

The Norfolk Natterjack



NOVEMBER 2017 Number 139



www.nnns.org.uk

The quarterly bulletin of the Norfolk & Norwich Naturalists' Society



Norfolk & Norwich Naturalists' Society

Founded 1869

Reg. Charity No. 291604

Officers of the Society 2017/18

President: Dr H Smith

Vice Presidents: Dr R E Baker, Mrs M A Brewster, A L Bull, R C Hancy,

P W Lambley, D I Richmond

Chairman: C Chapman, Falcon Cottage, 28 Hungry Hill, Northrepps, Cromer, NR27 0LN Tel 01263 576995 Mobile 07833463034 Email carl@wildlifetoursandeducation.co.uk

Secretary: Dr N W Owens, 22 Springfield Close, Weybourne, Holt, NR25 7TB

Tel 01263 588410 Email owensnw7@gmail.com

Assistant Secretary: F J L Farrow (address below)

Treasurer: R Maidstone, 8 Farrow Close, Great Moulton, Norwich NR15 2HR

Email robertwmaidstone@gmail.com

Assistant Treasurer: J Froud (address below)

Membership Committee: G Carrick, Treetops, 27 Cremer's Drift, Sheringham, NR26 8HY

Tel 01263 821358 Email carrigeor@aol.com

Secretary: J Froud, Westward Ho, 4 Kingsley Road, Norwich, NR1 3RB

Tel 01603 440444 Email jim@froud.org.uk

Programme Committee: Ms D L Cheyne, Wood House, Free Lane, Ditchingham, Bungay,

NR35 2DW Tel 01986 894277

Secretary: Dr S R Martin. 3 St John's Close, Hethersett, Norwich, NR9 3DQ

Tel 01603 810327 Email srmartin@uk2.net

Publications Committee: Dr A R Leech, 3 Eccles Road, Holt, NR25 6HJ

Tel 01263 712282 Email tonyleech3@gmail.com

Secretary: Dr J Parmenter, Alpha House, 37 Station Road, Reedham, Norfolk NR13 3TB

Tel 07710252468 Email jo.parmenter@tlp.uk.com

Editor. Transactions: Dr N W Owens (address above)

Editors, Bird & Mammal Report:

Birds: A M Stoddart, 7 Elsden Close, Holt, NR25 6JW

Mammals: F J L Farrow (address below)

Research Committee: A G Irwin, 47 The Avenues, Norwich, Norfolk NR2 3PH

Tel 01603 453524 Email tony.irwin@btinternet.com

Secretary: M P Ghullam, 5 Beech Drive, Cromer Road, North Walsham,

NR28 0BZ Tel 01692 402013 Email mylia@btinternet.com

Council:

Retiring 2018: A Edwards, J Emerson, S Neal, A Tegala

Retiring 2019: J Hubbard, D Nobbs, Dr P Taylor Retiring 2020: Teresa Frost, Tim Frost, T Hodge

Co-opted Members: To be invited following the first meeting of the new council.

Hon. Independent Examiner: Position vacant

The Newsletter, The Norfolk Natterjack, is published quarterly.

Editor: F J L Farrow, Heathlands, 6 Havelock Road, Sheringham, NR26 8QD

Email francis.farrow@btinternet.com

Cover image: Purple Emperor at Beeston Common (Francis Farrow) - See page 6

Norfolk & Norwich Naturalists' Society Recorders

General Francis Farrow 6 Havelock Road, Sheringham, Norfolk, NR26 8QD Mammals

E-mail: francis.farrow@btinternet.com

Badgers John Crouch 2. Chestnut Cottages, Guton Hall Lane, Brandiston, NR10 4PH

E-mail: norfolkbadgers@yahoo.co.uk

Bats John Goldsmith Barn Cottage, Wheelers Lane, Seething, Norwich, NR15 1EJ

E-mail: john@aurum-ecology.co.uk

Cetaceans Carl Chapman Falcon Cottage, Hungry Hill, Northrepps, Cromer, NR27 0LN

E-mail: Carl@wildlifetoursandeducation.co.uk

Birds Neil Lawton. 27 Swann Grove, Holt, Norfolk, NR25 6DP.

E-mail: dnjnorfolkrec@btinternet.com

Reptiles & Amphibians John Buckley 77, Janson Rd. Shirlery, Southampton, SO15 5GL

E-mail: john.buckley@arc-trust.org

Fish Freshwater Position vacant

> Marine Rob Spray & Dawn Watson 1 Town Houses, Yoxford Rd. Sibton.

Saxmundham, Suffolk IP17 2LX E-mail: hello@seasearcheast.org.uk

Molluscs (Land) Jake Stone 2 School Cottages, Walnut Hill, Surlingham, NR14 7DQ.

E-mail: norfolkmolluscs@outlook.com

Butterflies Andy Brazil 47 Cavell Road, Lakenham, Norwich, NR1 2LL Insects

E-mail: recorder@norfolkbutterflies.co.uk

Moths Jim Wheeler Iveygreen, Town St., Upwell, Wisbech, PE14 9AD

E-mail: jim@norfolkmoths.org.uk

Martin Collier The Hawthorns, 14 Park Road, Cromer, Norfolk NR27 0EA **Beetles**

E-mail: norfolk.beetles@gmail.com

Bumblebees Dr. Nick Owens, 22 Springfield Close, Weybourne, Holt, NR25 7TB E-mail: owensnw7@gmail.com

Grasshoppers & Crickets David Richmond 42, Richmond Rise, Reepham, Norwich, NR10 4LS

E-mail: richmond.42rr@btinternet.com

Lacewings, Sponge & Waxflies, Antlions, Alderflies, Snakeflies, Scorpionflies & Snow flea

Paul Cobb 82 Mauchline Road, Catrine, Mauchline, Ayrshire, KA5 6QJ

E-mail: paulrcobb@outlook.com

Dr J I T Thacker 38, Gladstone, Street, Norwich, NR2 3BH Aphids

E-mail: jit@caleopteryx.com

Dr Pam Taylor Decoy Farm, Decoy Rd, Potter Heigham, Gt. Yarmouth, Dragonflies

NR29 5LX E-mail: pamtaylor@british-dragonflies.org.uk

Parasitic Hymenoptera Graham Hopkins 15, Matlock Road, Norwich, NR1 1TL

E-mail: hopkinsecology@yahoo.co.uk

Sawflies Andy Musgrove Tendaba, The Street, Shotesham, NR15 1YG

E-mail: andy@bubo.org

Solitary Bees & Wasps Tim Strudwick 16, Beech Way, Brundall, Norwich, NR13 5ND

E-mail: timstrud@tiscali.co.uk

Doreen Wells 1, Cobden Terrace, Northgate Street, Gt. Yarmouth, NR30 1BT Ants (Joint recorders)

E-mail: wells doreen@hotmail.com and

Anna Jordan, Plough Cottage, Rode Lane, Carleton Rode, Norwich, NR16 1RQ

E-mail: norfolkants@yahoo.com

Stuart Paston, 25 Connaught Road, Norwich, NR2 3BP Hoverflies

E-mail: stuartpaston@yahoo.co.uk

Terrestrial Heteroptera (Land bugs, excld. Aphids, leaf-hoppers etc.)

Rob Coleman, Springfields, North Walsham Road, Felmingham, North Walsham,

NR28 0JU E-mail: mail@rob-coleman.co.uk

Froghoppers / Treehoppers and Leafhoppers

Dr. Tony Irwin (see other insects below)

Other Insects Dr Tony Irwin 47 The Avenues, Norwich, Norfolk, NR2 3PH

E-mail: dr.tony.irwin@gmail.com

Spiders Phillip Collyer, 9 Lowther Road, Norwich, NR4 6QN

E-mail: pipcollyer@yahoo.co.uk

Harvestmen Peter Nicholson, Greystone House, Castle Howard Rd, Malton, North Yorkshire

YO17 7AT E-mail: petenich@btinternet.com

David Hunter The Saltings, Holt Road, Gresham, Norfolk NR11 8AD Woodlice & Pseudoscorpions

Centipedes & Millipedes E-mail: david.hunter37@outlook.com Freshwater Invertebrates Dr Dan Hoare, Wheatfen Broad, Covey Lane, Surlingham, Norwich, NR14 7AL

Email: daniel.i.hoare@gmail.com

Marine Invertebrates (incld. Molluscs) Rob Spray & Dawn Watson 1 Town Houses, Yoxford

Road, Sibton, Saxmundham, Suffolk IP17 2LX Marine Algae (Seaweeds)

E-mail: hello@seasearcheast.org.uk

Galls Anne Hickley, 23 Biggin Hill Way, Watton IP25 6NZ

E-mail: anne@penguinofficeservices.co.uk

Bob Ellis 11, Havelock Rd., Norwich, NR2 3HQ,

Vascular Plants East Norfolk E-mail: bob@elymus.demon.co.uk

> West Norfolk Richard Carter 67 Doddshill, Dersingham, King's Lynn, PE30 4DJ

> > E-mail: rcarter@rsk.co.uk

Mosses & Liverworts East Norfolk Mary Ghullam 5, Beech Drive, Cromer Road, North Walsham, NR28 0BZ

E-mail: mylia@btinternet.com

West Norfolk Robin Stevenson 111, Wootton Rd., King's Lynn, PE30 4DJ

E-mail: crs111@talktalk.net

Lichens Peter Lambley The Cottage, Elsing Rd., Lyng, Norwich, NR9 5RR

E-mail: plambley@aol.com

Funai Dr Tony Leech 3, Eccles Road, Holt, NR25 6HJ E-mail: tonyleech3@gmail.com

Other Taxa Norfolk Biodiversity Information Service, Community and Environmental Services,

6th Floor, County Hall, Martineau Lane, Norwich, NR1 2DH

E-mail: nbis@norfolk.gov.uk

Referee:

Alex Prendergast, Bramble Cottage, Low Road, Tasburgh, NR15 1AR Charophytes

E-mail: mushroom alex@hotmail.com

Special interest groups

NNNS Photographic Group:

B D Macfarlane, 10 Peregrine Road, Sprowston, Norwich, NR7 8JP Tel 01603 408647 E-mail: david.brian.macfarlane@gmail.com

For Microscopy enquiries:

S M Livermore, 70 Naseby Way, Dussingdale, Norwich, NR7 0TP Tel 01603 431849 E-mail: stephenlivermore@outlook.com

Other Special Interest Groups, although not part of the NNNS, have similar aims to that of the Society:

Norfolk Amphibian & Reptile Group: P Parker, White Row Cottages, Leziate Drove,

Pott Row, King's Lynn, PE32 1DB Tel 01553 630842 E-mail: philipparkerassociates@btconnect.com

Norfolk Barbastelles Study Group: E-mail: enquiries@norfolkbarbastellesstudygroup.org

Norfolk Bat Group: J G Goldsmith, The Barn Cottage, Seething, Norwich, NR15 1EJ Tel 01508 550003 E-mail: john@aurum-ecology.co.uk

Norwich Bat Group: M Fielden E-mail: norwichbatgroup@gmail.com

Norfolk Flora Group: West Norfolk: S Harmer / R Carter, 67 Doddshill, Dersingham PE31 6LP Tel 07711870553 / 07711870554 E-mail: sharmer@rsk.co.uk / rcarter@rsk.co.uk East Norfolk: R W Ellis, 11 Havelock Road, Norwich, NR2 3HQ Tel 01603 662260

Email: bob@elymus.demon.co.uk

Norfolk Freshwater Study Group: Dr D Hoare, Wheatfen Broad, Covey Lane, Surlingham, Norwich NR14 7AL Tel 01508 538157 E-mail: daniel.j.hoare@gmail.com

Norfolk Fungus Study Group: Dr A R Leech, 3 Eccles Road, Holt, NR25 6HJ Tel 01263 712282 E-mail: tonyleech3@gmail.com

Norfolk Lichen Group: P W Lambley, The Cottage, Elsing Road, Lyng, Norwich, NR9 5RR Tel 01603 872574 E-mail: Plambley@aol.com

Norfolk Moth Survey: K G Saul, Albion, Main Road, Filby, Gt Yarmouth, NR29 3HS E-mail: kensaul@stone-angel.co.uk

Norfolk Spider Group: P Collyer, 9 Lowther Road, Norwich, NR4 6QN Tel 01603 259703 E-mail: pipcollyer@yahoo.co.uk

Norfolk & Suffolk Bryological Group: East Norfolk: Mrs M P Ghullam, 5 Beech Drive, Cromer Road,

North Walsham, NR28 0BZ Tel 01692 402013 E-mail: mylia@btinternet.com West Norfolk: C R Stevenson, 111 Wootton Road, King's Lynn, PE30 4DJ

Tel 01553 766788 E-mail: crs111talktalk.net

Toad-in-the-hole....

How was the summer for you? For most of the main natural history Orders it seems to have done reasonably well - at least locally in North Norfolk. There appeared to be a slow start and dragonflies and some early butterflies like Common Blue did give some cause for concern but all went well as summer advanced. There has been some great sightings such as Purple Emperor, Musk Beetle and Thrush Nightingale, which are reported upon in this edition. If you prefer more down to earth wildlife then check out part 1 of the Mole. Speaking of Mammals please see page 18 for the announcement of the new County Mammal Recorder. My thanks to all contributors for their notes, images and drawings.

Unusual hosts for Common Broomrape

Roger Jones

I have had a fascination for broomrapes *orobanche sp* since first encountering several species in the Channel Islands whilst on holiday there 30-odd years ago. There aren't many species in Norfolk. It seems to be only Yarrow Broomrape *orobanche purpurea*, Knapweed Broomrape *orobanche elatior* and the somewhat ubiquitous Common Broomrape *orobanche minor*. The 1999 Flora of Norfolk refers to two other species, not recorded for many years. Interestingly, the BSBI database has a couple of elderly records for Ivy Broomrape *orobanche hedera* in Norfolk. This may be pertinent to what follows.

Common Broomrape is known to be rather catholic in its tastes for host plants. Most commonly, it is legumes and composites though many others are known. I have had it parasitising cultivated geraniums in my garden on at least two occasions.

I live close to The Rosary Cemetery on the East side of Norwich. I have been looking at the wildlife there for quite some years and have noted the odd Common Broomrape on several occasions. In 2016, I became involved in Norfolk Wildlife Trust's County Wildlife Action project. One of the chosen survey sites was The Rosary and I volunteered as a surveyor. No longer was I casually looking at flowering plants etc. Rather, I was searching every nook and cranny. In this context, I spotted quite a number of Common Broomrapes.

The first one of interest was on the top of a brick and flint wall. That location alone was rather unusual. Especially when the only other plant up there was Ivy. Had I found Ivy Broomrape? I am certain that the answer to this question is no. The published BSBI maps are at hectad scale; it's difficult to be certain but I don't think the old record encompassed The Rosary. Further, over the years I have seen Ivy Broomrape in other locations outside Norfolk. I am sure I was not looking at Ivy Broomrape in The Rosary.

Secondly, there were a number of Common Broomrape spikes in a verge at the foot of the wall. There were only a few scruffy plants in this verge - none of which were classic Common Broomrape hosts - things like Green Alkanet, Broadleaved Dock, Garlic Mustard, Sow-thistle. Summarily, I took the host plant as Green Alkanet. Interestingly, Winter Heliotrope has been spreading invasively in The Rosary and there was some in the verge in question.

I "filed" my thoughts and looked again in 2017. By coincidence, the peak flowering period of the broomrapes coincided with the event called "Wild About the Rosary" on 10 June. Several NNNS members were present recording various species. There were a number of Common Broomrape

records but no-one questioned the host plant.

There was a Common Broomrape spike on top of the wall again. The host plant just has to be Ivy - there is nothing else there (photo 1).

The verge below the wall now contained almost nothing other than Winter Heliotrope. Oh, and 20-odd spikes of Common Broomrape. At this point, I was coming to the conclusion that Winter Heliotrope was the host (photo 2). Time for a little "forensic gardening". I selected a suitable broomrape spike surrounded by Winter Heliotrope and gently started digging. There is no question that the broomrape was attached to the root of Winter Heliotrope (photo 3). A little more digging and snipping and I had a piece out of the ground (photo 4). QED - Common Broomrape will use Winter Heliotrope as a host.









Photo 3.



Photo 4.

Images: Roger Jones

THE TRIALS OF (A SWALLOWTAIL'S) LIFE

Kevin Radley

In June, whilst waiting on The Fen for sunshine and Swallowtails to re-appear, I happened to notice the industrious activities of a Drinker moth (*Euthrix potatoria*) caterpillar which had escaped the attentions of marauding Wheatfen cuckoos, to whom they appear to be a delicacy, in the process of spinning it's cocoon.







This led me to ponder the relative merits of a 'system' where the pupa, once transformation is completed inside, would remain almost impregnable to most insect predators; and unappetizing to any mammal or bird that may come across it ensconced in its armoured silken tent, for the few weeks until emergence.

Compare this to the Swallowtail butterfly, whose naked chrysalis is supported by a mere thread -albeit a very strong one- to it's respective stem, facing possibly ten or eleven months, including over-winter, reliant solely on cryptic camouflage for protection.

Then, equally I suppose, the Drinker will see through those same cold, dark months as a vulnerable, small instar caterpillar. I have found as many as a dozen of these larvae deep down among the myriad grass-like leaves of a single tussock-sedge (*Carex paniculata*) in late November, trying to escape prying eyes and freezing cold.

Swallowtail chrysalis

Images: Kevin Radley

I am left with a feeling that if only the two species could get together and swap notes, their respective empires would flourish greatly: surely a cocooned Swallowtail chrysalis, similar to the Drinker, would evade the heavy losses that this species incurs each year in it's pupal state. Perhaps one day, through the evolutionary process, they may discover the wonders of Social Media and head toward World domination. Well, they'd probably make a far better job of it than a certain bi-pedal mammal currently running the show...

The British sub species (britannicus) of Swallowtail, with it's penchant for Milk Parsley (Peucedanum palustre) which grows in damp, boggy places, faces yet another menace to its well-being: fungi possibly destroy more chrysalis than is normally considered. Also this year, thankfully when most of the larvae had



Papillio machaon twitteratii

pupated (mid-August), I noticed a high proportion of Milk Parsley plants on The Reserve had begun to 'die back' with a fungal infection, whereby the



Milk Parsley 'die back' Image: Kevin Radley

flowering heads and a portion of stem a few inches below it droop, turning withered and brown, before any seed is produced. This condition has been observed in some plants at Wheatfen in previous years, but not to the extent seen on one fen in particular this year where the vast majority of plants had succumbed.

Incidentally, a fen area a couple of miles away, on another nature reserve where a good head of Milk Parsley plants were to be found, did not seem to suffer from this ailment.

Interestingly, I happened to come across an Eastern Daily Press cutting for it's, In the Countryside column by Ted Ellis dated August 29th 1966, entitled Butterfly Food Peril. Wherein he is horrified to discover the seed crop of Milk Parsley on his, "best Swallowtail marsh", totally destroyed by a, "truly lethal parasitic fungus." Citing the, "enemy", as a, "species of Diaporthe much like the one which attacks Ribwort Plantain." He

finishes the article with the rather dour note: "if it should prove to be widespread and capable of epidemic pressure, in two or three successive years it is bound to have a very severe effect on the conservation of both plant and butterfly."

Time will tell if they manage to survive the assault on them this time around. I certainly hope so, but it does illustrate the precariousness of some creatures' existence.

Butterfly Delight

Hans Watson

These days, it seems more and more difficult to discover something to lift the spirit, and that confounds what seems to be daily depressing news, that species are in decline. On a warm and sunny day in July, I called into Holt Country Park for a walk to the Lowes, and was amazed at the number of Silver-washed Fritillaries and White Admirals that I saw along the short walk from the car park to the pond. At times, eight or more Fritillaries were in view



at the same time, nectaring on bramble flowers. Several copulating pairs of Fritillaries were attracting other males, so that occasionally there seemed to be a fluttering 'ball' of butterflies. With all the Fritillaries, Red Admirals, White Admirals, Commas, Ringlets, Meadow Browns, Gatekeepers and others, the brambles seemed to be attracting butterflies from a large area, and was a delight to see.





I understand that Silver-washed Fritillaries are doing rather well at other sites in North Norfolk, and are even being seen in one or two places in the Yare Valley. It would be very interesting to know if global warming is aiding this butterflies fortunes, and whether I can look forward to any of its relatives colonising Norfolk.

Images: Hans Watson

Purple Emperor Sighting

Francis Farrow





Around mid-July there was some exciting news for Norfolk Naturalists with two sightings of Purple Emperor butterflies in Sheringham Park. These impressive butterflies (second largest in UK) have not been seen in Norfolk since they were resident in the early 1970s (apart from some recent infrequent sightings). Further to the Sheringham Park sightings a third sighting was made on Beeston Common, near Sheringham on 31st July.

The dedicated website for the Purple Emperor (www.purpleempire.com) states in its introduction 'This is not an insect you will stumble upon, unless you are blessed with extraordinary luck.' I believe I was extremely lucky as I literally stumbled upon a Purple Emperor on the ground. My first thoughts of a Peacock were dismissed instantly as I could clearly see white side flashes on the underwing - White Admiral? No not on the ground, it had to be a Purple Emperor. Heart pounding, I fumbled for the camera, which was still in its bag and took a few rapid shots before moving closer.

This was a female, which is largely brown with white diagonal wing markings, not the impressive iridescent purple male. The butterfly was on a path less than two metres ahead of me imbibing mineral salts from the soil. This was my first ever sighting and as I had missed out on an earlier Butterfly Conservation

excursion to Fermyn Wood in Northamptonshire I was particularly happy (I should say ecstatic!) to have found one on my local patch. Apart from moving around slightly while still imbibing (the striking lemon-yellow proboscis clearly seen) the butterfly remained with its wings closed for about 20 minutes. Then there were a few tentative movements of its wings before finally the butterfly spread its wings, revealing 'eye-spots', before taking off and ascending to around 10 metres after which, it glided some eight metres down to around three metres before flying off strongly to the south-west (the direction in which Sheringham Park lies). This last act was a great thrill - such an impressive insect.

One theory is that the recent Norfolk sightings are casual migrants, individuals from re-introduced Suffolk colonies that have done well in the last 10 years rather than deliberate releases of captive-bred stock. Derek Longhurst from the 'purple empire' website thinks the Purple Emperor has had a good season with a number of range extensions being reported. Hopefully enough of these large and beautiful butterflies will arrive and start their own colonies in Norfolk woodlands.

Hornets' nest at Flordon

Peter Aspinall

In mid-August I was on Flordon Common admiring a large Garden Spider when suddenly a Hornet crashed into its web. I soon realised that this wasn't an accidental collision, it was an attack! The Hornet seized the spider, nipped off its legs and one by one they fell to the ground. The Hornet escaped easily from the web, carrying its prey, and flew off high above the Common towards the gate.

A few days later when I walked passed the big Ash tree near the gate, I paused to look up at the two woodpecker holes high on its trunk. Sometimes a Nuthatch uses one as a nest site, plastering mud round the hole, but that hasn't happened this year. I could see that the lower hole looked 'different'-the cavity looked lighter - and with binoculars I could see why. There was pale coloured comb inside with a Hornet sitting on it - here was the Hornets' nest! I looked at it every day. After three or four days the hole was completely filled by the comb and then gradually the nest grew on the outside of the trunk. The photograph shows what it looks like now, in mid September, about a month

after I found it.

We have had some chilly nights - last night the temperature dropped to 4 degrees - but the Hornets are still as active as ever and continuing to extend their nest downwards. It is difficult to estimate its size, but it must be 60cm, or more, long. I like to peer up into the nest through the opening in the bottom and with binoculars I can sometimes see a verv large gueen. Small bits of debris fall from the nest and the Hornets make their way to the bottom of it to squirt out their faeces.



المسملاء المسملا

Imaga: Janat Nagal

There is another Hornets' nest on the Common, in a very different location. It is underground and the Hornets there have trimmed back the grass that was round the entrance. I have seen a lot of Hornets on the Common this year, but very few wasps.

Watching the Hornets and their nest in the tree has given me great pleasure......and now I wait to see what will happen as winter approaches.

SOME RECENT EXPERIENCES AT STRUMPSHAW

Tony Howes

Mainly due to lack of time to travel further afield, plus the up and down weather we have been having lately means I have spent more time at my local Strumpshaw Fen reserve. I take either the macro gear for insects, or the 600mm for hirds and mammals

Water Rail

The fen hide is best in the mornings as the light is then behind you, it can be very interesting there. Since the vegetation was cut back in front of the hide a few weeks ago Water Rail activity has been more evident, always very elusive and quick in their movements these birds of the reed-beds have been giving tantalizing glimpses as they move, usually running, along the shore line, you have to be quick in your reactions to get



them in the camera's view finder. You are more likely to hear them calling from the thick fen vegetation, the high pitched, pig like squealing can be rather

startling when heard at close

range.

Kingfishers have been frequent visitors lately, coming to the near perch to fish, or hovering over the open water. it's always a thrill to see one, usually proceeded by a high pitched whistle as they fly low



Kingfisher

and fast over the water. Looking at the perch closely one can see it's studded with silvery fish scales, the result of the unfortunate prey being bashed several times before being swallowed.

Herons and Little Egrets drop in occasionally, they will wade in the water always on the lookout for a meal. If a Cormorant happens to



Images: Tony Howes

come up the channel fishing, any Heron present will take great interest and often follows the black marauder to take advantage of any fish disturbed in the commotion.

Although most of the Marsh Harriers present over the summer months have now left for pastures new, there are a few seen over the reserve almost daily. Some of these are wing-tagged juveniles, if they come close enough for an image to be taken then often the tag can be identified, and the Warden can tell where and when it was tagged, all very useful information.

Last, but not least, I paid several visits to the small 'Dipping pool' near the meadow, a Water Vole (possibly two) had taken up residence there, and was giving good views at times. It took three visits before I was lucky and had the chance to photograph it in a favourable situation, these

charismatic mammals ('Ratty' of 'Wind in the Willows' fame) are much rarer now than they were. Hopefully their numbers will improve now that mink, their main predator, seem to be less numerous.



Top: Grey Heron

Middle: Little Egret

Bottom: Water Vole

Images: Tony Howes

Notes from the North Coast

John Furse

10th August

A Thrush Nightingale was found by James McCallum and present only one day. It was accompanied by a Pied Flycatcher and a Redstart. It looks to have been the 13th record for Norfolk, the last being in 2012. It is the second for Gramborough Hill, Salthouse; the previous one was in 1992. It was also the earliest August record (by two days) for the UK.



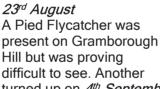
12th August

A young Sand Martin sitting on the fence at Gramborough Hill - probably deciding when it should fly south!



20th August

A young Kittiwake heads inland over Gramborough Hill.



turned up on 4th September, which was more confiding.



Images: John Furse



3rd September

A Whinchat was present on Gramborough Hill in the morning.

5th September

A Dotterel turned up just along the coast at Cley.





Image: John Crouch

Dwarf Thistle

A group of the uncommon Dwarf Thistle (*Cirsium acaule*) was found on some chalk grassland in the Beachamwell area, West Norfolk on 1st August by John Crouch.

This plant is generally restricted to chalk grassland in the UK and the NBN Map shows this well.



Talpa europea, the European mole, as seen by a reformed Homo sapiens trapper-predator (Part 1).

John Vincent.

A mole is a mole is a mole insofar as impact on the British mainland layman is concerned, rarely seen but well-known nevertheless. Other countries have other moles. In the Western Palearctic Europe there are a further 7 species – strangely Ireland has no moles. *Talpa europea* has been with us for some 350,000 years, an estimated 31 million of them. It deserves respect, but sadly over the years, especially from the mid-1500's on, *H. sapiens* has been its major predator with too little justification for so being.

On our small estate in Bergh Apton, in the 1930's and 1940's, I was one, learning from my grandfather as he no doubt learned from his, using the old scissors – type trap. There are tricks and dodges I will not bore you with – sufficient to say that I was entrepreneurial enough to skin my catch and sell the cured pelts to another older and smarter entrepreneur, Mr Harry Sayers, who brought fresh sea-fish to our door by pony and trap.

Over the bygone years bizarre uses have been made of various mole parts in the fields of folk-lore medicine and garment fashion, instance:

- farmers kept moles' 'hands' in silk bags as talismans for good luck and to ward-off toothache, epilepsy and scrophula;
- the supplying of mole pelts (the basic unit was a 12.5cm by 10cm prime cut) to the fashion industry escalated from the 16th Century to the early 20th Century, crashing post world-war 1, but recovering and lingering on to the late 20th Century before succumbing to manufactured substitute materials.

No additional little earners for Mr Harry Sayers there – he was far too late on the scene for the folklore medicine jamboree.

Bergh Apton was the only place I have ever seen a live *T. europea* above ground, making its way on a hot summer's mid-morning to the artificial sunken water source (see *Natterjack* no. 131 *The fatal lure of water*). *T. europea*, regrettably, was amongst the small drowned mammals found during the regular cleanings-out of the old copper. Since I left predating for more scholarly pursuits, what more have I learned of *T. europea*? A very brief run-down of the salient points gives:

 Habitat. Mostly too obvious to need covering, except to pin-point grazing land, greens and gardens as the main 'problem' areas. Altitude restriction is ca. 900m in British mainland, ca. 2,400m in the Alps.

My personal experience at The Old Rectory, Edingthorpe, has been no problem on lawns, small activity in the low-lying recreational lightly-wooded area, but activity as shown by surface runs at the roadside base of the boundary wall, and on a small patch of lawn on the inner side of the wall as shown by extensive redistribution of flowering bulbs/corms (but no molehills).

What I have noticed is the possibility of church graveyards in the countryside becoming isolated islands of intense mole activity in a frequently disturbed arable agricultural land surround. Edingthorpe church graveyard is one such, appearing to the uninitiated eye to be a veritable bustling mole 'county town' out in the boondocks. But caution is needed here. Atkinson gives a figure of mole density in a favourable

grazing land site of 10 moles/ ha. as a limiting high. But he is probably reckoning on visible molehills being of the order of <5-<10m apart, whereas in Edingthorpe church graveyard they are packed in a ca. 0.5ha site at a cheek by jowl 10cm spacing soil rim to soil rim. More of that later, but first the completion of the necessary brief run-down on *T. europea* as promised:

- Sight. Poor but can detect large entities, predators or prey.
 Restricted to the blue end of the spectrum.
- Hearing. Poor, restricted to low frequencies.
- Smell. Recently shown that the smell sense is in stereo.
- Tactility. Sensitive whiskers and microscopic sense organs on the snout combine with smell to make a major contribution to detection.
- Vibration detection. Not much mentioned but must be significant.
- Diet. Mostly earthworms Lumbricus terrestris, 6/day required.
 Otherwise broadly catholic meat-eating insectivores. Carnivorous given the opportunity. L. terrestris is immobilised and stored when plentiful. T. europea needs to consume more than half of its bodyweight in food per day.
- Life span. Possibly 2-4 years, with a high of 7 years.
- Communality. Males and females live solitarily and independently in their own territories, which they vigorously defend.
- Breeding. One litter per annum, average 3-4 young. Gestation ca. 4 weeks. Lactation 4 weeks. Weaning 3 weeks. High loss of young males to predators, say 50%, when forced off mothers' territories.

Atkinson quotes a generally accepted norm for an undisturbed population of moles to be:

Population % 60 20 10 5 3 2 1 Age (years) 1 2 3 4 5 6 7

A young mole dispersing in the summer is an active breeder in the following spring, if he/she survives.

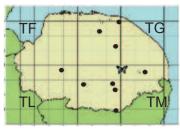
So there you have it. For T. europea both genders are known to be active day and night, in discrete ca. 4-hour periods, interspersed with sleep, the numbers varying with time of year, and out of the window for males when searching for females to cover in the spring breeding season. A T. europea adult mole is a living beautifully built for purpose drilling machine with its front-end extravagantly strengthened skeletally and muscularly, and a spine sufficiently flexible to be able to turn (or somersault) in the tunnel it is drilling to evacuate the spoil up to and out onto ground level, via a disposal venting tunnel. But there is more, much more, It must be able to, and is able to. navigate 'blind' in three dimensions in a dense light-excluding medium. It can locate food in the same medium, mostly, it is believed, in the form of random falls into its tunnels, but maybe boosted by direct scenting location. It can tolerate and work with the diminished oxygen levels in its tunnels. It has a very limited reliance on water direct - most requirements seem to be met by moisture obtained from its food. Nevertheless droughts are difficult periods for moles, forcing *L. terrestris* deeper to damper conditions. A tunnelling rate, inclusive of removing spoil, has been generalised at ca. 4.5 hours for 1m of tunnel (Atkinson gives a figure of 1 hour/1m of tunnel).

Part 2 will be presented in the February 'Natterjack' no. 140 and will look at moles particularly in the Edingthorpe churchyard area and also some conservation thoughts.



Reports





Thompson Common

16th July 2017

A small, but select, group of seven gathered at Thompson Common for the dragonfly walk. Conditions on arrival were overcast and it wasn't long before the first shower of drizzle. Despite that the first pond, just beyond the (mosquito infested) woodland yielded several species. We caught and examined both sexes of Scarce Emerald



Damselfly, as well as Azure Damselfly, Ruddy Darter and an old, tatty Fourspotted Chaser. The habitat here was mostly flooded grass with just a small area of open water at one end.

At the second pond we added a female Emperor ovipositing (egg-laying) and more of the species we had already seen. It wasn't until we reached the third and largest waterbody in the area that we found our first common Emerald Damselflies. Now we were able to

compare the subtle differences between these two, closely related emerald species. Just a little later, on a sallow on the edge of the pond, Derek Longe was the first to

spot the scars from Willow Emerald Damselflies. These scars are created when the female damselfly pierces the bark of a twig with her ovipositor to lay her eggs beneath it. Our visit was a little too early for Willow Emeralds to be flying, so these scars were at least a year old.

Taking a detour to our fourth pond we found newly emerged Common Darters flying up into the trees and a Musk Beetle feeding from some thistle flowers. Another Emperor was ovipositing in the fourth pond and nearby there were several more of the darters and damselflies we had already identified. Close to this final pond we found a female Wasp Spider in her distinctive web, before more persistant drizzle drove us back to our cars for a late lunch.







NNNS members at Thompsom Common

Images: Hans Watson

In the afternoon, four of us decided to brave the ominous clouds and head down to Thompson Water. Apart from a cleared section in the middle, this lake is now covered in wall-to-wall Water Soldier plants. These may be bad news for other creatures, but the dragonflies love them. There were swarms of Azure and Emerald Damselflies over the surrounding bushes, plus lots more Common Darters emerging from the water and taking their maiden flights. There was even one lone and late Norfolk Hawker briefly on the wing. By mid-afternoon the clouds were very threatening once again and just before I reached my car, being the last to leave, the heavens opened in earnest to conclude our outing.

Pam Taylor

'WILD FLOWERS REVEALED': MARSHAM & CAWSTON HEATHS

30th July, 2017

Despite the non-availability on the day of the Marsham Heath forestry car park scheduled as our meeting-place, some 24 members of the Society and Norfolk Flora Group gathered undeterred on a fine morning following rain overnight for the thirty-first field meeting of the 'Wild Flowers Revealed' series. welcomed us with an account of the different kinds of heathland to be found in the county and more widely. Though an enormous acreage of heathland has been lost locally and nationally over the last 200 years, owing in part to enclosure and other factors such as the loss of rabbits from myxomatosis. Marsham and Cawston Heath SSSI remains extensive, covering some 125 hectares, and Marsham, owned by the parish and managed by the NWT, was resplendent on our arrival with mingled and widespread red-purple Bell Heather and bright yellow Gorse in full bloom. As well as wooded and afforested areas, the SSSI embraces the largest area remaining in Norfolk of heather-dominated heathland of a locally-scarce type with affinities to the Atlantic coast heaths of western Britain. This dry heather heathland on glacial sands and gravels, subject to generations of grazing and burning, has developed a diverse flora with. I understand, most if not all the 12 indicator species of the H8 Plant Community (Calluna/Ulex gallii heath) present and also a rich assemblage of lichens, and the presence of interesting reptiles and birds (the latter including nightjars and woodlarks). Remarkably, Western Gorse *Ulex gallii* is co-dominant with Heather or Ling Calluna vulgaris and Bell Heather Erica cinerea on stretches of Marsham Heath, where smaller quantities of Cross-leaved Heath Erica tetralix are also found; on contiguous Cawston Heath to the west, Ling and Bell-heather are co-dominant. In the afternoon session, another uncommon and declining yellow-flowered undershrub of heathland often growing with heather, the nearthreatened Petty Whin Genista anglica, was also found.

As is often the case with field meetings, the party first lingered in the (conveniently vehicle-free) rough car park area with shallow pools, damp and scrubby areas and a rather heterogeneous flora, where Bob Leaney and others distinguished American Willowherb *Epilobium ciliatum* from the more vulnerable Hoary or Small -flowered species, *E. parviflorum*. Also seen was Common Cudweed - a 'Norfolk speciality' (which was to be followed much later on a track with damp patches and temporary puddles up on the Heath by plants of Small Cudweed and Marsh Cudweed). Also in the car park area were Bristly Oxtongue, Lesser Spearwort, Catsear, Yellow Archangel, Herb Bennet, Pendulous Sedge, Thyme-leaved Speedwell, Wood Sage and Waterpepper.

A strong contender for 'plant of the day' twining anti-clockwise among the gorse and heather of Marsham Heath proper, if only because of the interest it aroused and the keen searching it induced for further occurences, was the rootless, parasitic annual Dodder *Cuscuta epithymum*. I am indebted here to Jo Parmenter for her photographs of the plant and information on it: she refers to its long tangly red-pink

stems 'rather like strawberry shoelaces' which 'lovingly entwine about the host plant', and very pretty pink flowers in clusters. but also to the fact that its seed sprouts on bare ground at or near the surface of the soil, from where the seedling must reach its host plant quickly or die within a week when its own food resources are exhausted. It is said to grow towards the smell of the host plant! The shoot's haustoria (sucker-like absorptive pads) attach themselves to the host to extract nutrients. A note in Harrap's Wild Flowers informs us that Dodder, though an annual, can bring about the growth of galls on perennial hosts where parasitic tissue is able to overwinter, developing new Dodder plants the following spring. In Britain the name 'Dodder' orginated as a Middle English word in use from at least as far back as the 1200's, pre-dating the other use of 'Dodder' in English as meaning 'to dither, totter or teeter', traced back only to the early seventeenth century. There are or were any number of regional and local alternative names in England for Dodder, including 'Hairweed' and 'Red Tangle' in Norfolk, but its parasitic and apparently strangulatory



Dodder

nature made it, despite the winsome looks of its petite flowers, a diabolic plant: 'Devil's Guts', 'Devil's Net', 'Devil's Thread', 'Hellbind' and 'Hellweed' were all attached to it at different times and places, though 'Clover Devil' in Somerset may possibly have been applied more to Common Dodder's even-more-local bigger brother, Greater Dodder *Cuscuta europaea,,* of somewhat more catholic tastes, preferring as it does mainly nettles but also a number of other herbaceous plants. There were only 12 nineteenth-century Norfolk records for this larger species, all on herbaceous plants and gorse, and it hasn't been re-found in the county in recent times so far as I know.

Among other plants seen were Heath-Grass, Heath Bedstraw, Mat Grass, Early and Silver Hair-Grass, and some attractively neat and compact cushions of Sand Spurrey in full flower. More open, mossy areas on the Heath had plentiful Pill Sedge and Heath Star-moss *Campylopus introflexus*, which originated in the southern hemisphere - possibly South America - with the first European observations in England and France made in 1941 but found throughout the UK and Ireland by the 1960's. A patch of Tutsan was seen in a wooded area as was Wild Strawberry. Bill Mitchell further reports that, moving into a clearing, Squirrel-tail Fescue, Heath Groundsel, Birdsfoot, Heath Wood-rush, Lesser Burdock, Trailing St. John's Wort, Red Bartsia and Slender Parsley Piert were all seen, and in a large puddle encountered on re-entering a patch of woodland, plants of Bog Pondweed were present but of a light green colour rather than the usual reddish hue. Nearby was a fine specimen of Golden-scaled Male Fern and, a little further into the wood, a pond with a large patch of Marsh Cinquefoil growing out of the water.

The party moved on to Cawston Heath after lunch, where Bill Mitchell reports the finding of the hawkweeds *Hieracium ubellatum* (Narrow-leaved Hawkweed) and *H. sabaudum*. On a more grassy area were Common Centaury, Smooth Tare, both Slender and Hairy St. John's Wort, Haresfoot Clover, Blue Fleabane, Small

Cudweed, an Eyebright *Euphrasia nemerosa*, and several Cinnabar Moth caterpillars on Common Ragwort

Among insects seen during the day were Gatekeeper, Meadow Brown and Large White butterflies and a Brown Hawker. Birds seen included a Hobby flying and two male stonechats on gorse bushes. James Emerson photographed a Bog Bushcricket and Heath Assassin Bug, and also the gall *Stenopterapion scutellare* caused by a type of weevil and found by Robert Maidstone on Western Gorse, which James rightly pronounces 'a very good county record'. On entering Cawston Heath, the party encountered two male Silver-studded Blue Butterflies, the first to be seen in this area since the species was introduced two years ago. Many thanks to James and Robert and others mentioned above for contributing finds and illustrations to this account, and to Bob Leaney, Jo Parmenter, Bob Ellis and others for organising a well-prepared and well-attended joint visit, rewarding on a social as well as a botanical and natural-history level.







Bog Bush-cricket

Heath Assassin Bug

Weevil gall: Stenopterapion scutellare

Images: James Emerson

New County Mammal Recorder for 2018



Following the note in '*Natterjack*' no 137 the Research Committee received some five enquires regarding the position of Norfolk Mammal Recorder for 2018. The Committee are pleased to announce that the successful appointee is Richard Moores. Richard will be able to answer your mammal queries and take any sightings from January 1st 2018. His contact details are as follows:

Richard Moores, Horseshoe Barn, Halvergate, NR13 3AJ Email: norfolkmammalrecorder@outlook.com

Please continue to send any 2017 mammal records to the present County Mammal Recorder: Francis Farrow (See '*Natterjack*' recorders page for details).

Norfolk & Suffolk Bryological Group Meetings 2017

Beginners are always very welcome - the only equipment needed is a handlens (x10 or x20) and some paper packets (old envelopes are fine) for collecting specimens. Meetings begin at 10.30am and will only be cancelled if there is snow or hard frost. The Norfolk and Suffolk Bryological Group (a sub-group of the British Bryological Society) is an informal interest group with no formal status or legal identity. All attendees at the events set out in the annual programme participate in those events entirely at their own risk and no responsibility for any injury loss or damage shall lie against the organisers of the events. The distribution of the programme of events is not intended to and does not form any contract or any other legal relationship between the organisers and the participants.

Sunday 12 November 2017 - Lyngate Farm, just north-west of North Walsham. Turn onto the track heading NE at TG 2683 3184 - see sign marked BBS. Mix of grassland, trees, lake, buildings and gardens.

Sunday 26 November 2017 - Cockthorpe Common and onto Stiffkey, calcareous grassland and then coastal/salt marsh vegetation. Meet at Cockthorpe church at TF 981 422.

Saturday 16 December 2017 - Potter Fen and Honeypot Wood - both SSSI sites west of Dereham. For Potter's Fen - park along the residential section of the busy Stone Road anywhere from TF 982 119. Honeypot Wood in the afternoon - there will be spaces in the wood and at the entrance around TF 935 143. Further directions will be given at Potter's Fen. We will need to park carefully in order not to block the farm access.

British Bryological Society Recorders:

Robin Stevenson, 111 Wootton Road, King's Lynn PE30 4DJ. 01553 766788. crs111@talktalk.net (West Norfolk)
Mary Ghullam, 5 Beech Drive, North Walsham NR28 0BZ. 01692 402013.

mylia@btinternet.com (East Norfolk)

01092 402013.

mylia@btinternet.com (East Nortolk)

Richard Fisk, 35 Fair Close, Beccles, Suffolk NR35 9QR. 01502 714968. richardjfisk@waitrose.com (Suffolk)

Programme: Chris Roberts, 21 The Street, Burgh-next-Aylsham NR11 6TP. 01263 732772 chrisroberts_500@hotmail.com (please note the underscore before 500) Mobile: 0788 7914047

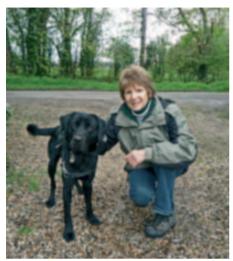
Mrs Ruth Race A M A., F.L.S

It is with deep regret that the Society was made aware of the death of Mrs Ruth Race formerly Barnes at the beginning of July this year. Ruth had been a member of the society since 1964 and she was until her demise the Society's longest living member. Ruth was president of the Society for the year 1964/65.

Our best wishes go to her family.

Carl Chapman Chairman

A Tribute to Diane Robinson



Diane and her beloved Ben Image: Janet Negal

Diane (who died on June 14th) was the last member of the Robinson family who ioined the Norfolk and Norwich Naturalists' Society in the mid 1960s and served it so well. When she was attending the new County Grammar School at Wymondham, Diane's French Teacher and Headmaster was Paul Banham, who later became a President of the Society. He obviously recognised her interest in Natural History and suggested to her that she and her family would enjoy the activities of the Society. They quickly became very active members, attending all the meetings and holding various offices. Joyce, Diane's mother, was Excursions Secretary for many years and her father, Robert (Bob), became Assistant treasurer and then.

almost 30 years ago, started the Photographic Group which is still going strong today. Diane served on the Programme Committee, on Council and as Secretary to the Research Committee. The Society was always important to her and until she became unwell in February this year she was serving refreshments after the evening meetings and enjoying seeing old friends.

For nine years Diane wrote a piece entitled, 'Wildlife in and around Mulbarton' for the quarterly Mulbarton Parish News. She had been working on a survey of Mulbarton Common (a County Wildlife Site) for the NWT and she had also worked as a volunteer for the Hawk and Owl Trust, manning the Peregrine observation post in The Close. Some of her wild flower drawings will illustrate the interpretation board being designed for Hethel churchyard. She was always eager to talk about her latest wildlife sightings after walking Ben, her beloved black Labrador dog, each day. Diane wasn't just interested in Natural History, she was passionate about it and she relished what she knew was the last Spring of her life.

Some of us thought we knew Diane well, but since she left us we have found out about so many aspects of her that we knew nothing about.....for example, she spoke fluent French! We knew that she wrote poetry and 'did art', but when we read the poems and saw her pictures we realised just how very talented she was. She was so modest, so gentle and so very kind. She will be sadly missed.

Janet Negal

'May'

Where trees were bare
And hare chased hare,
Now whiskery barley's shimmering there...

Where seeds sown in rows Were scavenged by crows, Yellow oilseed rape in profusion grows...

Where brown fields were tilled
And harsh weather chilled,
Now dykes - not with water - but wild flowers are
filled...

Where skies bleak and grey
Were "the norm" every day,
They're blue, full of birdsong, and hope, now it's
May!

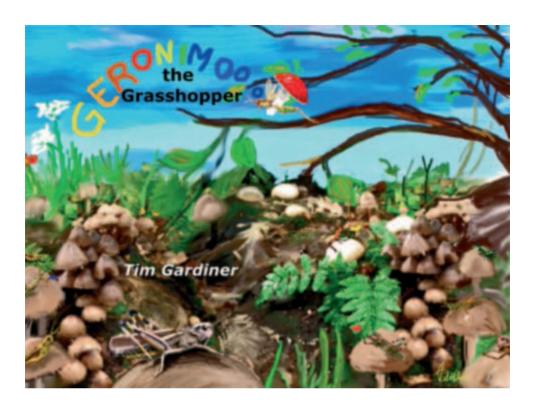
Cold Winter has passed, Lush foliage grows fast, Swift, swallow and lark herald Summer at last!







Poetry and Pictures by Diane Robinson



Book Announcement

Geronimo the grasshopper has been published by the Essex Field Club. The second book in the Insect Adventures series of children's stories tells the tale of Geronimo the grasshopper, as he learns to jump higher and goes on an exciting adventure when he leaves his heathland home. Will he return in time to win the Mould Medal in the Heathland Games? The book was published by the Essex Field Club in July 2017 and has a foreword by Jimmy Doherty. The illustrations are by Andrea Ellis of Unequi Science & Creativity with words by Tim Gardiner. To buy the book (£5.99 + £1.50 UK p&p)

Visit http://timsinsectadventures.blogspot.co.uk/p/geronimo-grasshopper.html

The books in the Insect Adventures series are designed to appeal to children between the ages 5-8 who are able to read alone or they can be read by parents at bedtime. The stories are split into eight easy to read chapters and introduce children to the lives of insects and how they adapt and survive in the wild.



The next issue of *The Norfolk Natterjack* will be February 2018.

Please send

all articles / notes and photographic material
to the editor as soon as possible by

January 1st 2018 to the following address:

Francis Farrow, 'Heathlands', 6 Havelock Road, Sheringham, Norfolk, NR26 8QD. Email: francis.farrow@btinternet.com

All photographs / images are very welcome, especially to accompany an article or document a record, occasionally however, because of space limitations, preference may have to be given to Norfolk-based images, or to those subjects depicting interesting or unusual behaviour, or are less commonly (or rarely) seen in print.

Membership subscriptions

The N&NNS membership year runs from 1st April to 31st March.

During this time members will receive four copies of the quarterly *Natterjack* newsletter, and annual copies of the Transactions of the Society, and the Norfolk Bird & Mammal Report. A full summer programme of excursions and a winter programme of talks are also organised annually.

Membership renewals are due on *1st April each year* and should be sent to the membership secretary:

• Jim Froud, Westward Ho, 4 Kingsley Road, Norwich, NR1 3RB or online using 'PayPal' or credit card via the website: www.nnns.org.uk

New memberships should also be sent to:

• Jim Froud at the above address or online using 'PayPal' or credit card via the website: www.nnns.org.uk

Current rates are £20 for individual, family and group memberships (£30 for individuals living overseas).

Cheques payable to: Norfolk & Norwich Naturalists' Society.

Contents

Toad-in-the-hole Jnusual hosts for Common Broomrape <i>Roger Jones</i>	Page 1
The trials of (a Swallowtails') life Kevin Radley	Page 3
Butterfly Delight <i>Hans Watson</i> Silver-washed Fritillary and White Admiral)	Page 5
Purple Emperor sighting <i>Francis Farrow</i>	Page 6
Hornets' nest at Flordon Peter Aspinall	Page 7
Some recent experiences at Strumpshaw Tony Howes (Water Rail, Kingfisher, Grey Heron, Little Egret and Water Vole)	Page 8
Notes from the North Coast <i>John Furse</i> (Thrush Nightingale, Sand Martin, Kittiwake, Pied Flycatcher, Whinchat and Dotterel)	Page 10
Dwarf Thistle John Crouch	Page 11
Talpa europea, The European Mole, as seen by a reformed Homo sa trapper-predator (Part 1) John Vincent	apiens Page 12
Excursion Reports: Thompson Common <i>Pam Taylor</i> 'Wildflowers Revealed':	Page 14
Marsham and Cawston Heaths Stephen Martin	Page 16
New County Mammal Recorder for 2018	Page 18
Norfolk & Suffolk Bryological group meetings 2017 Mrs Ruth Race (announcement) Carl Chapman	Page 19
A tribute to Diane Robinson Janet Negal	Page 20
Book announcement: "Geronimo the grasshopper" Tim Gardiner	Page 22

Illustrations:

Swallowtail cartoon (page 4) Kevin Radley Water Vole drawing (page 18) Julie Curl