity Group]
June 8	Allington Meadows SSSI, SK83

July 12 & 13	Whisby Nature Park, SK96
August 4	Middlemarsh Farm, TF56
September 7	Byrons Lodge & Farm, North Somercotes, TF49
October 13	Fungus Foray. Snipe Dales Country Park, TF36

The meeting planned for farmland at Brampton, SK88 on June 30 was cancelled.

Among the plants found at the meetings were: Nettle-leaved Bellflower *Campanula trachelium* and Herb Paris *Paris quadrifolia* in Broughton Far Wood:– Spring Sedge *Carex caryophyllea*, Dwarf Thistle *Cirsium acaule*, Dropwort *Filipendula vulgaris*, Common Rock-rose *Helianthemum nummularium*, Small Scabious *Scabiosa columbaria* & Wild Thyme *Thymus polytrichus* at Harrowby:– Water Chickweed *Myosoton aquaticum*, Adder’s-tongue *Ophioglossum vulgatum*, Burnet Saxifrage *Pimpinella saxifraga*, Yellow Rattle *Rhinanthus minor*, Great Burnet *Sanguisorba officinalis*, Pepper-saxifrage *Silaum silaus*, Ragged-robin *Silene flos-cuculi* and Meadow Oat-grass *Avenula pratensis* at Allington:– Orange Foxtail *Alopecurus aequalis*, Marsh Foxtail *A. geniculatus*, Sea Club-rush *Bolboschoenus maritimus* and Saltmarsh Rush *Juncus gerardii* on Middlemarsh Farm:- Corn Spurrey *Spergula arvensis* at North Somercotes.

New County Records

Fine-leaved Fumitory *Fumaria parviflora*, Skirbeck, TF34, JOM. At least 40 plants as a cabbage field weed. An archaeophyte mostly found in arable fields on chalk. This record emphasises the importance of looking everywhere. Sites that look unpromising at first glance may well harbour surprises.

Early Meadow-grass *Poa infirma*, Skegness, TF56, CH & PK, confirmed Dr. T. Cope, BSBI Poaceae referee. It was growing with Annual Meadow-grass *P. annua* on hard-standing in a seafront car park. In the 1962 Atlas [Perring & Walters, 1962] the records for this tiny grass are confined to the Channel Islands, The Isles of Scilly and Cornwall. In ‘Atlas 2000’ [Preston et al, 2002] the records have spread eastwards along the English south coast as far as West Sussex. Since then they have extended northwards, both inland and along the coast, through southern England and East Anglia as far as the north coast of Norfolk. In 2013 not only was it found in Lincolnshire but also at a motorway service station in Yorkshire [Brian Laney, 2013, pers. comm. 27 Feb]. Is it really spreading this rapidly or has it been seriously overlooked in the past?

Autumn Oxeye *Leucanthemella serotina*, Cowbridge, TF34, JOM & JG. On rough ground between the lock and B1183.

New Vice-county records: Vc53, South Lincolnshire

Deptford Pink *Dianthus armeria*. 33 plants on a drain bank in TF23, JF. A ‘Red Data Book’ plant of open, disturbed sites in short grassland. It has undergone a major decline nationally and is now classed as ‘Threatened & Vulnerable’ [Wiggington 1999]. It can occur as a garden escape but this population was considered to be native. This pink has been known in the past in the north of the county where it was first recorded at Coningsby in 1894. Between 1965 and 1989 it was found at several different locations around the Tower on the Moor at Woodhall Spa but has not been seen in this area since.

Short-styled Field-rose *Rosa stylosa*. A single bush on the Welland Bank at Baston Fen, TF11, JF in 2012 and then found in TF23 by JOM in 2013. This is primarily a rose of southern Britain at its northern limit in Lincolnshire where it has only been recorded previously at Saltfleet TF49 in 1855 and Immingham Docks Railway Junction TA11 in 1977.

Guernsey Fleabane *Conyza sumatrensis*, Spalding, TF22, JOM. On waste ground. Recorded in 10 hectads in North Lincolnshire, where it was first seen in 2004.

House Holly-fern *Cyrtomium falcatum* in Weston St. Mary’s churchyard, TF22, JOM.

Dactylorhiza x kerneriorum, a hybrid of Common Spotted-orchid *Dactylorhiza fuchsii* and Early Marsh-orchid *D. incarnata*, Sutton Bridge, TF41, JOM. On the bank of South Holland Main Drain.

Musk Stork's-bill *Erodium moschatum* on a roundabout at Fulney, TF22, JOM and also in Holbeach Town, TF32, JOM. In the past this has been a very uncommon casual in Lincolnshire, but since 2000 it has been recorded in two hectads in both Vc53 & 54.

Water Bent *Polypogon viridis*, Spalding, TF22, JOM. A native of southern Europe, the Mediterranean, SW & Central Asia and N. Africa. Introduced into cultivation in Britain in 1800 and first recorded in the wild in 1876. First recorded in North Lincolnshire in 2007 and now quite widespread there with records from 14 hectads.

Glaucous Glasswort *Salicornia obscura* on saltmarsh at Holbeach St. Mathew, TF42, JG. The only records for this taxon in Lincolnshire are from TF42 where it was seen in 1994 & 2001. There are very few dots for this glasswort in 'Atlas 2000'.

Rock Soapwort *Saponaria ocymoides* on a spoil heap in Whisby Nature Park, SK96, Stuart Smith & Angela Buckle. Confirmed Phil Porter.

New Vice-county records: Vc54, North Lincolnshire

Green-flowered Helleborine *Epipactis phyllanthes*. Kevin James found 20 plants of this nationally scarce orchid on the Moor Farm LWT Nature Reserve in TF26. The majority of the plants were growing under mature Cherry Laurel *Prunus laurocerasus*.

Indehiscent Amaranth *Amaranthus bouchonii*, first found by Keith & Wendy Robertson in 2012 at Kirkby on Bain Gravel Pits NR, TF26. Found again at this site in 2013 and also recorded on a spoil heap on the Fuller Street Dunes at Cleethorpes, TA21 by Bill Meek. The only previous Lincolnshire record is for Bourne South Fen, TF11, Kerry Harrison in 2003.

A sample of the records received in 2013 – the records are for 2013 unless stated otherwise

Corn Chamomile *Anthemis arvensis*, Glentham, TF09, CH & PK. A single plant growing on the pavement at the edge of the village.

Short-leaved Water-starwort *Callitriche truncata*, Kirkby on Bain Gravel Pits NR, TF26, Keith & Wendy Robertson. First noted in 2012. Vegetatively *C. truncata* and Autumnal Water-starwort *C. hermaphroditica* are similar but the two can readily be separated by their very different fruits. Although the plant was locally plentiful in the Kirkby on Bain gravel pit no fruiting material could be found. *C. truncata* was confirmed in 2013 by R. V. Lansdown, BSBI Callitrichaceae referee, from a photograph of vegetative material. This is a Nationally Scarce species with a stronghold in Nottinghamshire but it has rarely been recorded in Lincolnshire.

Slender Thistle *Carduus tenuiflorus*, Leverton Marsh, TF44, Keith & Wendy Robertson. Not common in Lincs. Recorded from 6 hectads post 2000.

Grey Sedge *Carex divulsa* subsp. *divulsa*, Glentham, TF09, PK. Several plants on a roadside bank in the village. A scarce sedge in Lincolnshire. New for TF09.

Tawny Sedge *Carex hostiana*. A single plant on the road verge adjacent to Scotton Common NR, SK89, David Harrison. It has always been a scarce plant in Lincolnshire.

Water Whorl-grass *Catabrosa aquatica* in a roadside ditch at Tattershall, TF25, S. J. Heathcote & E. L. Cooke. New for TF25. It was also recorded in Scrivelsby Beck, TF26, Richard Chadd.

Hound's-tongue *Cynoglossum officinale*, Grimsthorpe Park, TF02, SL in 2012 and Uffington Park, TF00, Jane Squirrel & Graham French in 2013. New for TF00. There are few post - 2000 records for this plant in South Lincolnshire.

Dune Helleborine *Epipactis dunensis* Crowle Moors NR, SE71, Mark Lynes. One plant in 2012 and 8 plants in 2013. An important re-find of this scarce orchid which was known from Crowle Moors NR from 1981 to 1990. Dune Helleborine is currently present at 3 sites in Lincolnshire. Two are in Vc54, namely Messingham Sand Quarry NR, SE 90 [where first found by Vi Wilkin in 2006] and Laughton Forest, SE80 [first found by John Davison & John Petyt in 2011] and the third, the Crowle site, which though in Lincolnshire is somewhat confusingly in Vc63, Southwest Yorkshire!

Wood Horsetail *Equisetum sylvaticum* Scunthorpe, SE91, three locations, JF & PK. A scarce plant in Lincolnshire but known from the Scunthorpe area from 1984 to 1991.

Wall Bedstraw *Galium parisiense*, Scunthorpe, SE91, JF confirmed by R. M. Burton, BSBI Galium referee and SE90 (two sites), JF & PK. The only previous record for the County is from Boston in 1836 [Gibbons, 1975]. At the 2 sites in SE90 the first held a few plants growing on very sparsely vegetated railway ballast and the second a substantial population growing on sandy soil among relatively closed Bent/Fescue grassland. At this latter site, though the plant was locally abundant, it was found purely by chance. JF reached down to collect a sample of a quite different plant and came up with a bit of Wall Bedstraw in his hand. The Galium was all but invisible among the grasses when viewed from a standing position but locally abundant when searched for on hands and knees. It could so easily have been missed. "Apparently this species has turned up in many widely scattered places in England and one in Wales in the last few years, and there is no obvious link to connect the occurrences, which are not usually connected with other unexpected plant species.... It is likely that it is widely overlooked" [R. M. Burton, 2013, pers. comm. 19 July].

Corn Marigold *Glebionis segetum* & Corn Spurrey *Spergula arvensis*, North Scarle, SK86, Brian Hedley.

Black Walnut *Juglans nigra* Glenham, TF09, CH & PK. Two handsome trees in St Peter & St Paul's Churchyard.

Grass Vetchling *Lathyrus nissolia*, Little Scrubbs Meadow, TF17, Stuart Smith & Angela Buckle.

Common Cow-wheat *Melampyrum pratense* Hardy Gang Wood, TF07, David Harrison. Recorded all time from 14 hectads in the county and now known from only one. Hardy Gang Wood is the only location where this species has been recorded since 2000.

Fine-leaved Water-dropwort *Oenanthe aquatica*, Scrivelsby Beck, TF26, Richard Chadd.

Prickly Poppy *Papaver argemone*, Middle Rasen, TF08. Several plants on the A46 road bridge, CH & PK. Rough Poppy *Papaver hybridum*, several plants growing with abundant Corn Marigold *Glebionis segetum* on disturbed ground beside a supermarket car park in Brigg, SE90, PK.

Corn Parsley *Petroselinum segetum*, Covenham St Bartholomew, TF39, PK. At edge of path around the top of the reservoir bank.

Hawkweed Oxtongue *Picris hieracioides*, Fuller Street Dunes at Cleethorpes, TA21, Bill Meek. A sizeable population. New for TA21.

Sherard's Downy-rose *Rosa sherardii*, Kirkby on Bain Gravel Pits NR, TF26, Keith & Wendy Robertson in 2012. Confirmed by Roger Maskew, BSBI Rose referee in 2013.

Greater Water-parsnip *Sium latifolium*, Thurlby Fen Slipe TF11, Kerry Harrison. 'A major cluster at least 4ft across with perhaps 30 flowering stems' and some satellites. The status of this colony is uncertain. Greater Water-parsnip did occur here as a native until 2003 but re-introductions in 2007 have complicated the situation, as one of the introduction sites was close to the location of the original native colony. A recent detailed review of Greater Water-parsnip in Lincolnshire by Barrie Wilkinson lists the remaining native sites as Boultham Mere SK97, Saltfleetby–Theddlethorpe NNR TF49, Tattershall Lakes TF25 [last seen 2011], The Chasm & possibly Thurlby Fen Slipe TF11 and The Counter Drain in both TF11 & TF12.

Bastard Toadflax *Thesium humifusum* Little Warren Road verge TF01, Geoff & Wendy Thwaites. A Nationally Scarce species at the northern limit of its world distribution in South Lincs where there are two long-standing populations, one in the Holywell area in TF01 and the other on the High Dyke in SK95. It was first recorded from the Holywell area in 1903 [Gibbons 1975] and has been known from the Little Warren Road verge since 1951. It was first recorded on the High Dyke in the late 19th century.

Navelwort *Umbilicus rupestris*, Tattershall Castle, TF25, CH & PK. Still present in quantity. First recorded here in 1727 by Dr. Patrick Blair.

Dwarf Eelgrass *Zostera noltei*, Horse Shoe Point, TA30, Inshore Fisheries Conservation Association [IFCA]. In August Judith Stoutt of Eastern IFCA organised a team of eight surveyors to carry out a systematic search for eelgrass over a large area of the foreshore off Horse Shoe Point. Only a solitary, small patch of *Zostera noltei*, comprising 2 clumps each c. 40cms x 20cms was found. This was in a shallow wide run close to where the plant had previously been found in 2005, 2006 & 2010.

Many thanks to all who sent in records in 2013.

Correction: In 2011 John Petit & John Davison found Dune Helleborine *Epipactis dunensis* growing under mature beech along the verges of a hardcore track in Laughton Forest, SE80. This record was misreported as Green-flowered Helleborine *Epipactis phyllanthes* in the Botany report in Transactions 2011, 28, p. 50. My apologies for this error.

Key to initials in text

JF, Jeremy Fraser - JG, Jonathan Graham - CH, Colin Hutchinson - PK, Paul Kirby - SL, Sarah Lambert -JOM, Owen Mountford.

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FRESHWATER INVERTEBRATES

Richard Chadd

An extensive river monitoring programme driven by requirements of the EU Water Framework Directive greatly increased coverage of Lincolnshire's rivers in 2013, with over 300 river sites surveyed for freshwater invertebrates in Spring and Autumn. Unsurprisingly, this produced a number of useful records.

Highlights included many new records for the Greater Water Boatman *Notonecta maculata* Fab.. This is a species which is decidedly local in its distribution, both regionally and nationally, in part because it

favours artificial habitats such as fire pits and cattle troughs, but also because it is attracted to streams which periodically dry up. New records were obtained from Nettleham Beck at Nettleham (TF000752, 28/08/13), Boultham Catchwater at Skellingthorpe (SK9319871799, 19/09/13), Trusthorpe Pump Drain at Bamber's Bridge (TF497829, 04/09/13), Highland Drain (SE9858203515, 30/10/13) and Old Beck (TF112278, 22/10/13).

Trichoptera records for 2013 included a larva of the Limnephilidae family, *Grammotaulius nigropunctatus* (Retzius) in Legsby Beck at Snelland (TF075805, 14/03/13). This is a common species in the UK, but this is a first record for the Environment Agency in Lincolnshire and only the 7th record for Lincolnshire as a whole.

A larva of the Regionally Notable spring-head specialist of Family Apatanidae, *Apatania muliebris* McLachlan was found in Branston Beck (TF021743, 28/10/13). This is a brachypterous and parthenogenetic species, important in studies of genetic condition in geographically restricted populations of insects.

Another limnephilid, *Limnephilus bipunctatus* Curtis was found as a larva in Goltho Beck at Hardy Gang Wood (TF0971575149, 05/03/13). This is a locally distributed species in the UK, which is somewhat enigmatic, favouring immature habitats such as trackside ditches and wheel ruts. This is only the 3rd Lincolnshire record of the species.

All three of these records were provided by Alex Pickwell, a colleague at the EA.

Other notable caddisfly records (all as larvae) were:

Polycentropus irroratus (Curtis) in Cringle Brook at Stoke Rochford (SK920287, 28/10/13). This is a Local species of Family: Polycentropodidae which seems to have become well-established at this site;

Another polycentropodid, *Neureclipsis bimaculata* (Linn.) at Sincil Dyke in Lincoln (SK987709, 01/05/13). This is a nationally common species which has been greatly expanding its range in Northamptonshire, but this appears to be first record for Lincolnshire;

A species of F: Leptoceridae, *Athripsodes bilineatus* (Linn.) in the Slea at Bonemill near Sleaford (TF084471, 12/09/13). Again, this is a common species nationally, but only a handful of records exist in the extreme south-east of the county;

Beraeodes minutus (Linn.), a species of F: Beraeidae, has returned to the lower River Waring. Damage to the habitat caused by extensive and unauthorised dredging by the landowner in 2008 appeared to have destroyed the population of this uncommon species, related strongly to submerged tree-roots, but the species seems to have survived.

Another notable record for 2013 was that of the subterranean shrimp *Niphargus aquilex* Schiodte, in Dunston Beck at Waneham Bridge (TF0590262256). Lincolnshire is close to the northern limit of distribution of this species in Europe and all records are significant.

ODONATA

Nick Tribe

The headline event of 2013 in Lincolnshire was the tidal surge overnight on 5th/6th December. The inundation of coastal reserves was extensive. Several coastal waterbodies flooded including North Flash at Donna Nook NNR Quad 3 area (TF4398) (Small Red-eyed Damselfly *Erythromma viridulum*), most of the fresh water bodies at Gibraltar Point NNR (11 possible/probable breeding species and 5 vagrant species recorded in 2013 including the long established Red-veined Darter *Sympetrum fonscolombii* colony in the Mere) (TF5658) and the lagoons and reedbeds of Far Ings NR on the south bank of the Humber (TA0123). The impact on the odonata assemblage will no doubt have been significant but it will be fascinating to watch the re-colonisation of sites over the next five to ten years. Thankfully sites such as Saltfleetby-Theddlethorpe NNR and the RSPB reserves at Frieston Shore and Frampton Marsh largely avoided inundation.

Good numbers of Brown Hawkers *Aeshna grandis* were seen including 25 on 10th August at Messingham Sand Quarry NR (Andrew Ashworth), 20 at Alkborough Flats on 20th August (Graham Catley/North Lincolnshire Council) and 5 of this species were seen at Wolla Bank NR on 23rd July (Pete Childs).

Wandering Banded Demoiselles *Calopteryx splendens* were seen at North Somercotes on 15th August (Steve Lorand) and at Gibraltar Point NNR on the 24th August (Richard Doan). White-legged Damselfly *Platycnemis pennipes* was seen at its sole known county location on the River Welland near Stamford on 1st August (Trisha Thompson).

Two male vagrant Black Darters *Sympetrum danae* were seen at Gibraltar Point NNR on 22nd September (Chris and Sue Bottomer) and one male was seen at Saltfleetby-Theddlethorpe NNR on 29th September (John Walker). An Emperor Dragonfly *Anax imperator* was seen to arrive from over the sea at the latter site on 18th August (Cliff Morrison). December 1st saw records of late-flying Common Darter *Sympetrum striolatum* at Gibraltar Point and Whisby Nature Park near Lincoln; November records are reasonably common for this species but any December record is unusual.

SHIELDBUGS

Annette Binding

Eleven species were recorded in 2013. Most of these were in quite good numbers and as in previous years I received most records of the Green Shieldbug *Palomena prasina*. At the other end of the scale there was only one record of *Legnotus limbosus* which was found at Hills and Hollows Quarry near Grantham on the 15th May by Charlie Barnes.

The Parent Bug *Elasmucha grisea* continues to be quite rare in the county with only three records received from two locations, Haxey Turbary where P. Lee found one on the 15th June and another one on the 9th August and Horncastle found on the 22nd August by Charlie Barnes.

I received only two records of the Gorse Shieldbug *Piezodorus lituratus* one from Welton le Wold Quarry found on the 29th August found by Alan Lazenby and one from Pike Drain Marsh, Boultham Moor, Lincoln found by Mick Talbot on the 21st September. Usually found in good numbers on gorse and broom, we found none in Lincolnshire and only one adult at Clumber Park in Nottinghamshire where we carry out an annual invertebrate survey and where the species is usually widespread throughout the Park.

Similarly the Bronze Shieldbug *Troilus luridus* was also scarce with records received from only two locations, Low Hameringham where Alan Dale found two specimens on the 18th of August and Whisby Nature Park where Allan Binding recorded five adults and one egg batch on the 22nd of September.

My thanks to all those people who sent me their records in 2013.

SQUASH BUGS

Annette Binding

There are eleven species of squash bugs in Great Britain including the recently introduced Western Conifer Seed Bug *Leptoglossus occidentalis*. These bugs are also known as leather bugs. Several of them are quite large and they are often recorded alongside shield bugs.

Two species of Coreidae are worth mentioning. The first is *Coreus marginatus* also known as the Dock Bug. Alan Lazenby found one at Whisby Nature Park on the 13th July, the first record of this species in Lincolnshire. There were two further records of this species recorded in 2013. Mick Talbot found one at Boultham, Lincoln on the 26th of September and John Lamin reported one from Bourne South Fen on the 11th November. As the common name suggests both nymphs and adults feed on dock.

Secondly there have been a few more Lincolnshire records of the Western Conifer Seed Bug. It was new to the county in 2010 and was reported in The Lincolnshire Naturalist by Colin Smith. Since then four more records have been received, two in 2011 and one each in 2012 and 2013. The locations were Caistor, Horncastle, Gibraltar Point and Nettleham respectively.

The western conifer seed bug is large and conspicuous, up to 20mm in length and with distinctive flattened hind tibia. Both adults and nymphs feed on the seeds of conifer trees. They overwinter as adults. They do not sting or carry any diseases although if disturbed they can give off a distasteful odour.

MOTHS

Martin Gray

2013 proved to be a year 'of two halves' to use the footballing cliché. The coldest spring for 50 years, following on from the dreadful weather of 2012, severely depressed moth numbers during the first half of the year. However, all changed with the onset of the heatwave in July and moth populations increased, leading to some memorable nights' trapping. The onset of autumn was exciting too, with an influx of migrant moths from warmer parts of Europe. These included numbers of Vestals *Rhodometra sacraria*, White-points *Mythimna albipuncta* and probably the best being a pristine Bedstraw Hawk-moth *Hyles gallii* trapped in Pete Burnett's Fiskerton garden on the 25th August.

A new species as recently as 2002 to Britain is *Ectoedemia heringella*, and the author found several leaf-mines on the Holm Oaks *Quercus ilex* in Sleaford on the 4th January. Rapidly spreading northwards this record was not unexpected and should soon reach some of the evergreen oaks in Lincoln.

The author had a netting session at Saxilby Flood on 22nd May which produced a new Lincolnshire record with *Grapholita lunulana* (Nationally Scarce B) a small Tortrix species. This moth is general found in northern Britain with the larva feeding on vetches.



Bedstraw Hawk-moth

Pete Burnett



Grapholita lunulana

Martin Gray



Coleophora artemisicolella

Martin Gray



Phyllocnistis xenia

Martin Gray

Coleophora artemisicolella is probably widespread over much of Lincolnshire, yet a larval case found at Saxilby Flood on the 18th September by the author represented the first county record. The larval case (made from an empty seed head on Mugwort *Artemisia vulgaris*) proved to be one of the most difficult of all the *Coleophoras* to locate.

Robert Woods has been surveying around the Scunthorpe Steelworks on behalf of Buglife and recorded two new Lincolnshire records with The Annulet *Charissa obscurata* on 28th August 2013 and *Epinotia sordidana* on 21st July . The Annulet is mainly a heather feeder and there is plenty of the food plant at the adjacent Risby Warren.

Nigel Lound recorded a Tree-lichen Beauty *Cryphia algae* at Gibraltar Point on 25th August , an expected record. This species is now known to be resident in Britain and slowly moving northwards especially along the coast.

On the 7th October the author visited Gibraltar Point and in the plantation found a few leaf-mines of *Phyllocnistis xenia* on White Poplar *Populus alba*. This species reached our shores in 1974 in Kent and is slowly expanding its range this being the most northerly record at present. The larvae form a thin silvery translucent gallery on the upper surface of the leaves, then fold the leaf edge over and pupate in a cocoon in the fold.

On the 10th October David and Suzanne Jardine noticed a moth in a car-park near Grantham. It was photographed and on further investigation was found to be an example of the Box Tree Moth *Diaphania*

perspectalis a new Lincolnshire record. This is an Asian species, with the first UK record being from Kent in 2007. Since then there have been a number of records from several counties including Surrey, Sussex, Essex, Buckinghamshire, Hertfordshire, Gloucestershire and Bedfordshire. The moth is considered a pest species of Box (*Buxus*) in many European countries and records in the UK are thought to be by accidental importation with Box plants from Asia. No doubt the origin of this record was from the nearby garden centre.

BUTTERFLIES

Allan Binding

After a very cold winter and the coldest May for years we then had one of the hottest summers in recent years. This weather has, of course, affected butterfly numbers and species.

As expected, spring species were well down in numbers. Very few Orange-tip *Anthocaris cardamines* were reported. We grow Jack by the Hedge in our small garden and up to this year there have always been Orange-tip larvae on them. In 2013 there were none.

We were expecting all butterfly species to be down in numbers and although some species struggled others have surprised us. Silver-washed Fritillary *Argynnis paphia* was recorded from many locations in the county and was deemed as being a natural expansion throughout Southern and South Eastern England by Butterfly Conservation. Forty-five Dark Green Fritillary *Mesoacidalia aglaja* were seen by Ian McGlynn and Dr Nigel Turnbull at Robert's Field LWT Reserve on one day. We believe these were probably released by an unknown person, although this species turns up quite regularly in small numbers each year in the county. Some species such as Peacock *Inachis io* and Small Tortoiseshell *Aglais urticae* emerged later than usual in 2013.

Meanwhile Ringlet *Aphantopus hyperantus* and Meadow Brown *Maniola jurtina* were out in good numbers. Marbled White *Melanargia galathea* were seen at Red Hill and Swinstead Valley in very large numbers.

Green Hairstreak *Callophys rubi* have been found at a new location to the west of Woodhall Spa.

Very few records of migrant Painted Lady *Cynthia cardui* and Clouded Yellow *Colias crocea* were received.

In 2013 more butterfly species were released in the county. Some were from a company selling Painted Ladies which were then released in the Boston district. Other species believed to have been released included Purple Emperor *Apatura iris* and Chalk-hill Blue *Lysandra coridon*. Records of these species have not been included on the Lincolnshire database or maps.

2014 will be the last year of the current five year recording period, before the update to the National Butterfly Monitoring Scheme Atlas is published, so please continue to send in your records as soon as you can as any late records sent in will not be included in the atlas. To be included in the new atlas all records should be sent in by late November 2014.

DIPTERA

Phil Porter

Few especially scarce flies came to my attention during 2013, so I have chosen a selection of species which I had not encountered before as a sample. Unless otherwise stated, the following were collected by Richard Davidson and identified by myself.

Six new Whisby site-records during 2013 included two species captured with the use of a Malaise trap near the Orchid Glade. I operated this automatic tent trap without preservative in short bursts of at most 24 hours to provide small catches which could be sorted in a reasonable time straight away.

The soldier-fly *Oxycera nigricornis* was found to be present at least from 12th June to 22nd July. This is generally distributed in England. Most *Oxycera* species, including this one, have striking yellow and black patterns and are small but conspicuous. They are considered to be good wetland habitat indicators.

Another small species which would probably not have been recorded without a Malaise was the dolichopid *Chrysotimus molliculus* on 25th August, notable mostly for the female alone having a bright yellow abdomen. This is a local species but probably under-recorded.

On 19th October, a fungus gnat, Mycetophilidae, appeared among the catch. I usually preserve these only if there is time, and put them away if there is space as there are around 480 British species and the determination usually requires a genetical preparation which is not an area I wish to enter. However this one was so distinctive and (relatively) large that I thought it was worth sending an image to the world authority Peter Chandler. He was indeed able to identify it as *Dynatosoma fuscicorne*, a local species but associated with bracket fungi on dead wood.

On 27th August, Richard Davidson brought in a dolichopodid, *Hydrophorus balticus*, from wet mud at the edge of a lake, which had not turned up during a similar investigation of wet muddy margins in 2012 when three other species of *Hydrophorus* had come to light.

From the same family *Dolichopus griseipennis* also appeared a few days later. This species seems to have a curious distribution being apparently most widespread through a zone from South Wales to the north-east of England, and more sparsely recorded in the south-east and the north-west.

Most often the muscids, houseflies and their relatives, hardly seem worth the sometimes considerable toil of identifying them if the aim is to assemble diptera habitat communities as many of them are extremely common and require little more than the existence of faeces or other decaying organic matter in which to breed, and flowers on which to feed. However a few are characteristic of lake edges, for example the handsome *Limnophora maculosa* found on 25th August.

Away from Whisby, Richard collected some strictly coastal flies.

On 8th June, Wolla Bank yielded the muscid *Helina protuberans*, which seems a little less common on the east coast, and a distinctive empid *Rhamphomyia maculipennis* which although quite small, black, and from a potentially confusing genus with many species, has a characteristic dark shading in the wing membrane.

Near Chaple Point in mid-September *Helcomyza ustulata* was common. This grey species is monotypic throughout Europe in its own family. It was also at Mogg's Eye on 1st October, and appears fairly common around our coasts.

The last two marine species were at The Far Ings foreshore on 24th October; the dolichopodid *Hydrophorus oceanus*, and the specialist coastal dung-fly *Scathophaga litorea*. These are both common members of the diptera community along our seashores

The hairy tachinid *Tachina ursina* was widespread at Chambers Farm Wood in mid-April. This parasite fly is only seen early in the year and can be easily missed. Other less familiar species from the area (at least to me) were the empid *Rhamphomyia pilifer*, on 7th May, its tiny near-relative *Trichinomyia flavipes* on 29th June, the dolichopodid *Syntormon bicolorellum* on 26th September and the dark limoniid crane fly *Gnophomyia viridipennis*, kindly identified by John Flynn, on 2nd July. *S. bicolorellum* seems to be the least common of this group.

A most curious occurrence of the woodland asilid *Choerades marginata* from inside Richard Davidson's house in Lincoln on 24th August. This was formally a southern species but has been moving northwards owing to climate change.

Risby Warren on 11th August provided a record of the rather handsome member of the flesh-fly family, *Miltogramma punctatum*.

The tiger crane fly *Nephrotoma flavipalpis* was at Scotgrove Wood on 6th August.

Throughout the summer, David Sheppard ran a Malaise trap at Snipe Dales to amass a fairly complete species list and passed the dolichopodids, empids and hybotids to me for identification. They included the dolichopodids, *Hercostomus cupreus*, *Anepsiomyia flaviventris* and, in great abundance, *Sciapus platypterus*; the hybotids *Oedalea holmgreni*, *Trichina clavipes* and *Platypalpus luteus*; and the empids

Phylodroma melanocephala, *Hemerodromia unilineata* and *Rhamphomyia erythrophthalma*. Soldier flies, Stratiomyidae, were represented by *Sargus iridatus* and *Oxycera nigricornis*.



Other collections by David were from Furze Hill on 19th June which included *Dolichopus pennatus*, and from Linwood Warren on 7th July which included yet another dolichopodid, *Hercostomus nigripennis*.

An interesting selection by Peter Kirby from Nene Outfall on 1st September included *Dolichopus diadema*, a picture-wing fly *Melieria picta* and the hoverfly *Helophilus trivittatus*.

Tanyptera nigricornis

Phil Lee

Phil Lee photographed the striking crane fly *Tanyptera nigricornis* at Scotton Common on 26th May, which

was only the second recorded in the county after one at Birch Wood, Southrey in 2011.

Finally, concerning the two Syrphid inquilines of wasp nests which have lately colonised Lincolnshire, *Volucella inanis* was noted by John Flynn in Weelsby Wood, Grimsby 17th August which appears to be the first record for North Lincolnshire and on the same day Lesley Hebdon recorded *Volucella zomaria* at her garden in Gosberton Clough, her son having also seen one nearby about 3 weeks earlier.

BEETLES

Charlie Barnes

Trying to bring some order to chaos, I normally summarize the year in chronological order, however one find in 2013 stands out above all the rest, and it's with this I'll start.

In June, John Davison and Eddie Gaunt sent me photographs of an unknown beetle from Scunthorpe. Normally when I see a beetle I can narrow it down to family – however, this had me stumped. It resembled one of the Chrysomelidae, with hints of the Bruchinae, but it was by no means a definite identification. So it was with this family I started and within about 5 minutes had managed to identify it as *Bromius obscurus* (which is indeed one of the Chrysomelidae). The only problem with that is that



Bromius obscurus

Eddie Gaunt

Bromius obscurus was only known from one site in Britain and Ireland, a disused railway in Cheshire and rated as Endangered RDB1. However, the only member of its genus and subfamily we have here, there is no mistaking it for any of our other species (although abroad there a number of very similar species).

Even more interesting is that it recorded as a British species by some authors based on it being taken in Lincolnshire sometime in the 1800's, although no further information on this capture can be found. So, have we found this forgotten Lincolnshire population after over 150 years in hiding? I suspect this is unlikely. The Scunthorpe area was well worked in the recent past by eminent coleopterists and entomologists and is unlikely to have been overlooked. The adults are large (5-6mm) and feed on the

surface of Rosebay Willowherb making conspicuous longitudinal feeding slits in the leaves. One possibility is that a relict population has recently undergone a range expansion – follow up visits to Scunthorpe have found it at sites over 2.5km (1.5 miles) apart. However, its status as a pest species abroad and common name of “Western Grape Rootworm Beetle” hint at another possible source. In North America and southern Europe it is a pest of grapevines and is conceivable to believe that a population (or single female – the species is parthenogenetic) was transported to Scunthorpe via a shipment of grapes.

During May, Richard Davidson visited Potterhanworth Wood, a wood dominated by Small-leaved Lime, *Tilia cordata*. There he found the buprestid *Trachys minuta*, a leaf-miner of various deciduous trees. This is an RDB2 beetle that was, in recent years, restricted to the Bardney Limewoods NNR and one other site in the complex. Richard's find represents the first records for VC53 South Lincolnshire (all previous records being for VC54 North Lincolnshire). Given the makeup of Potterhanworth Wood and proximity to the Bardney Limewoods, it is not surprising to find *Trachys minuta* here, however it represents an excellent record for a species which has recently been classified as 'Nationally Rare' and 'Near Threatened' in 'A review of the scarce and threatened beetles of Great Britain' published by Natural England (Alexander, 2014). Although known from 7 vice-counties (and an additional 11 unverified), lack of management of ancient and semi-natural (e.g. coppicing) appears to cause populations to decline and become locally extinct.

As part of a wider survey of Lincolnshire Wildlife Trust reserves, Alan Lazenby found the small apionid weevil *Oxystoma cerdo* at Whisby Nature Park in June. The first record of this Nationally Notable B

species for VC53 South Lincolnshire (Alan also found the species at Haxey Turbary – the 4th record for VC54 North Lincolnshire), it is widespread but not common and feeds on species of vetch. Other notable species from Alan's visits include the 2nd record of the clerid beetle *Necrobia violacea* and the rove beetle *Ontholestes murinus* under the burnt skin and bones of deer at Welton le Wold Quarry in August.

Although the June field meeting to Allington Meadows was generally rather lacking in beetle finds, at the very end of the day I decided to overturn a small piece of wood in a dry ditch. Resting on the underside was the tetratomid beetle, *Hallomenus binotatus*, the larvae of which are associated with fungi. Known in Lincolnshire from 3 records in VC54 North Lincolnshire, this find represents the first recorded occurrence in VC53 South Lincolnshire. Along with *Trachys minuta*, *Hallomenus binotatus* has also been recently assessed as part of Natural England's review of the scarce and threatened beetles of Great Britain. Historically classed as Nationally Notable B, it is now considered to be Nationally Scarce, although this suggests no change in status has been recorded since the historic grading was applied.

During the BioBlitz at Whisby Nature Park in July, John Flynn found the buprestid beetle, *Agrilus biguttatus*. Historically classified as RDB2 then Nationally Notable A, it was excluded from Natural England's review of the scarce and threatened beetles of Great Britain due to a national range expansion in recent years. However, despite this range expansion John's record represents the second known site for the beetle in Lincolnshire, and it is still largely restricted to the southern counties. The larvae develop within oaks leaving D-shaped exit holes and *Agrilus biguttatus* has been implicated in oak decline where it is believed to attack already weakened trees.

Other finds during the BioBlitz include the third record for VC53 South Lincolnshire of the Nationally Notable B chrysomelid, *Donacia cinerea* found by the author (not far from where it was recorded in 2011) and the mycetophagid beetle, *Mycetophagus piceus* which was attracted to the MV moth light in the evening. Although no longer considered Nationally Notable B, this is only the 4th record of *Mycetophagus piceus* for Lincolnshire as a whole.

In September, Richard Davidson collected a small weevil at Whisby Nature Park that turned out to be the Nationally Notable B *Curculio rubidus*. Known from only two other sites in Lincolnshire, this find represents the third record for VC53 South Lincolnshire, with Whisby currently the only known site in VC53. *Curculio rubidus* feeds on species of *Betula*, as a larva in the male catkin.

Finally, during a marsh moth litter pile session at Rimac in September, Matthew Blissett photographed the Nationally Notable B ground beetle *Panagaeus bipustulatus* which hadn't been recorded in Lincolnshire since 1999. Although not considered as rare as its congener, *Panageus cruxmajor*, it shares the similar 'black cross on red background' patterning on the elytra and must be considered one of the more attractive of our beetle fauna.

ACULEATE HYMENOPTERA

Alan Phillips

My own activities were much reduced in the 2013 season. Nevertheless some interesting species were recorded with three new species added to the county list. This now stands at 317 species recorded (159 wasps, 21 ants, 138 bees).

Wasps

Dipogon subintermedius (Magretti, 1886) – 3rd county record. Whisby Nature Park, SK9166, Alan Phillips. A spider-hunting wasp (Pompilidae) which preys on the spider *Segestria senoculata*. Widespread nationally though rare in the county.

Spilomena enslini Bluethgen, 1953 – new county record. Snipe Dales, TF3368, David Sheppard. 2 females and 1 male caught in a malaise trap in July. Identifications determined by Mike Edwards. A southern species with most records from south of the Thames.

Spilomena troglodytes (Vander Linden, 1829) – 3rd to 5th county records. Snipe Dales, TF3368, David Sheppard. A single female in July, and 2 females in August. All from malaise trap samples with identifications confirmed by Mike Edwards. Last recorded in 1938, Old Bolingbroke, by M.W. Graham. A widespread species though probably very under-recorded due to the very small size of the genus as a whole (2.5 – 3.5mm).

Argogorytes fargei (Shuckard, 1837) – 3rd record. Snipe Dales, TF3368, David Sheppard. A female from a malaise trap. Confirmed by Mike Edwards. Last recorded in 1941, Old Bolingbroke by M.W. Graham. A generally rare species nationally which may be spreading to new areas.

Gorytes laticinctus (Lepeletier, 1832) – 2nd record. Whisby NP, SK9166, Michael Archer. A rare species first recorded in 2011, also from Whisby NP, by Alan Phillips.

Bees

Hoplitis claviventris (Thomson, 1872) – new county record. Phoenix Local Nature Reserve, SE878140, Andrew Grayson. A female taken in July, determined by Andy Jukes, and recorded as part of Buglife's Stepping Stones Project. Primarily a southern species in the UK with sporadic records further north.

Osmia spinulosa (Kirby, 1802) – new county record. Rauceby Warren, TF0343, Michael Archer. A female in July. Formerly known as *Hoplitis spinulosa*, this is a species which nests within old snail shells, and is widespread in the southern half of Britain on neutral and calcareous grassland.

Megachile leachella Curtis, 1828 – 2nd record. Gibraltar Point, TF5557, Michael Archer. First recorded in 2002, Skegness, by C.W. Watson. Formerly known as *Megachile dorsalis*. Generally a coastal species on sand dunes, although it is occasionally found inland in sandy areas.

Bombus campestris (Panzer, 1800) – 6th record. Branston verge, TF0266, Ted Benton. The cuckoo bumblebee of *Bombus pascuorum*. Nationally widespread but rare in the county.

Bombus ruderatus (Fabricius, 1775) – Humberston, TA3105, Bill Meek. A banded male from garden in August. Confirmed by Steven Falk. Although there is a good population in South Lincolnshire (VC53), this is the first modern record of the species from North Lincolnshire (VC54) since 1941, when recorded from Old Bolingbroke by M.W. Graham.

My thanks to all those who sent in records, specimens and photographs.

SPIDERS

Annette Binding

There was one species new to the county in 2013, *Ero aphana* RDB2, which turned up in our very small back garden on the 5th of August. The spider was found during a check of the spiders' webs around the back door and window frames of our house.

I often check these spiders' webs and sometimes 'steal' anything that looks as if it might turn out to be an interesting invertebrate. Although many of these are just bits of debris, some are much more interesting and I have in the past found a several rarities in this way.

So when I collected an apparently inanimate object from a web on the outside of our electric meter box on the 5th August I was expecting it to be just another piece of debris. However, when I looked at it through the microscope I discovered that it was a female *Ero aphana*, the same species which I had collected at Clumber Park, Nottinghamshire on the 30th June 2005. Since this species is listed as rare I contacted Peter Harvey and he told me that *Ero aphana* is turning up in all sorts of places including gardens, outhouses and houses.

There are four species of *Ero* in northern Europe and all have been recorded in Great Britain. Sometimes called 'pirate spiders' they do not spin webs but enter the webs of other spiders mimicking prey or a potential mate in order to lure out the occupant of the web and attack and eat it. All the *Ero* species are easily identified by having either two or four tubercles on the abdomen. *Ero aphana* has four tubercles. All four species are very small in size, body length 2.5 to 3mm. They are so well camouflaged resembling a piece of debris they are probably overlooked.

Coincidentally on the 26th April I found a female *Ero furcata* under a small piece of deadwood in my garden. Although not nearly as rare as *Ero aphana* this is only the 5th record of *Ero furcata* for Lincolnshire.

At the time of writing there were no other species of note found in 2013 although I have some specimens still to identify.

HARVESTMEN

Annette Binding

A very cold winter followed by the coldest May for some time meant a slow start for many invertebrates. However, 2013 turned out to be much better than anticipated. I received approximately double the number of records received in 2012. These covered fifteen of the twenty-one species recorded in Lincolnshire. Only seven species were recorded in 2012.

Although there were no new county records, four of the species recorded in 2013 had no post year 2000 records. One of these, *Mitostoma chrysomelas* caught in a malaise trap at Snipe Dales on the 10th November by David Sheppard, had not been seen in the county since 1975. There are only seven previous records of this very tiny species, all by G W Whatmough and all from either Lincoln or Woodhall Spa. Only 2mm long, it is a ground living species found in moss and leaf litter and because it is so tiny it is probably overlooked.

The second species with no post year 2000 records was *Opilio saxatilis* which was found by Martin Gray

at Broadholme on the 30th of August. There are twenty-seven previous records. This was the first record since 1994.

Also recorded in 2013 with no post year 2000 records was *Lophopilio palpinalis* which was found at Stixwold Ferry on 19th August by Alan Lazenby. There are thirteen previous records and this was the first since 1993.

The fourth species with no post year 2000 records was *Odiellus spinosus* which was found at Addlethorpe on the 25th October by Karen and Sarah Hand. This species was last recorded in the county in 1991. There are only ten previous records.

Finally *Dicranopalpus ramosus* continues to expand its range and was recorded from six new sites in 2013. My thanks to all the people who sent me records in 2013

PSEUDOSCORPIONS

Annette Binding

There were four records of Pseudoscorpions in 2013. The first one was *Dactylochelifera latreillei*. Two specimens were found behind a notice board at Gibraltar Point in June. The record was forwarded to me by the warden Kevin Wilson.

The second record, *Lamprochernes nodosus*, was received from Silvia Fowler in August. This species continues to thrive in the compost bin in her garden near Louth where she found six on the 6th August.

Records of *Chthonius ischnocheles* were the third and fourth. One was caught and several others were seen at Longholt Wood on the 3rd September by Allan and myself. They were found in an old bird box which was on the ground. *Chthonius ischnocheles* was also recorded from Byrons Lodge LNU Meeting on the 7th September. Charlie Barnes found one in rotten wood.

All three of the species found in 2013 have previous Lincolnshire records.

BATS

Annette Faulkner

2013 has been another interesting year for making discoveries and filling in or adding to our knowledge of bat distribution in the historic county, and apart from the regular surveys and roost counts the following were of note.

In July a group of six Bat Group members paid a visit to Normanby Park, north of Scunthorpe. They settled in for an all night survey, using mist nets and harp traps as well as various types of detectors. Nine species were recorded, including Nathusius's Pipistrelle *Pipistrellus nathusii* Keyserling & Blasius, a rare species that is probably under-recorded. Two female Brandt's Bats *Myotis Brandtii* Eversman - a difficult species to separate in the hand from the closely related Whiskered Bat *Myotis mystacinus* Kuhl - were caught in mist nets, and identification was later confirmed by DNA testing from fur clippings. Both had bred this year, confirming a roost in the area – but not the one later located: these turned out to be Whiskered Bats, with the identification done this time from DNA from droppings samples.

Also in July and going on into August was a Bat Group survey at a wood in the centre of the county by several experienced members. This time, in addition to the above techniques, radio tracking was also used after catching Barbastelles *Barbastella barbastellus* Schreber, to locate their tree roosts and confirm breeding. Once again nine species were found, but a different assemblage, with evidence of both Leisler's *Nyctalus leisleri* Kuhl and Noctules *Nyctalus noctula* Schreber breeding there in addition to the Barbastelles.

In August a Noctule roost was discovered in a woodpecker hole in an ash tree at Wyberton by a member of the public, who contacted the Bat Group after counting out 26 bats. A visit was made by the local bat workers and the identification was confirmed. Noctules are exceedingly scarce in the Fens and this is the first recorded roost for over twenty years.

In September bats were discovered roosting in gaps below manhole covers in a storm water drainage system under the roads at Doddington Park, Lincoln by Anglian Water personnel. Work was stopped while one of the local bat workers was called, and a total of six Daubenton's Bats *Myotis daubentonii* Kuhl were relocated while work went on to change the manhole covers. The bat worker subsequently had sight of the plans of the drain and found the nearest access point was some 350 metres from where the bats were found. This is for further investigation in 2014.

Daubenton's Bats were also discovered in a culvert beneath the railway track at Pyewipe, again in Lincoln, which ecologists were surveying prior to the line being upgraded. Few roosts of this common species are known since, with the exception of Tattershall church and castle, they roost away from buildings, utilising bridges, culverts and trees, and are difficult to find. A pilot project carried out by ourselves during the summer on the bigger drains in the Spalding area, whereby the bats are timed arriving at a succession of bridges, looks promising as a way of tracking them back to their roost areas. The difficult bit will be locating the exact roost site!

MAMMALS

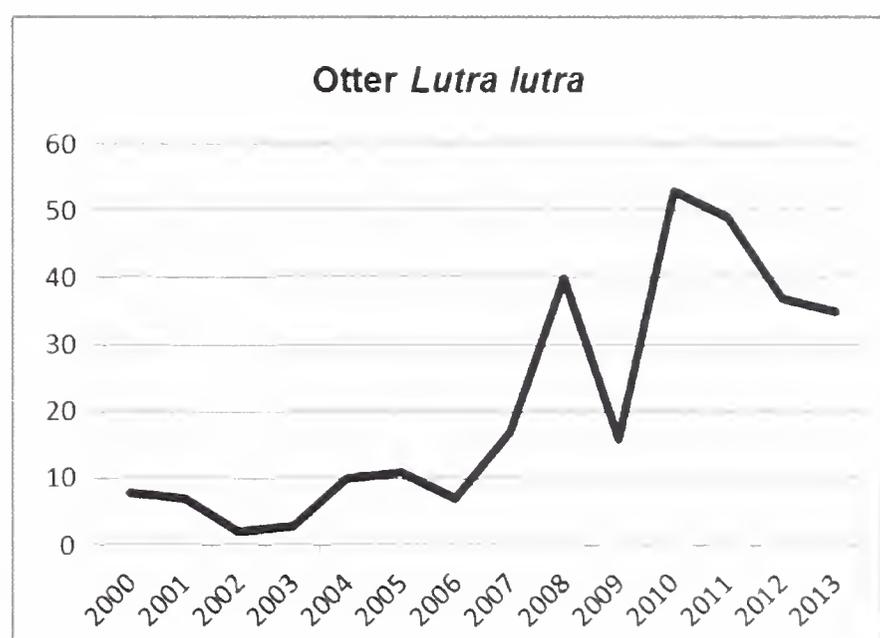
Chris J. Manning

In 2013, 1,431 records were entered into the mammal database, only two recorders submitted more than 100 records, Brian Hedley (124) and Julie Ellison (106). The most common species were Hedgehog *Erinaceus europaeus* (208), Badger *Meles meles* (160), Brown Hare *Lepus europaeus* (151), Red Fox *Vulpes vulpes* 126 and Chinese Muntjac *Muntiacus reevesi* (103)

Road Kill remains a significant source of records at 28% (401 of 1,431), mostly commonly Badger 73% (47 of 160 records) and Western Hedgehog 67% (139 of 208 records).

Otter *Lutra lutra* numbers are slightly down at 35 records, however 7 of these are sightings and 6 photographic records, a figure that is likely to increase as more trail cameras are used.

The impact of the tidal surge on 5th early December 2014 on nature reserves is well



known, impacts on species are less easy to detect. Dead Roe Deer *Capreolus capreolus* were reported on Alkborough Flats (Moody, 2014) although these may have been deposited from another site. Both Roe Deer and Water Voles *Arvicola terrestris* have since been recorded on the Flats. Read's Island may have suffered inundation but the Fallow Deer *Dama dama* have persisted as have the Chinese Water Deer *Hydropotes inermis* at Gibraltar Point.

References

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2013 LNU FIELD MEETING SUMMARIES

Brian Hedley

**28 April, Broughton Far Wood SSSI (including Clapgate Pits LWT Reserve)
SE959 107**



A well-attended (17 people) first meeting of the year led by Brian Hedley. Partly sunny, dry but generally cool conditions.

About 130 plant species were noted but some flowers were delayed due to the relatively cold spring. High-lights included large swathes of flowering Wood Anemone, a patch of Herb-paris, Nettle-leaved Bellflower, Early Purple Orchid, Common Gromwell, Twayblade, Wood Sorrel, Woodruff and Moschatel. A selection of fungi were noted included King Alfred's Cakes, Birch Polypore, Hoof Fungus, Dryad's Saddle, Turkey-tail and Stump Puffball.

Broughton Woods SSSI (April meeting)

B Hedley

Twenty eight bird species were recorded including Woodcock, Tawny Owl, Green Woodpecker, Great Spotted Woodpecker,

Treecreeper, Willow Warbler, Chiffchaff, Blackcap, Siskin and Goldcrest.

Seven mammals were noted by sight or signs and included Roe Deer, Common Shrew and Brown Hare. Both Common Toad and Common Frog were noted.

A selection of beetles were recorded by Charlie Barnes and others and included a snail-killing beetle, *Silpha atrata*, and Glow Worm. Other invertebrates included Bee-fly, Small White butterfly, Midwife Spider, several bumblebee species (Buff-tailed, Early, Tree and Red-tailed) and Tawny Mining Bee.

**19 May, Harrowby Hills and Hollows, Near Grantham
SK932 356**

A warm, still, sunny day welcomed 11 attendees to the Hills and Hollows site, courtesy of Londonthorpe and Harrowby Without Parish Council, led by Charlie Barnes.

Well surveyed botanically in previous seasons, over 85 plants species were noted on the day including Dropwort, Small Scabious, Wild Thyme, Stemless Thistle, Common Rockrose and Downy Oat-grass. Six species of butterflies, including over 15 Orange-tips, a number of moths (e.g. the yellow streaked micro moth *Esperia sulphurella* in a burnt out oak) and bumble bees were recorded. 17 species of birds were recorded including Skylark, Yellowhammer and Reed Bunting. Beetles included the Nationally Notable species *Platyderus depressus* (a ground beetle) and *Platyrhinus resinosus* (a weevil), which feeds on King Alfred's Cakes fungus (also present). The Yellow-striped Flea-beetle *Phyllotreta ochripes*, which has been recorded less than 10 times in Lincolnshire before, was also present in good numbers on Garlic Mustard.

Despite being less than 8 hectares, the site holds a wealth of wildlife and will be well worth a visit as the seasons progress.

**8 June, Allington Meadows SSSI, Near Grantham
SK871 399**



Allington Meadows SSSI (June meeting)

B Hedley

A private site with access courtesy of landowner Bill Cragg and involving an afternoon session followed by an evening moth and bat session. Led by Barry Johnson and well-attended by 19 people. A dry and fairly mild meeting but overcast which limited invertebrate records.

The meadows supported a species-rich mix of plants including Great Burnet, Pepper-saxifrage, Dropwort, Meadow Saxifrage, Ragged Robin, Pignut and Adder's-tongue Fern. A few fungi were noted: Turkey-tail, Cramp-balls and Blushing Bracket. Various galls were noted on willow, Nettle and Ground-ivy. A total of 37 birds were noted including breeding Lapwings, Common Buzzard, Yellow Wagtail, Lesser Whitethroat and Tree Sparrow.

Eighteen moth species were recorded including Small Yellow Underwing (a very local species in Lincolnshire), Silver Y, Common Swift, Brimstone, Treble-lines, Shoulder-striped Wainscot and Clouded Border. Butterflies were limited to Green-veined White and Small Tortoiseshell. Azure Damselflies were frequent with occasional Blue-tailed Damselfly and Banded Demoiselle.

Other invertebrates included Speckled Bush-cricket, Malachite Beetle, Common Cardinal Beetle and a good selection of spiders noted by Allan Binding. A fungi-feeding beetle, *Hallomenus binotatus*, was noted by Charlie Barnes and is Notable B plus new for VC53

Mammals included Otter spraints beneath a road bridge nearby plus Common and Soprano Pipistrelle bats recorded in the evening.

**12 & 13 July, Whisby Nature Park Bioblitz Event
SK910 662**

The Whisby Bioblitz took place over the 12th and 13th July, with a very wide range of recorders totalling 22 adults and 200 children amassing well over 3,000 records of 891 species of wildlife from simple aquatic animals to mammals, an amazing effort. The weather was really too hot for many invertebrates,

fungi and lower plants which undoubtedly limited the total. It had been hoped to exceed 1,000 species. There were several major highlights nonetheless.

Among 324 plant species recorded there were familiar specialities such as Pennyroyal, Maiden Pink and Heath Cudweed together with the first discovery of Small Scabious by Neil Harris. Alan Lazenby found extruded pupal cases of Large Red-belted Clearwing which had emerged from a rotten birch stump, another new site record. Staff from the Environment Agency came up with numerous new records in the less well-known areas of freshwater micro-life including rotifers, algae and caddisflies, Martin Gray and Brian Hedley trapped the vast majority of the 137 species of moths recorded. During the night Nathusius' Pipistrelle was identified by sound recording analysis, another new discovery.

**4 August, Middlemarsh Farm, Croft (Nr Burgh le Marsh)
TF528 632**



Middlemarsh Farm (August meeting)

B Hedley

A sunny, dry but windy afternoon attended by nine people and led by Brian Hedley and Roger Wardle. Visit courtesy of J and S Dodsworth to this private site where a wetland habitat creation scheme has been maturing since 2008.

Plants noted included a good list of wetland species such as Orange Foxtail, Salt-marsh Rush, Marsh Cudweed, Lesser Pondweed and Water-plantain.

Water Vole signs were frequent plus a few Brown Hares were seen.

A particularly good list of 49 bird species were noted including Wood, Green and Common Sandpipers, Black-tailed Godwit, Little Egret, Marsh Harrier, Shoveler, Snipe and Water Rail.

Twelve butterfly species were noted including Essex Skipper, Small Copper, Common Blue and Brown Argus. Eight species of dragonflies/damselflies noted included Emperor, Black-tailed Skimmer, Four-spotted Chaser, Ruddy Darter and 100s of Blue-tailed Damselflies. Other invertebrates included a Notable B weevil, *Gymnetron villosulum*, which galls speedwells plus frequent Silver Y moths, the hoverfly *Scaevia pyastri* and Water Scorpion.

**7 September, Byron's Lodge, North Somercotes
TF416 974**

An afternoon plus evening meeting courtesy of landowners Bryan and Liz Libell to their large garden and surrounding farmland. Led by Brian Hedley and attended by 15 people. A dry, windy, warm and mainly sunny afternoon with winds easing by the evening.

Over 200 plant species were noted including Flowering-rush, Pepper Saxifrage, Wild Pear, Corn Spurrey, Galingale and Sharp-flowered Rush.

Grass Snake, at least ten Common Lizards plus Common Frog and Common Toad were noted. Mammals included about ten Common Pipistrelles and two Soprano Pipistrelles (mostly recorded by Annette Faulkner) plus Brown Hare and signs of Muntjac and Water Vole. Birds comprised 28 species including Hobby, Yellow Wagtail, Curlew and at least four Tawny Owls calling during the evening.



Common lizard Byron's Lodge(September meeting) B Hedley

The moth session noted 27 species including two Red Underwings (on house wall), Dark Sword-grass, Frosted Orange, Diamond-backed Moth, Burnished Brass, Silver Y and Barred Fruit-tree Tortrix. A list of 12 butterfly species included 40+ Speckled Woods, Painted Lady, Comma, Small Copper, Red Admiral and a late Meadow Brown. Dragonflies comprised Migrant Hawker, Common Darter and Ruddy Darter.

Charlie Barnes recorded over 40 beetle species including *Zeugophora subspinosa*, 13th record for Lincolnshire, *Isochnus sequensi*, *Psyllobora vigintiduopunctata* and *Tytthaspis sedecimpunctata*. John Flynn recorded a variety of flies including *Syrphus ribesii* and *Eristalis pertinax*.

Other invertebrates included Hornet and various Shieldbugs (Forest, Green and Hawthorn).

13 October, Snipe Dales Country Park

TF331 684

Annual fungi foray led by Ray Halstead and attended by 16 people on a dry and mainly sunny afternoon. A good selection of over 70 species of fungi recorded including: Fly Agaric, Russet Tough-shank, Beech Bark-spot, Bleeding Conifer Crust, Smooth Earthball, Stinkhorn, Orange Jelly, Yellow Clubs, Birch Polypore and Honey Fungus. (see Fungi report for more details).

Galls were very much in evidence and included Spangle, Knopper, Oak Apple and Artichoke. Over a 100 plant species were noted and included Bird's-foot, Giant Horsetail and Bifid Hemp-nettle.

Twenty-four bird species were noted including the unusual mix of a Swallow and Redwings plus Treecreeper, Jay, Bullfinch and Siskin. Invertebrates included Birch Shieldbug, Green Shieldbug, Forest Bug, Grey Shoulder-knot moth and White-tailed Bumble-bee. A selection of beetles were found by Charlie Barnes including the Notable B *Pterostichus oblongopunctatus*.

NOTES ON DONORS OF BIRD SPECIMENS TO THE LINCOLN COUNTY MUSEUM

Professor Trevor Kerry

The City and County Museum, opened in 1907 in Greyfriars, Broadgate. Its first curator, Arthur Smith, established many collections, including bird specimens. When Greyfriars closed these last were stored by the LNU. Recently, I photographed this collection. It seemed worthwhile to explore the major donors, represented by seven individuals: F.L. Blathwayt, F.M. Burton, G. Caton Haigh, Sir Hickman Bacon, J.F. Musham, S.A. Nobbs and the Wells-Cole family.

Most famous is undoubtedly Caton Haigh. George Henry Caton Haigh (1860–1941) was an authority on Himalayan plants, and an ornithologist. He compiled bird diaries for Lincolnshire (1888-1940). He occupied Grainsby Hall, Grimsby, patrolling the Wash area to explore its birdlife. Being a marksman, most of his contributions may have been shot by him.

F.M. Burton, former LNU President, was a nationally-known geologist not primarily a birder, though a champion of the new museum and Secretary and Treasurer of the LNU's Museum Committee. He built up personal collections of natural history specimens and books, and determined to leave these to the museum – which he did.

J.F. Musham, President of Selby Scientific Society, lived both there and in South Park, Lincoln. His expertise may have been conchology. He reports (in *The Naturalist*) finding two examples of *Helix aspera* in Rand, and being sent specimens of the same species from Bracebridge Heath Fen (1909/10).

A prolific donor of birds was Sir Hickman Bacon of Thonock Hall near Gainsborough. He was a compulsive collector. Thonock Hall was set in woodland; many of the birds donated by Sir Hickman Bacon met their fate in these woods or in the surrounding area (Figure 1). One interesting donation was of a Cattle Egret in breeding plumage reputedly shot on Boston Fen. His was an eclectic mix of items, dated 1860-70, which included a Water Rail from Lea Marsh, a Curlew from Thonock, a Stone Curlew and a Puffin from Gainsborough. His donations highlight the frustration that little useful detail on these specimens is now extant.

Two other donors provided useful gifts. Victor Henry Wells-Cole (b. 1897), lived at Skellingthorpe in 1901, and clearly had a considerable bird collection which found its way to the museum. S. A. Nobbs also features in the museum's collection (Figure 2). Nobbs was a taxidermist from Lincoln (see below).

The final donor in this review is the Revd Francis Blathwayt. LNU President in 1918, he chose a simple life as a country rector. He served curacies in Lincoln and became Rector of Doddington (1909-1916). He links several of the other donors (Blathwayt 1893-1953): he bird-watched with Caton Haigh, conversed with Nobbs and lunched with Burton. A note he published in *Transactions* about Crossbills in Harts-holme (Kerry 2005) doubtless led to his donated specimen of this species.

Other donors, including the LNU, appear among the labels attached to specimens in the collection: though their contributions seem to have been more limited. The donors' generosity has provided a snapshot of ornithology in the period 1850-1920 even if the medium is no longer a preferred one.

References

BLATHWAYT, F.L. (1893-1953) *Bird Diaries* in 22 volumes held in Dorset Museum

CATON HAIGH, G. W. (1888-1940) *Bird Diaries for Lincolnshire* London: MSS Collection, Natural History Museum

KERRY, T. (2005) *Of Roseates & Rectories: The birding biography of the Revd Francis Linley Blathwayt*
Lincoln: Pintail/TKC



Common Buzzard

Trevor Kerry



Black-winged Stilt

Trevor Kerry

Author data

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*Trevor Kerry is Emeritus Professor of Lincoln University and Visiting Professor at Bishop Grosseteste University. He is author of the Blathwayt biography mentioned in the article, of **Birds, Birders, Birding** (2014 Lincoln: Pintail/TKC), and of numerous journal articles on-line and in magazines (many under a pseudonym).*

CONTRIBUTING TO THE LINCOLNSHIRE NATURALIST

Phil Porter

We are constantly on the lookout for full length articles or short notes, even a few lines which can be useful space-fillers, on any aspect of our natural history, current or historic. Consider a note in the Lincolnshire Naturalist for any new or significant observations such as range extension, behaviour, numbers, seasonality, humour - the scope is wide.

The contribution should be emailed to the editor at whisbypn@lincstrust.co.uk . It would be so much appreciated if the text could be sent without more than the minimum of very basic formatting necessary to get the material down in an intelligible manner. I will not trouble the contributor to worry overly about the actual font – I have used Calibri rather than Arial this year as part of the attempt to cut down the number of pages in the book, as you will have read in the Editorial. Alignment and paragraph settings are also easy to change, so your default setting should be fine.

The house style for the use of Linnaean binomials in this issue is as follows; these names should be *italicised*, not **emboldened**, (bracketed) or underlined. They should follow the English name, where applicable, with no separating comma. English names should have capitalised initials. (See editorial).

Pictures should be sent with a caption note please, indicating at least the subject and name of the photographer, but do not embed this information in the picture. The file size should be about 300KB. The pictures are a significant factor in the production finances, so although I attempt to include all pictures sent, if several are submitted, be prepared for me to have to leave 1-2 out if necessary. On the other hand, perhaps in the wake of the problem with picture size in Vol 28;2, I received fewer pictures this year. I am sure a balance can be reached in the future.

References to journals and books should appear as below. Please note and use the capitalisation and italicisation convention.

WOODRUFFE-PEACOCK, Rev E.A., 1900. The Lincolnshire Naturalists at Freiston. *The Naturalist*: **25**: 141-144.

DUDDINGTON, J. & JOHNSON, R. 1983. *The Butterflies and Larger Moths of Lincolnshire and South Humberside*. Lincolnshire Naturalists Union. Lincoln. 299pp.

Regarding the copy date, contributors may remember that it has been set for many years as 31st March. It is now rare to receive more than the odd copy by that time these days, and the last frequently arrives in late August or even September. Please remember that the really frustrating, fiddly work involved in putting the issue together only really starts when all of the material is available, so do please, please, try to send copy before the summer holidays.

TRANSACTIONS OF THE LINCOLNSHIRE NATURALISTS' UNION

Officers of the Union in 2012 (Year of election to the Executive Committee)

President Ian MacAlpine Leny (2001)

President-elect Nick Tribe (2004)

Honorary Secretary Charlie Barnes (2010)

Honorary Treasurer Ian MacAlpine-Leny (2001)

Membership Secretary via LWT

Publicity Secretary Roger Parsons (2010)

Programme Secretary Vacant (winter) and Brian Hedley (2007) (summer)

Editor of Transactions Phil Porter (2008)

Executive Committee Colin Smith (2001), Chris Manning (2001), Richard Chadd (2002), Nick Tribe (2004), John Flynn (2012), Alan Phillips (2012)

External representatives

Lincolnshire Biodiversity Partnership - Ian Macalpine-Leny,

Lincolnshire Bird Club Committee - Ian Macalpine-Leny,

Lincolnshire Wildlife Trust Biodiversity Team - Richard Chadd,

Local Wildlife Sites Panel - Richard Chadd

Section Recorders

Ants Bees and Wasps

Bats

Beetles

Bryophytes/Lichens

Butterflies

Dragonflies

Fish

Flies

Freshwater Invertebrates

Freshwater Algae

Fungi

Geology

Grasshoppers and Crickets

Higher Plants

Mammals

Marine Invertebrates

Molluscs (non marine)

Moths

Plant Galls

Sawflies

Shieldbugs

Pseudoscorpions

Spiders

True Bugs

Mr. Alan Phillips

Mrs. Annette Faulkner

Mr. Charlie Barnes

Professor Mark Seaward

Mr. Allan Binding

Mr. Nick Tribe/Mr. Richard Chadd

Mr. Ian Macalpine-Leny/Mr. Nick Bromidge

Mr. Andrew Godfrey

(coordinators Mr. John Flynn/Mr. Phil Porter)

Mr. Richard Chadd

Mr Bill Brierley

Mr. Ray Halstead

coordinator Ms. Helen Gamble

Mr Brian Redman

Mr. Paul Kirby

Mr. Chris Manning

Mr. Helgi Gudmundsson

Mr. Alex Pickwell

Mr. Colin Smith

Mr. Graeme Clayton

Dr. David Sheppard

Mrs. Annette Binding

Mrs. Annette Binding

Mrs. Annette Binding

Mr. Colin Smith

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