Norfolk County Council

Biodiversity Team

Highlights and Achievements 2016-2017

Photo Bev Nichols

NBIS Norfolk Biodiversity Information Service

nbp Norfolk Biodiversity Partnership

Norfolk Non-native Species Initiative

Norfolk County Council

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Norfolk Biodiversity Information Service
August 2017

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This Report

Norfolk County Council Biodiversity Team is part of the Environment Team, within the Community and Environmental Services Department. Working in partnership with the County Council and other organisations, the Biodiversity Team works to provide high quality information, co-ordinate resources and expertise across the county, work with local communities and provide practical action on the ground to help protect and enhance the natural environment of Norfolk. This report highlights the activities and achievements of the Norfolk County Council Biodiversity Team over the past year

The Biodiversity Team

Norfolk Biodiversity Information Service (NBIS)

Norfolk Biodiversity Information Service is a Local Environmental Records Centre holding information about species, geodiversity, habitats and protected sites for Norfolk. NBIS provides quick and easy access to high quality information for all.

Norfolk Biodiversity Partnership (NBP)

Established in 1996, the Norfolk Biodiversity Partnership brings together the resources and expertise of local authorities, statutory agencies and voluntary groups in pursuit of a shared goal – to conserve, enhance and restore Norfolk's biological diversity.

Norfolk Non-native Species Initiative (NNNSI)

Launched in 2008, the Norfolk Non-native Species Initiative promotes the prevention, control and eradication of invasive alien species, working through a stakeholder's forum.

Norfolk Biodiversity Information Service

Species Records

Much of the **species data** held by NBIS and made available for **planning and conservation decision making** is provided by the voluntary network of **County Recorders**. These people are members of the Norfolk and Norwich Naturalists Society and are experts in their taxonomic fields. They provide or check all of the records going on to the NBIS database to ensure high quality data.

The NBIS database currently contains **3171900* species records** (including a number from our neighbouring counties of Suffolk and Cambridgeshire, collated as part of cross-county biodiversity audits). In 2016-17 **597642* records** were imported.

*Figures determined 31 March 2017

Data Enquiries

Responding to **data enquiries** is one of the core tasks of NBIS. Requests come in from sources such as ecological consultants, conservation bodies, local authorities, students and interested members of the public often wanting to know about **protected species** (and sites) in a particular area. NBIS aims to respond to all commercial enquiries within **5 working days** and to enquiries from our funding partners within **3 working days**.

In 2016-2017 **NBIS responded to 493 enquiries**. These can be broken down as follows:

Commercial (E.g. ecological consultants)	439
Local Authority Enquiries	13
Funding Partner enquiries (e.g. NE, EA etc.)	4
Non-Commercial Enquiries (E.g. Students, members of the	37

Data Exchange Agreements

Local Biological Records Centres are partnership organisations established as hubs for the collection and supply of wildlife data to a wide range of users. This provision is underpinned by a **complex network of data exchange** between local and national wildlife recorders. Overtime these relationships can be come blurred and the role of interested parties confused.

In order to clarify these relationships and increase the transparency with which data can be exchanged between the records centre and data providers NBIS has embarked on a process of **establishing data sharing agreements with our data providers**. This has so far focussed on the key relationships that we have with county recorders, as well as the those that we both have with the national recording schemes and societies and the NBN Atlas.

So far **7 Data Exchange Agreements have been agreed ,** with a further **15 currently under discussion**. These should follow in the coming months as we continue to finalise data agreements with a number of other county recorders. A second round of consultations have been planned for June 2017 where we hope to be able to engage more recorders in this process.


Norfolk Biodiversity Information Service: Data Exchange Agreement

Norfolk Biodiversity Information Service - County Recorder
Data Exchange Agreement

Introduction

Norfolk Biodiversity Information Service (NBIS) is a Local Environmental Record Centre holding information on species, geodiversity, habitats and protected sites for the whole of the county of Norfolk. NBIS operates within the guidelines of the National Biodiversity Network (NBN), upholding the principle that biodiversity data should be easily accessible for not-for-profit decision-making, education, research and other public-benefit purposes whilst ensuring that making this data available reduces the risk of damage to the environment.

The Norfolk and Norwich Naturalists' Society (NNNS) is Norfolk's oldest natural history society dedicated to conserving the county's wildlife and also co-ordinates the network of voluntary County Recorders.

This agreement is between Norfolk Biodiversity Information Service (NBIS) and the individual County Recorder named in clause 5. NNHS have no obligations under this agreement. It lays out the rights and responsibilities of each party with respect to the exchange, management and use of data exchanged under this agreement. It is valid from the date on which signed until terminated by either party in accordance with clause 4 of the agreement. Records exchanged under this agreement are protected by copyright, database rights and other intellectual property rights. Onward supply and use of records by either party are subject to the conditions set out in this agreement.

1. **Obligations of NBIS**

All data provided to NBIS under this agreement will be managed in accordance with the NBIS Data Policies, a copy of which can be provided on request or viewed online at http://www.nbis.org.uk/sites/default/files/documents/Data_Policies.pdf

NBIS will:

- Undertake validation* of records received directly by NBIS before forwarding to the County Recorder for verification**. This will be carried out in accordance with the published policy and any amendments by NBIS will be clearly marked as such in the forwarded data (such as the addition of scientific names) and comprise filling in gaps in data (covering email. The majority of amendments formatting grid references appropriately.
- Forward the records for the relevant taxa according to Schedule 1 free of charge.
- Provide data in the format shown in Appendix C.
- Where possible provide data at capture resolution (preferably 100m minimum), unless otherwise specified in clause 3.

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This process of engaging with country recorders has been both interesting and informative and has already resulted in changes to the way we work which has **improved the way we manage the data we hold**. Many thanks to all those who have taken part in this process so far and we look forward to building on this work in the future

Breaking New Ground — Wildlife Recorders of Tomorrow

The Brecks is an important area for wildlife both in a UK and international context. However many of the species records come from a few well recorded designated sites, with recording often done on an ad hoc basis. This means that it is often difficult to detect changes in the biodiversity of the area. There is a **need for wider recording** of the Brecks area and a **structured** programme of species surveillance and monitoring.

In order to address this NBIS has been involved in an HLF funding project called **Breaking New Ground**, which was an overarching theme for several smaller projects, aimed at increasing public awareness in the heritage and landscape of the Brecks. As part of this project NBIS led on the **Wildlife Recorders of Tomorrow Project** which focused on improving skills and involvement in wildlife recording.

Progress of this project has previously been reported on since its start up at the end on 2014/ beginning of 2015. This report now summarises successes of the project as a whole **following its completion in June 2017**.

In total **785 people volunteered** as part of the project and many more were engaged in the project through bio blitz and other public events. This massively exceeded the project target of 60 and came from across the skills spectrum from those new to recording to wildlife experts . In total **974 days were volunteered** to the project time which is worth **£133, 031**. Thank-you very much to all involved.

All photos: NBIS

As a result of this project **records were received from 384 sites**, **23 which were monitored and 361 which were recorded for at least one taxonomic group**. This again exceeds targets to monitor 10 sites and record at 40. In total a massive **32,210 new records** have been generated and greatly add to our understanding of wildlife in the area.

As part of the project **over 40 workshops, training days and talks** have also been delivered to develop wildlife recording skills and encourage interest in biological recording. In addition **4 successful bio blitz's** took place at Brandon (October 2015 and July 2016), High Lodge (July 2016) and Little Ouse Headwaters (June 2016).

These events covered a wide range of topics including birds, mammals, plants, fungi and a number of invertebrate groups including bees, hoverflies and bug sorting marathons. One of the very exciting finds of the July weekend was the **Ashy Furrow-bee (*Lasioglossum sexnotatum*, pictured)** a very rare bee, previously only seen once in Norfolk in the 1980s, was found in St Leonards Churchyard in Mundford!

Photo: NBIS

Positive feedback from these events has included:

"It's great that these courses have been set up and are free and available to start introducing enthusiasm for getting to know the ecology of the area. Great idea! "

"Invertebrate sorting and pizza: a perfect day!"

"I enjoyed the Bioblitz, it was nice to meet people that I have known on the Norfolk & Norwich Naturalists Society Facebook group over the year."

The project was picked up well in local media which included promotion of our bee workshop in an **EDP** article by Mark Cocker and an article on the Lunar Yellow underwing Workshop in the **Bury Free Press**. Features on **Radio Norfolk** and **Brecks FM** also help promoted workshop's, as did blogs and articles calling for volunteers published by **Norfolk Wildlife Trust**.

Breaking New Ground
HLF Landscape Partnership

heritage lottery fund
LOTTERY FUNDED

Update from one of last years recording fund projects

Last year NBIS provided funding for a PhD student from UCL to undertake research on **effects of pond terrestialisation on pollinators.** The funding was to enable the purchase of time lapse cameras and moth traps essential for field research.

The study investigated pollinating insect groups around the margins of 8 open canopy and 8 over-grown ponds . **Data collected as part of this project will be incorporated in the NBIS database**.

Preliminary results from this study show that the **number of bees and wasps**, the total **number of pollinators** and the **number of flowering plants** are **all greater in ponds where there is management to maintain an open canopy.** It is hoped that a second year of data , which has just been completed, will allow any statistical significance between pollinator diversity at the different pond categories to be fully revealed.

This work is none the less beginning to demonstrate that ponds are important for insect pollinators in the farmland landscape and providing **data** pointing to the fact that pond **conservation techniques** are benefitting these communities rather than hindering them.

As this work is further analysed, it is hoped that the apparent shared conservation interest between farmland ponds and pollinating insects will be made very clear and will influence **agri-environmental schemes** across the country.

Photos both Richard Walton

Bid-Rex (Biodiversity Data Regional Exchange)

BID-REX is an **Interreg Europe funded project** focussing on better utilisation of biodiversity data in the delivery of policy. **The project will develop an interactive interregional partnership to explore and exchange best practices through identifying information needs for decision makers, matching information to needs**, improving data flows and capacity building for decision-makers and data providers.

What will we be doing?

Norfolk County Council and the University of East Anglia are delivering the project in the UK and will **build on recent work such as the Breckland and Broads Biodiversity Audits, the Norfolk Living Map and the Norfolk Species Surveillance Network.** We will work with data users and providers to assess data **needs of decision-makers** and the way in which these are met, highlight examples of **best practice**, assess **future needs** and ways to access data, focus on the use of **added-value data** such as opportunity maps and ecological network models.

What has happened so far….

Norfolk partners held the **first stakeholder workshop** on the 7th November 2016 to engage with stakeholders and help them identify how best to reinforce high quality relevant biodiversity data and conservation decision making.

On the 17th January 2016, Norfolk County Council hosted a meeting with stakeholders from **Local Environmental Records Centres (LERCs)** to investigate the issue of **Open Data** with regards to ensuring sustainable access to biodiversity data.

Norfolk County Council has attended the Natural Environment Research Council's **envExpo 2017** to showcase the work of BID-REX and present to decision makers the value of new technologies such as Earth observation

This project will continue in 2017-2018

Photo: NBIS

Norfolk Biodiversity Partnership

Planning and Biodiversity Seminar

The **12th annual** Planning and Biodiversity seminar, run jointly between NBP and the Suffolk Biodiversity Partnership was held in November 2016.

More than 90 participants which included planners, ecological consultants and wildlife experts heard presentations focussed on the theme of **ensuring sustainable development in conjunction with the best outcome for biodiversity**.

Speakers set the national context, gave a quick and dirty guide to **Habitats Regulations Assessments (HRA) requirements**, explained what is meant by the **"NERC Biodiversity Duty"** 11 years on and outlined **5 simple things every planner can do** to make a contribution to protecting biodiversity.

Those directly involved in delivering mitigations provided illustrated examples of what good species mitigation looks like for **Hedgehogs**, **Common Toads**, and **Swifts** and at a landscape scale for **Barbastelle Bats**. This complemented results from visitor survey results from **Natura2000 sites** in Norfolk which highlighted the need to consider and potentially mitigate **visitor pressure** on our most protected sites through the planning process.


EAENVIRONMENT

Focus firmly on planning ahead to save biodiversity

The event enjoyed press coverage in the East Anglian Daily Times.

For full summary and link to presentation please see: **http://www.suffolkbis.org.uk/biodiversity/statutoryobligations/plannerspage/seminar2016#overlay-context=biodiversity/statutoryobligations/plannerspage**

Community Biodiversity Awards

Each year the Norfolk Biodiversity Partnership hosts the **NBP Community Biodiversity Awards** to celebrate work done by volunteers, projects and community groups throughout the county for the benefit of biodiversity. **In 2016 the awards were kindly sponsored by Kelling Heath Holiday Park, The Landscape Partnership (TLP), Norfolk Wildlife Trust (NWT)** and **the Diocese of Norwich**.

2016 NBP Community Biodiversity Award Winners

Credit: Denise Bradley

Parish and Town Councils Award

Winner: South Wootton Parish Council

For connecting the community with improvements to South Wootton Park, and other biodiversity projects in the parish

Highly Commended: Brisley Parish Council

For working with others to bring Harper's Green and Brisley Common into positive management

Commons and Greens Award

Winner: Litcham Common Management Committee

For their continuing commitment and hard work to achieve the conservation of Litcham Common

Highly Commended: The Friends of Boyland Common

For bringing the Common back into good management and returning it to the heart of their community

Inspiring Others Award

Winner: Geoff Doggett

For his determined and inspirational leadership in developing and linking the River Waveney Trust with the wider community

Highly commended: Eddie Anderson

For his work to improve the River Mun, creating better conditions for wildlife downstream of his land, and creating a nature reserve for others to enjoy

Churchyard and Cemeteries Award

Joint Winner: The Friends of Great Yarmouth Cemetery & St Nicholas Churchyard

For involving their community in the care and improvement of the cemetery for wildlife and people

Joint Winner : Wymondham Abbey

For managing their churchyard with wildlife in mind and involving the local community in the process

Highly Commended: Thorpe Market Church

For their long-term commitment to conserving biodiversity in their churchyard

Best Group Award

Winner: Little Ouse Headwaters Project

For the imaginative way they have involved and informed their community in their ambitious, large-scale conservation work in several parishes

Highly Commended: Kenninghall Lands Trust

For inspiring their community to create woodlands and an orchard for wildlife and people to enjoy

Lifetime Achievement Award

Awarded to Richard MacMullen

For his work over 30 years inspiring landowners to incorporate conservation practice into their farming activities, thus improving the prospects for farmland biodiversity

Norfolk Non Native Species Initiative

Enquiries

In 2016 the NNNSI handled **over 76** different reports of invasive species from members of the public across the county, ranging from Himalayan balsam to American mink. This is a **41% increase** on the previous year. The NNNSI was able to successfully resolve each enquiry through offering **identification assistance**, **management advice** and carrying out **control work**.

Funding Successes

In 2016 the NNNSI raised **£28,100 of external funding** for invasive species projects including eradication of floating pennywort on River Waveney and American mink across Norfolk

Controlling Floating Pennywort on the River Waveney

The NNNSI has again been working with Native Landscapes to build on progress previously made as part of the contracted work to **control Floating Pennywort and Himalayan Balsam** on the River Waveney between 2010 – 2015.

Photo credit: Paul Sims

Removal of Floating Pennywort plants took place between May and October 2016. **Manual removal** was used wherever possible, with plants been placed on the banks to dry out. **Herbicide applications** were carried out as necessary between July and September 2016.

As a result of this contract a **significant reduction in the amount of Floating Pennywort recorded** was seen on the previous year. To ensure the continued control and eventual eradication of Floating Pennywort it is recommended that **further controls** are undertaken in 2017.

Norfolk Mink Project

Photo Credit: Snowdonia National Park

2016 has been another fantastic year for the project. In total 412 rafts were deployed and 420 traps were loaned resulting in the capture of 47 mink across the county. The number of mink taken is **33% down on 2015** which follows on from of 30% on 2014, a decrease that has been attributed to **a real reduction in the number of mink in the county.** The contribution of volunteers has once again been vital to the success of the project. In 2016 total of **291 volunteers** were involved in monitoring and trapping mink which we calculate is worth **in the region of £115,000 per year**. Thank-you to all those involved.

Our new website, launched last year continues to be a fantastic resource and a great place to keep up to date with our latest projects and find out more information about invasive species in Norfolk. To find out more please visit our website at **http://thenorfolkminkproject.org.uk.**

Changes in size and distribution of the Mink population in Norfolk

Analysis of Norfolk Mink data by PhD student Chris Pyatt, has been able to offer an insight into how trapping mink has effected the underlying populations of mink in Norfolk. In all catchments we see an initial spike in trapping success followed by a slow trickle of capture as shown in figure 1.

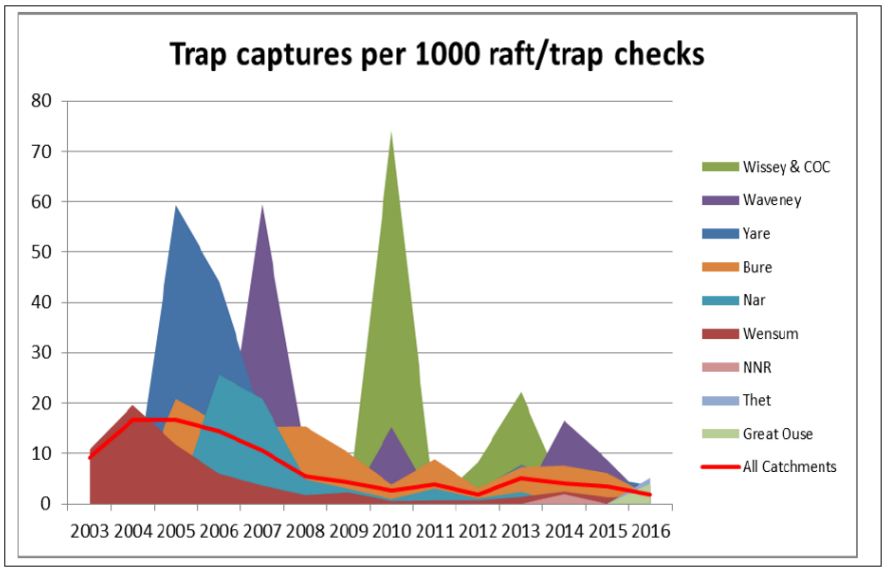


Figure 1: Trends in Norfolk catchments in the number of Mink killed per 1000 raft / trap checks. From work by Chris Pyatt.

This suggests that most mink in an area are captured fairly quickly and that the population is then held at much lower levels in subsequent years. Overall the results show that we are being **successful in reducing the number of mink in Norfolk substantially**, the aim now is to see if we can **make the whole catchment effectively mink free.**

Protecting White-clawed crayfish

Article written by Dr Katy Owen, Coordinator of NNSI

The white-clawed crayfish *Austropotamobius pallipes* is Britain's only native crayfish species. Once widespread across Britain, recent years have seen a marked decline in their numbers. They are now classed as an endangered species and at risk of becoming extinct in Norfolk.

Photo Credit: Norfolk County Council

The greatest threat to their survival comes from an invasive alien species, the signal crayfish *Pacifastacus leniusculus*. Originating from North America, this larger, more robust species was farmed for food in lakes but soon escaped into the wild. Signal crayfish are more aggressive and voracious than the native white-claw, **usually winning the competition for food and habitat**. However, the real issue **is crayfish plague, a disease caused by a species of water mould**. It doesn't affect signal crayfish (who act as carriers) but is fatal to native white-claws. Attempts to eradicate signal crayfish and control the deadly plague they carry have not been successful. Trapping, electrofishing and habitat destruction have all failed to halt the invasion.

As a last resort to preserve white-clawed crayfish for future generations, the NNNSI and NBP have been working in collaboration other agencies to create 'ark sites'. These are rivers or lakes in Norfolk which have been carefully assessed as suitable areas for this species to thrive, but which are safe from invasion by signal crayfish and the plague that follows them. This summer, white-clawed crayfish were carefully collected from strongholds in two Norfolk rivers and **relocated to new ark sites**. Scientists hope that these evacuees will settle in and begin to breed, creating new populations and securing the future of the species in our area.

Work was also carried out to **increase protection for a white-clawed crayfish population** currently under threat of invasion. A **metal barrier** designed by the Environment Agency and installed by local engineers specifically to prevent signal crayfish moving upstream. The large overhang and increased flow will prevent signals from climbing the weir, preventing populations from establishing upstream.

Photo Credit: Norfolk County Council

Alert for potential Invasive Ant

Article by Dr Katy Owen, Doreen Wells, Danielle Engelbrecht and Nicola Dixon

Background

Lasius neglectus is an **invasive species of Garden Ant** that has become widespread in Europe, having most likely originated in Asia-minor. **It has previously been recorded at six other isolated colonies in the UK, the closest currently being Cambridge Botanic Garden**. This probably does not reflect the true number and distribution of this species which is almost certainly under recorded at present.

How do they spread?

Naturally the spread of this species is restricted to a few metres a year, as the queens rarely fly. This **species has also been found to spread through plant exchange,** as it is able to survive in the soil of potted plants which provide an ideal nest site. This has allowed the species to colonise urban and semi-urban habitats, especially those with a high level of plant exchange such as botanic gardens.

Potential Impacts

Severely effects local invertebrate biodiversity. **Native ants are excluded from the core regions of the colony** and **ground foraging groups e.g. beetles and woodlice are also affected**. The abundance of plant **sap feeding insects e.g. aphids tends to increase**, as these taxa are farmed by ants for honeydew, **Attracted to electrical fields causing failure and damage by fire** in fuse boxes, electrical plugs and mechanical equipment. **Invades buildings** but workers don't sting or spray formic acid and are too small to bite humans.

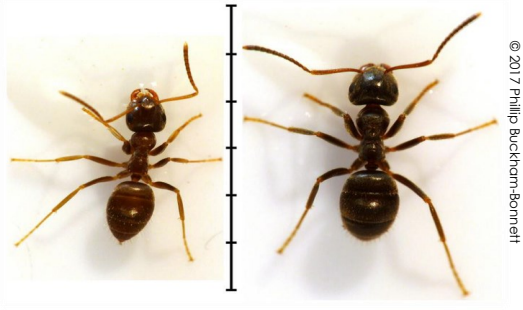
What is being done?

March 29th 2017 was **Invasive Ant Awareness Day in Norfolk**! This campaign was launched during invasive species week with a specific focus on the invasive garden ant *Lasius neglectus*.

Until 2009 no invasive ant species had successfully established itself in the UK. That situation ended when a colony was discovered nesting at Hidcote Manor in Gloucestershire. Fast forward to 2017 and we now find that there are six known colonies, with the nearest one to us being in Cambridge. **National organisations are taking this threat very seriously and we wanted to do the same.**

Identification

Superficially similar to common garden ant *Lasius niger* – occupy similar habitat but there are differences in anatomy, behaviour and social structure



- Workers are **slightly smaller** (3-6 mm) and lighter in colour than the common garden ant *L. niger* (5-8 mm)
- **Erect standing hairs** present on the antennal scapes and hind tibiae of *L. niger* are absent in *L. neglectus*.
- Both species **nest in the ground, under stones and pavement** and are often found in parks and garden.
- *L. neglectus* workers can form dense trails on tree trunks and are **often abundant around honey dew producing insects.**
- Trees are crucial to their existence. Workers will be almost continuously active in tending aphids for their honeydew. **Colonies are therefore more likely to be found in areas close to trees.**
- Has **a shorter hibernation period** so may be active for longer in the year – **look for ant activity in early spring or late autumn.**

Identify – Report – Contain

If you find a suspicious colony collect voucher specimens for identification and contact:

Doreen Wells (County Ant Recorder) - wells_doreen@hotmail.com
Phillip Buckham-Bonnett (York University) - pbb502@York.ac.uk

Norfolk Non-native Species Initiative

BWARS

Animal & Plant Health Agency


NBIS
Norfolk Biodiversity
Information Service


nbp
Norfolk Biodiversity
Partnership


Norfolk
Non-native
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