

WHITE ADMIRAL

Newsletter 81

Spring 2012



SUFFOLK NATURALISTS' SOCIETY

CONTENTS

EDITORIAL		1
SMALL RED-EYED DAMSELFLY AT GEDGRAVE	Steve Goddard	2
THE TWO MILE BOTTOM BAT HIBERNACULUM	Nick Gibbons & John Goldsmith	5
GEOLOGY IN MAY	Caroline Markham	6
SNIPPETS		7
NEWTs, BRICKS AND WINTER DORMANCY	Tom & Catherine Langton	8
HEDGEHOG HIBERNATION SURVEY	PTES	10
DIGITAL PHOTOGRAPHY WITH THE MICROSCOPE	Philip M. Greaves	11
FIELD EVENTS 2012		
Taster day at Flatford Mill	Adrian Chalkley	14
Butterfly Conservation events	Rob Parker	15
Geology field excursion	Caroline Markham	16
Moth trapping events	Tony Prichard	17
Orford Ness Bio-blitz	David Fincham	17
Little Ouse Headwaters anniversary bash	LHOP	19
Surveys - two orchards and a marsh	Paul Read	19
BRYOPHYTES RECORDED IN SUFFOLK IN 2010	Richard Fisk	21
POEM Snow Sprinter	Rasik Bhadresra	23
AUSTRALE OR APPLANATUM?	Neil Mahler	24
LETTERS, NOTES AND QUERIES		
Bathroom spiders	Colin Hawes	26
Deformities in Great Tits	David Dow	27
The size of the human population on Earth	Robert Stebbings	27
Wasp specimens wanted	Adrian Knowles	28

Cover: Almost fully mature adult male *Erythromma viridulum* photographed by Steve Goddard

ISSN 0959-8537

Published by the Suffolk Naturalists' Society
c/o Ipswich Museum, High Street, Ipswich, Suffolk IP1 3QH
Registered Charity No. 206084



David Walker
30 Reade Road
Holbrook
Suffolk IP9 2QL
Quercus121@aol.com

SPRING 2012

Commentators in the conservation journals and magazines have in the last month or two been critical of Peter Kendall, President of the NFU. They have taken him to task in particular for saying in a speech last November at the Agricultural Industries Confederation's annual conference "We haven't got a bio-diversity crisis in this country". SNS members can make up their own minds about the correctness of his assertion, although I would point out that the BTO's biodiversity index for farmland birds shows a steady and continuing decline in numbers since the late 1970s, not to mention butterflies, amphibians, flowering plants etc. I could go on and on ... the data tell the story. This is just one reason why organisations such as the SNS and the SOG, small though they are, are so important. Dedicated individuals work hard compiling records that feed into a national picture of the true state of the UK's biodiversity, thereby supplying vital information for Government and conservation bodies.

Much as it goes against the grain we should all be hoping for a very wet summer. Two dry winters have left groundwater levels extremely low, so ditches are dry and freshwater marshes and reed beds in danger of drying out. Many hedges and trees could die if summer temperatures reach the heights of the last few years. This does not bode well for wildlife. Recent trends suggest that rain, if it comes, will not be steady and regular but in a deluge, creating other problems for people and wildlife. However, we must be grateful for any water that falls even if it's on days that field activities are planned. In that regard this edition of *White Admiral* includes an interesting, wide range of events, which we hope will appeal to a good number of members.

This could be the last issue with me as editor. I have asked Council to look for a replacement; I have been in the post for a long time and would like time to do other things. Despite some frustration it has been a very satisfying experience and, best of all, it has brought me into contact with many interesting people, some of whom have become truly good friends. Anyone interested in taking over the reins should contact any member of Council or me directly.



SMALL RED-EYED DAMSELFLY *Erythromma viridulum* AT GEDGRAVE

Many members will now be familiar with this species since its discovery in Essex in July 1999 and in Suffolk in August 2001 but I thought you might be interested in my observations at Gedgrave, near Orford on 11th August, 2011. I had travelled to the site in search of the Wall Brown butterfly to contribute further to that year's survey, even though the weather was not at its best.

It was a mainly cloudy day with some sunny periods but the overriding feature was the wind, a south-westerly 4-5. My previous visit was in 2008 when I first found Wall Brown present at this location. Thankfully, this now scarce insect in Suffolk is still surviving here. However, I certainly did not expect to see *E. viridulum*.

Looking for shelter from the wind I found myself walking towards the reservoirs and there, a short way along the track, most unexpectedly I spotted a number of apple-green damselflies in a Corsican pine. The more I looked, the more I saw. In all, there were at least fifty damselflies around this tree - amongst the needles, on nettles beneath as well as in an adjacent holly and other tree species. The *Erythromma* species and *E. viridulum* in particular, are known to frequent trees, indeed it is believed they often roost there but usually quite close to water.

Once I had got my eye in, I realised that these green damselflies must be immatures of Small Red-eyed Damselfly, a stage that I had not seen before. Close study and many camera shots allowed me to examine their markings fully and this confirmed my thoughts. On further investigation, I found both adult males and females but the greater number were clearly immatures.

The reservoirs mentioned are east/south-east of this spot and several hundred yards away. On searching further, I saw none of these damselflies in trees closer to the waters but only at the western end of the inclined track, perhaps because it was the most sheltered spot. I began to wonder whether they were migrants or locals carried from the water by the strong wind. I guess they could be either, although I have since learned that mid-August was not a very good period for migrants - who knows? Whatever, they had certainly provided me with a unique experience.

Perhaps like many others, I had not seen the species away from water before, where they are not easy to see. Neither had I seen the immature stage, and so many, which looked to me, at first sighting, like another species.

Again as we all find, it just shows that you never know what you might see even on the least promising of weather days. The wonders of nature!

My grateful thanks to Adrian Parr for his comments on the original draft of this article.

Steve Goddard



Photo of immature female *Erythromma viridulum* showing apple green colouration



Photo of nearly-mature female *E. viridulum* showing markings on thorax



© Nick Gibbons

Construction, May 2004



© Nick Gibbons

The hibernaculum, January 2012



Photo: Arthur Rivett

Herald Moths



Photo: Arthur Rivett

Natterer's (left) and Daubenton's (right) in the Norfolk bat bricks

THE TWO MILE BOTTOM BAT HIBERNACULUM

At some time in 2002 John Goldsmith suggested the idea of a new artificial bat hibernaculum for the Thetford Forest, a pipe-dream he had harboured for several years and, in a weak moment, I appear to have agreed with him. The site he had in mind, having considered most of the forest area, was at Two Mile Bottom where a small, shallow valley, possibly a site of old sand-diggings, ran down almost to the River Ouse. It fulfilled several key requirements, namely it was near a river; there was existing bat usage along the water-course confirmed by detectors; it had a north-facing entrance; it was shaded; it was away from existing used tracks and away from areas of high human usage; there were no archaeological sites present to disturb; and the existing valley shape meant there was much less soil to move, so reducing cost.

A plan for a 100 metre-long tunnel was put together by John Goldsmith and myself based on a similar construction to the very successful High Lodge hibernaculum that had been constructed in 1991 to a 'Goldsmith/Tilford' design and had a wide variety of hibernating bat species, including *Barbastelle*, although the general design and approach had been used at several sites. At that point it was not thought that the new tunnel would be too expensive although the three quotes received for the work were a bit of a shock at over £40,000.

In the end, with money from the Forestry Commission, a grant from WREN (Waste Recycling Environmental Limited) supported by Forest Heath District Council, the Environment Agency and Suffolk County Council, the tunnel was built in the spring of 2004.

There were a few issues with construction but these were overcome with a bit of ingenuity. The tunnel was completed in the summer of 2004 and, fittingly, officially opened by John Goldsmith. Various bat hibernation fittings were added by FC volunteers as additions to the numerous bat bricks that had been incorporated in the ceiling during construction.

As well as constructing the tunnel, a number of bat boxes, both wooden and woodcrete, were placed on the trees around the site. These proved very successful within the first year, with *Leisler's*, *Pipistrelle* and *Brown Long-eared* bats using them.

Since construction the hibernaculum has been regularly monitored during the winter months by Forestry Commission staff and members of the Suffolk Bat Group. Bill Landells added digital temperature recorders to the tunnel, and he has monitored these.

During the first winter no bats were found, although some *Brown Long-eared* droppings were deposited near the entrance. However, it was well used by *Herald* moths with up to 28 being counted. This species is always a good indicator species as the two species typically co-occur in hibernation sites.

Then in January 2007 a single *Brown Long-eared* Bat was found hibernating. The number increased when seven individuals were recorded flying around inside the tunnel later in 2007. In January 2008 two *Brown Long-eared* bats were found

hibernating. Things seemed promising at this point, in that the hibernaculum was at least registering on the local bats' 'radar'. Whilst this was a success, the target species of Natterer's, Daubenton's and Barbastelle were still missing.

In January 2009 Arthur Rivett and myself visited the hibernaculum during a very cold spell of weather (a ground temperature of -16°C was recorded at Santon Downham) and sixteen bats were recorded. These were of three species: Daubenton's, Natterer's and Brown Long-eared.

Since then things have gone from strength to strength. In January 2012 we recorded a total of 36 bats (Daubenton's, Natterer's and Brown Long-eared). As counts tend to peak around February it looks as though it will be another record winter.

These findings make this artificial hibernaculum a great success, undoubtedly the best purpose built, underground bat hibernation tunnel in the UK, and indicates that the design appears to be a good general recipe for success, even if it takes five winters for bats to find the site and use it.

Sincere thanks to all those who have supported the project both financially and in a voluntary capacity.

Nick Gibbons and John Goldsmith

Details of the Suffolk Bat Group can be found at www.suffolkwildlifetrust.org/species-and-habitats/the-suffolk-bat-group

GEOLOGY IN MAY

Pliocene Forest Open Day

At the 2011 SNS Conference the 'Pliocene Forest' poster displayed on *GeoSuffolk's* stand attracted a lot of attention, and now there is an opportunity to visit this innovative project, as described in the autumn 2011 White Admiral. Rockhall Wood SSSI at Sutton featuring the 'Pliocene Forest', although on private land, is planned to be part of the Sutton Open Gardens event on May 27th.

There will be a small charge, some of which will go towards the upkeep of All Saints Church, a very 'geological' church and well worth a visit while you are in Sutton. This early medieval church was restored in the mid-19th century using waste products from the 'coprolite' pits in the Red Crag of Sutton. Building materials are mostly dressed flint, some containing fossil belemnites and sponges, and many showing Red Crag provenance, being encrusted with Red Crag barnacles. Also, Red Crag shells are used like 'galletting' between some of the flints. There is also a large number of Boxstones, rounded green/brown sandstone pebbles of Miocene age, which are found at the base of the Red Crag alongside the 'coprolites': all-in-all an

important physical record of the local ‘coprolite’ industry which manufactured fertiliser from these phosphate nodules during the 19th century.

The Geology of Ipswich - a display in Christchurch Park.

Chris Baines, at the 2011 SNS Conference made an impassioned plea for more environmental projects in towns and cities in order to engage an increasingly urban population. In May *GeoSuffolk* is doing just this with a display based around the Geology of Ipswich at the Reg Driver Centre in Christchurch Park. Themes will include the Stoke Tunnel excavations into an interglacial bone bed; Coprolite Street and the ‘coprolite’ industry; and former Ipswich brick yards and their fossils.

Visit www.geosuffolk.co.uk for details of these events.

Caroline Markham

SNIPPETS

- SNS Council has nominated two members for election at the AGM - they are Roger Dixon and Liz Cutting. Roger is well-known for his active involvement in Suffolk geology and Liz for her photography, her work with the RSPB and with dormice.
- *The State of the UK's Butterflies 2011* report shows that the number of common and widespread butterfly species fell by almost 25% in ten years.
- Work carried out by Reading University's Centre for Agri-environmental Research intimates that under the Entry Level Stewardship scheme populations of species such as Skylark, Linnet, Corn Bunting and Yellowhammer will continue to decline.
- West Somerset and West Gloucestershire have been selected as the two Badger cull pilot areas. The six-week culls will begin in late summer.
- 2012 is the last year for recording for the new national dragonfly atlas.
- The first presence of dormice in woodland around Alton Water has been confirmed. Sleeping specimens have been found in three nest tubes and nests in three others. It is suggested that dormouse colonisers might have crossed the A137 road on their way from woods in Bentley. The Alton Water team are planting more hazel and honeysuckle.
- Many people are not aware that female robins sing; like the male of the species they do this to denote ownership of territory and to warn off rivals.
- Research findings at the Centre for Ecology and Hydrology suggest that antibiotics and anti-virals prescribed in a flu pandemic could kill the waste water cleansing microbial populations of sewage treatment plants. This would allow release of inadequately treated sewage into water courses, with disastrous consequences for aquatic life. Injection of drugs rather than oral administration might avoid the problem.

NEWTs, BRICKS AND WINTER DORMANCY

Recent unusual weather has led to some unusual observations on the activity of great crested newt *Triturus cristatus* both on land and in water. We have had three dry years on the Suffolk coast (2009-2011), with particularly dry springs. With only 41 mm of rain here in Bramfield in January 2012, we are entering one of the driest runs of months for decades. Equally (with the recent exceptions of 2009/2010) we have had very mild patches in November and December, months when newts are normally rarely seen. Newts that no doubt are hungry after so much dry weather in the autumn, which limits their foraging on land, might have a chance to catch up in mild early-winter weather.

At Dews Farm the dwellings are set between two ponds in which newts occur in large numbers. As a result, the observation of newts is relatively easy after dark in wet warm (above 5°C) weather, providing a useful check on amphibian activity in the general area. It is normally possible to see newts in the ponds at night at almost any time of year, as long as the air temperatures remain above about five degrees Celsius for a few days and the water balances with it.

Suffolk pond types include many that are a steep sided basin shape with an access slope at one side. Typically such ponds can be four metres or more deep, having been built for volume and the ground temperature continually warms a column of water as cold winter air cools it from above. It is in fact an inaccurate generalisation that great crested newts leave ponds in winter. While it may be true in shallow ponds, the bottom of a deep pond is a warmer winter refuge and in mild conditions we can see newts in numbers during mild spells throughout most winters in the ponds which have a good depth. Seeing a newt or two with a high powered torch on or around Christmas Day, a little way underwater at the pond edge has been possible during over nearly 20 years of observation - due to relatively mild late-December conditions. Frozen weather (normally of up to about two weeks duration) seems to be either before the middle of December or from the start of January and occasionally both. The 2009 and 2010 icy winters bucked the recent trends, but in 2011 the end of the year was a return towards the more recent 'norm'.



It has, however, been rare for newts to be observed out on land after the first real winter cold snap in December, when woodcock are often first seen. A small and reducing proportion of newts will leave their winter refuges at the base of garden walls and dwelling houses to forage on rainy nights even as weather gets colder into October and November. The impression is that they may go only a dozen metres or so before returning to the same refuge. In 2009 two individual newts were seen on land on nights with a temperature of three degrees Celsius in December. On a night

measuring zero degrees, one was found nearly dead. It was a female newt that had been seen several times on previous nights 'chancing it' after warm days but with nights that cooled to freezing. It had not returned back from a short-distance forage in time before succumbing to cold.

In December 2011 we had a snowy start to the month and then it went dry, with just 26mm rain for the month. There were then warm day and night air temperatures and a little more rain after 27th December. This brought something never seen before: great crested newts on land in January. Over 20 adult and juvenile newts were out in numbers on the evening on 1st January 2012 (12°C by day/3°C by night), and again on the 10th, when smooth and crested newts were also seen in ponds. They were seen again on the 18th January (at 10 degrees in the evening). These were no more than short forays; we have not seen mass outward movement of great crested newt to breeding ponds anywhere much before mid-February and often much later. Ground may well be frozen into early March as it was in 2010 and 2011. Normally the spring trigger is night temperatures above around four degrees with rainfall.

One factor that may be important in affecting in newt dormancy behaviour near farm buildings is the use of domestic buildings that are partly warmed from inside. This prevents external freezing of brickwork and this may be important for the traditional 'Suffolk red' brick that absorbs lots of water like a sponge. Designed to soak up rain and to dry out quickly, the 'soft' red brick seems to be liked by amphibians as a refuge. Over the years on countless searches in Suffolk, Essex, Norfolk, Cambridgeshire and Bedfordshire, we have found great crested newts in small stacks of bricks, and not always between the brick and the ground but often in the gaps within the first layer of a loose stack. This is presumably a location with stable wetness and away from the ground a little in case it freezes or dries out. The irony of an anti-housing development phrase from north Wales 'wildlife and bricks don't mix' comes to mind. In the walls of buildings that are both heated and unheated from within, newts can be seen in holes and gaps in the brickwork and between joints, often still with their head out and retreating when a torch is shone on them. This may be them 'testing' the outside air temperature/wind chill factor or 'sit and wait' predator behaviour as it is in warmer months. Often these are the best places to check when you think conditions may be right for newt activity, as well as scanning for them on the ground with a torch.

However, the winter foraging journeys from the brickwork of inhabited or 'warmed' buildings seems to extend later than from unheated garden walls. Presumably with extra heat, in houses newts may even avoid total dormancy by using places that are kept above freezing by the building's internal warmth. In doing so there is presumably a favourable interaction with humans. Newts have long been found in the cellars of old buildings and are not uncommon inside rural buildings with a pond nearby and sometimes squeeze under doors, which is a dangerous place to be wedged. Occasionally when they do make it inside they are found desiccated some time later.

The relationship between great crested newts and built structures is interesting as old buildings are often renovated and may become better or worse according to

brickwork treatments at ground level. Observations suggest that great crested newt can respond to weather almost immediately and are perhaps not so ‘locked in’ to winter dormancy as other amphibian and reptile species, although adders can emerge in warm winter interludes they have also been found ‘caught out’ and dead. Activity of other amphibian species seems much less ‘reactive’. Great crested newts seem able to use old brickwork and its advantages better than other amphibians. The observations could indicate behaviour that holds some risk for the individual newt, that may somehow benefit the population and it shows great crested newt as a species that can take advantage of changing conditions – perhaps one reason why it has been found almost unchanged as a species in the fossil records for thousands of years.

Tom and Catherine Langton

HEDGEHOG HIBERNATION SURVEY

A study was conducted 40 years ago that suggested a link between climate and when hedgehogs come out of hibernation. We, the British Hedgehog Preservation Society and PTES, are now repeating the study to see if climate change has affected hedgehog hibernation patterns.

We therefore need your help to collect hedgehog records from 1st February until 31st August 2012.

Simply tell us every time you see a hedgehog, noting its location and whether it is alive or dead. Please don’t forget to stay on the lookout until the end of August when all hedgehogs should still be awake.

You can register for the survey on our website www.hedgehogstreet.org. To enter sightings you will need a username and password. Once you have signed up you can record a sighting at any time by clicking on “ENTER YOUR RECORD”.

Peoples’ Trust for Endangered Species

Contributions to *White Admiral*

Deadlines for copy are 1st February (spring edition), 1st June (summer edition) and 1st October (autumn edition).

*The opinions expressed in *White Admiral* are not necessarily those of the Editor or of the Suffolk Naturalists’ Society.*

The availability of high quality digital ‘consumer’ cameras at relatively low prices has made photography with the microscope significantly easier than with traditional film. Coupled with recent developments in software aimed at the amateur, digital imaging now makes it possible for everyone with basic microscopy skills to take good quality photomicrographs. This series of articles provides guidance on suitable types of digital camera, including webcams, compact fixed lens cameras and digital SLRs and how to couple these cameras to a microscope. Software is discussed for both basic image capture and processing.

Digital Sensors

At the heart of digital imaging is the image sensor. This consists of an array of light-sensitive receptors, embedded into a microchip containing the wiring and circuitry necessary to record light levels captured from each receptor. The receptors, termed *pixels* (an abbreviation of picture-elements) generally consist of photodiodes embedded in a well. The photodiodes convert photons of light striking the sensor into electrons in a proportional relationship (the more photons striking, the more electrons generated). The charge generated is measured by the microchip circuitry, converted to a digital signal and processed by in-camera software.

There are a number of different sensor types. The first generally available is the Charge Coupled Device (CCD). The CCD is still the most common type of sensor in professional photomicrographic cameras but has largely been replaced in consumer cameras by the Complementary Metal Oxide Sensor (CMOS). The CMOS sensor is present in a greater range of consumer devices; mass-production means that the CMOS sensor is significantly cheaper than the equivalent CCD sensor. Although the CMOS sensor requires more processing by the camera software to reduce noise in the image, the image quality from current generation of CMOS sensors cannot be distinguished from images created by CCD sensors.

Resolution and Image Quality

Camera manufacturers can vary both the number of pixels on a sensor, and their individual (physical) size; more pixels can be accommodated into a sensor chip of given size by reducing the dimensions of each pixel. Resolution – the ability to see two adjacent points in the image as separate – is determined by both the number of pixels and their size. For the two adjacent points in the specimen to be recorded as individual elements in the image, the microscope must first of all be able to resolve the points. The objective must be of sufficiently high numerical aperture to resolve the structure, and the microscope must be correctly set up; the highest resolution digital camera cannot record information that is not present in the optical image. Secondly, the two adjacent points in the image must fall onto separate pixels, and these pixels must be separated from each other to show a ‘gap’ between the two structures.

Larger pixels have the advantage that they can capture more light before becoming saturated and have a higher signal to noise ratio; they are thus more appropriate for recording images of low light intensity where long exposures are necessary. Smaller pixels capture less light before becoming saturated and have a higher signal to noise ratio, but provide greater image resolution. In most situations, much of this is academic; the choice of camera will be based on cost, and sensor resolution in terms of the *number* of pixels.

Quality of the image depends on the output device – computer screen, projector, or print. Understanding the relationship between image resolution and output device is perhaps the most misunderstood aspect of digital photography with the terms ‘PPI and DPI’ used interchangeably. PPI stands for ‘Pixels per Inch’ and determines the *size* of the image on the output device. The number of pixels used to record the digital image file is fixed by the camera sensor; this cannot be changed. However, these can be displayed or printed at a variable number of pixels (each represented as one coloured dot in the image) per inch. Lower PPI values will result in a larger output image size but the ‘dot’ nature of the image will become more apparent as the PPI value is lowered and the final image will have a ‘grainy’ appearance.

Table 1: Maximum Image Size for Various Image Outputs

	Output Image Size (inches)		
	Computer Screen	Domestic Quality Print	Publishing Quality Print
Camera Sensor MP	96 ppi	200 ppi	300 ppi
1.3	13.3 x 10.8	6.4 x 5.2	4.3 x 3.5
2.0	17.0 x 12.8	8.2 x 6.1	5.4 x 4.1
4.0	23.7 x 17.8	11.4 x 8.5	7.6 x 5.7
6.0	32.0 x 21.3	15.4 x 10.2	10.2 x 6.8
8.0	36.5 x 23.3	17.5 x 11.2	11.7 x 7.5
12.0	44.7 x 29.7	21.4 x 14.2	14.3 x 9.5
18.0	54.0 x 36.0	25.9 x 17.3	17.3 x 11.5

For professional printing (such as a book or magazine) 300 ppi is the required quality; printing of photographs on a domestic printer will generally be at 180 to 200 PPI and will be of acceptable quality; graininess will start to become apparent below this value. Computer monitors (PC) generally work up to 96 PPI. Table 1 summarises maximum output image size for various uses of the image.

DPI (dots per inch) relates to dot density and is a measure of the output device (computer screen or printer) resolution; either the number of dots of ink that can be applied to paper, or can be displayed on screen. The DPI value will affect the quality of the displayed image but not its size; lower DPI will result in a grainer image. DPI is usually controlled by the printer software and is usually adjusted under Print Quality. Draft, Normal, Fine and Best settings affect the DPI and control image quality, not size. Size is usually set by photo editing software and may be set directly as PPI or, more usually with current software, directly as Image Size in inches or centimetres.

Philip M. Greaves

This article is adapted with permission from a fuller version first published in the Quekett Journal of Microscopy, 2010, Vol. 41 Part 4.

Next instalment - Choice of Camera

SNS AGM & Spring Members' Evening – CHANGE OF VENUE

The AGM and spring members' evening, a combined event, will be held on Thursday 19th April at 7.30pm. The meeting will be held at The Flying Fortress in Bury St Edmunds (<http://www.theflyingfortress.co.uk/>), not at the venue mentioned in *White Admiral* number 80.

Directions

The Flying Fortress is situated a mile outside Bury St Edmunds, on Mount Road, which leads towards Thurston. The postcode is IP31 2QU.

From the A14 (from Cambridge): take the exit signposted "Great Barton" (Junction 45). At the bottom of the slip road turn right and continue as directed below.

From the A14 (from Ipswich): take the exit signposted "Great Barton" (Junction 45). At the bottom of the slip road turn left, go back under the A14 and continue as directed below.

After the A14 turn-off: continue along the road until you reach a junction / traffic island. Take the left hand turn and turn left onto Mount Road. Continue for about a mile and as you approach a roundabout take the left hand turn immediately before it. The Flying Fortress is at the end of this driveway.

**Wildlife recording 'Taster' Day at Flatford Mill Field Studies Centre,
Saturday June 30th**

One of the key aims of the SNS is to record the county's natural history; something which the society has been doing, via its members and network of county recorders, since it began in 1929. However, some members find the idea of identification a little daunting and sometimes may be unsure to which branch of natural history they could best contribute. So June 30th is an effort to provide a 'field meeting' with a difference, which is as varied as possible and where members can try out a variety of activities under the guidance of county recorders. Hopefully those who come will get a better idea of what the recorders do and may be able to find a new area of natural history in which they can contribute records. It should also prove to be a great venue to meet and talk with like-minded naturalists in a beautiful setting.

The event will be held at the Field Studies Council Centre at Flatford Mill and we are very grateful to Edward Jackson and his team for supporting us in this venture. If you have never been to the Mill there has never been a better time to see it with their recent programme of renovations now complete. Always 'green' in outlook members will be pleased to know that any electricity they use on the 30th June will be generated by the recently installed Archimedean Screw turbine. This operates 24 hours a day, silently and out of sight in the base of the historic Mill's wheel pit.

Full details of the activities on offer will appear on the SNS website as they are confirmed over the weeks to come. The idea is that members register their interest now and later on choose a selection from the range of activities. You would then take part in perhaps three or four during the course of the day in a 'carousel' arrangement. Each activity would start in the centre and then go out to a suitable location in the countryside around the mill before returning again for members to join a new group.

Whilst there will be no cost for SNS members you will need to provide your own packed lunch. We hope to be able to cater for a fairly large number of people and of course want to use the event to publicise the SNS. So if you have an interested friend who is not a member why not invite them along, they will be most welcome.

At the time of going to press the following activities are being planned. So see if any of these appeal to you and watch out for more to appear on our website www.sns.org.uk.

- A morning session identifying moths caught in the FSC moth trap the night before.
- Observing the stag beetle life-cycle with live specimens.
- Small mammal sessions including identification, the use of Longworth traps and the trap loan scheme.

- Pond and river dipping, examination of freshwater invertebrates in demonstration aquaria and observing behaviour under the microscope.
- Wildflower identification in and around the Mill.
- Sessions on examining owl pellets and their use in small mammal recording.
- Tours of the newly completed RSPB Wildlife Garden by the warden.
- An evening stag beetle hunt.

If the idea of this field trip with a difference, not to mention a closer look around Constable Country and the famous Flatford Mill, appeals to you please register your interest now. This will take quite a lot of organising so the sooner we know who might attend the better. Please let us know your address and telephone number and whether you are an SNS member. Please email these details to: flatford@sns.org.uk

Adrian Chalkley

Butterfly Conservation events to which SNS members are invited

Saturday 5th May

Brimstones & Bluebells, Holywells Park, Ipswich

A chance to witness courtship and egg-laying behaviour of the Brimstone butterfly and other spring species.

Meet: Stable block, near car park. Map Ref: TM176434

Time: 11am

Leader: Matt Berry, tel. 07599243026

Tuesday 15th May

Dingy Skipper Hunt, Kings Forest

Help with a hunt for Dingy Skipper.

Meet: Access lane to John O'Groat's Cottages. Map Ref: TL825739

Time: 10.30am

Leader: Rob Parker, tel. 01284 705476

Tuesday 19th June

Silver-studded Blue Survey at Minsmere RSPB reserve

Meet: Warden's Lodge just before RSPB car park. Map Ref: TM470671

Time: 10.00am

Leader: Rob Parker. Register in advance, tel. 01284 705476

Backup dates - Tuesday 26th June and Monday 2nd July

Friday 6th July

Pakenham Wood for Silver-washed Fritillary

A chance to look for this recently returned fritillary.

Meet: Pakenham Church car park. Grid Ref: TL930670

Time: 10.00am

Leader: Rob Parker, tel. 01284 705476

Saturday 7th July

Butterflies and other wildlife at Purdis Heath, Ipswich

A survey / wildlife walk to help record species present on this valuable SSSI heathland site.

Meet: Ipswich Golf Club car park. Map ref: TM205429

Time: 10.00 am

Leader: Matt Berry, tel. 07599243026

Wednesday 11th July

Rendlesham and Tangham Forest for White Admirals (morning); Upper Hollesley Common (afternoon)

Meet: Rendlesham Forest Centre (car park charge applies). Map Ref: TM353484

Time: 10.30am

Leaders: Peter Maddison and Richard Stewart, tel. 01473 736607

Bring packed lunch

Saturday 14th July

A Survey of the under-recorded tetrads in the Cookley and Walpole area.

Contact Peter Maddison for details, tel. 01473 736607

Tuesday 17th July

Flowton Farm Survey

A walk on John Cousin's 350 acre farm to survey for butterflies.

Meet: Farm visitors car park. Map Ref: TM084457

Time: 10.00am

Contact Peter Maddison to book, tel. 01473 736607

Geology Field Excursion

Saturday June 2nd

Sutton and Bawdsey

Meet at 10.30 am at the car park on the east side of the B1083 Woodbridge to Bawdsey road (TM 306 475).

We shall drive on to a site in Sutton to see Coralline Crag and GeoSuffolk's 'Pliocene Forest'.

In the afternoon we shall visit Bawdsey to see London Clay, Red Crag and coastal erosion near East Lane (Low tide is approx. 4.30).

Bring a packed lunch (but pubs, cafe, toilets are scattered around - details on the day).

London Clay on the foreshore can be very slippery, so please wear suitable footwear. This is a joint meeting with the Tertiary Research Group and the Essex Rock and Mineral Society, so many interesting people to talk to!

Caroline Markham

Moth trapping events

Saturday 26th May

Moth Night at Purdis Heath, Ipswich

Meet in Bucklesham Road lay-by near to Suffolk Showground. Map Ref: TM212423

Time: 9.30pm.

Leader: Tony Prichard, tel: 01473 270047

Saturday 23rd June

Moth Night in the Fens of the Little Ouse Headwaters. The Suffolk and Norfolk moth groups will both be involved; details are still being finalised. See p.19.

Contact Tony Prichard for further details, tel: 473 270047.

Orford Ness Bio-Blitz, August 4th

On Saturday August 4th this year I am running a “Bio-Blitz”^{*} mass biological recording event on Orford Ness.

The largest vegetated shingle spit in Europe, Orford Ness is an SSSI and has multiple other designations, either alone or as part of a larger area: it is a National Nature Reserve and a Ramsar site as well as a SPA, AONB, SAC and ESA. It was home to an experimental military base for the RFC and RAF and later the Atomic Weapons Research Establishment for much of the 20th century, which limited access and provided a degree of protection to the site before it passed into the ownership of the National Trust in 1993.

Being such a significant site, a good deal of biological recording has taken place over the last 18 years or so, particularly with respect to birds and moths, but there is still great scope for additional recording of all kinds, both of common species and the more unusual. New species of invertebrates are still frequently recorded here, including, as a recent example, the rare water beetle *Berosus fulvus*, in its most northerly known site in Britain, with many others almost certainly remaining to be discovered. Reptile records are, perhaps surprisingly, rather lacking, whilst plant communities are changing in composition and coverage over time. Altogether, despite the dedicated work of our regular volunteers, there are significant holes in our current records, and a frustrating lack of detail with many of the older records that we do have.

Although vegetated shingle and lichen heath form the most significant habitats on the site - and the most difficult to access without causing undue damage – there are also grazing marshes, salt-marshes, reed-beds, mudflats, river walls, brackish lagoons and a good quantity of “brownfield” hard-standing and abandoned military structures on the site. I hope to make sections of all these habitats available to explore around the central section of the 16km long spit.

Some Bio-Blitz events are entirely open to the public. However, access difficulties and the sensitive and hazardous nature of Orford Ness preclude this and will mean the event must be restricted in numbers. Booking will be required, and I would like to focus on SNS members and others who have a genuine interest in the habitats available on the site. I would urge anyone interested in participating to get in touch as soon as possible.

As well as the Bio-Blitz, Orford Ness will be open to the public as usual on that Saturday. Normal visitor access is limited to a number of clearly marked trails, and these will remain in place on this day, with Bio-Blitz-ers alone having access to other parts of the site. The ferry, which provides visitor access to the site, will be in use by the public from 10.00am onwards, so I would like to bring all B-Bers across before then.

Our regular ringers should have mist nets and a moth trap in operation which will hopefully provide some early records on the day.

Although anyone participating in the event will be free to leave at any time, I would hope that some at least would enjoy staying all day until around 5.00pm, when we will round up and head back to the mainland. Towards the end of the afternoon, I would hope to present a summary of the more interesting and unusual species that have been found on the day for the benefit of our general visitors as well as B-Bers.

On the Sunday, following the main day, a select few invitees (even more heavily restricted by access difficulties and sensitivity of habitat) will, I hope, head down by boat to the southern end of the spit to carry out further recording on the vegetated shingle in that section, which has come under increasing pressure in recent years from unauthorised visits by boaters and anglers. Records from this area in particular are rather scarce and we would like to gather as much information as possible now as part of a process to monitor and prevent further damage and decline.

If you would be interested in coming along for this Bio-Blitz day or would simply like to know more about the event and the site in general, please contact me either by phone on 01394 450900, or by email: david.fincham@nationaltrust.org.uk

**I have always had reservations about the use of the term “Bio-Blitz”, and on this site in particular, with its history in the development and testing of bombs and ballistics, it takes on even more complex resonances, but it still captures the essence of the event.*

David Fincham

Celebrate the Little Ouse Headwaters Project's 10th anniversary with a big biological recording bash and barbeque

Over the past ten years we have expanded our land holding to a total of 65 hectares in conservation management, spread over 11 sites on the Norfolk/Suffolk border. The upper Little Ouse valley contains a number of sites of local, national and international importance for wildlife, most notably the small remaining fragments of valley fen. Other habitats include wet woodland, wet meadow, dry heath, acid grassland, hedgerows and ponds.

We remain a community-based, volunteer-run organisation with no paid staff. The project has benefitted greatly from the generosity of local natural history societies and individual naturalists who have visited our sites and provided their records. To assess our wildlife gains and losses ten years on, and to help evaluate the impact we've made on the valley's wildlife, we are organising an informal 'stock-taking' weekend of biological recording. We hope that this will not only provide us with a plethora of new records, but also an opportunity for our many volunteer recorders to get together and compare notes.

You are welcome to join us for any part of the weekend – we will use a local village hall as a base, and provide an introduction to the project and the local area for anyone visiting for the first time. We can provide details of local accommodation, or a field for camping. A barbeque will be provided on the Saturday evening for all involved, as well as our many local volunteers.

More detailed information will be available shortly, and will be posted on our website (www.lohp.org.uk), which also holds more information about the project, including maps of our sites. If you would like to register an interest in attending, and receive updates by email, then please contact us at:

enquiries@lohp.org.uk, or phone Jo Pitt on 01379 898684 or Helen Smith on 01379 687680.

LHOP

Surveys - two orchards and one marsh

2nd June

The Marsh, Thrandeston.

The Marsh is a cattle grazed 15 acre marsh grassland, a registered common, and a County Wildlife Site that has been in Countryside Stewardship and Broads ESA for nearly 20 years, and is being surveyed this year in preparation for a Higher Level Stewardship application. The Marsh has had a chequered history, being drained in the 1980s, but rescued and rewetted a few years later. In the process several important plants did not return, notably Meadow Thistle and Marsh Arrow Grass, but who knows, they might have returned as others have. The boundary dykes and beck, a tributary of the Waveney, hold stonewort, ten-spined sticklebacks, and duck mussels, but need to be properly surveyed this year. It is hoped to have local guides

to the habitat and its history. Interest lies mostly in higher plants, the dyke fauna and flora, and wet grassland invertebrates.

Normally the cattle go on on the 12th May but this year they are to be delayed for a month to allow detailed surveying, so this is an opportunity to visit the site without being hassled by young beef stock.

Meet at The Marsh gate, by the western railway bridge, near Marsh Farm, Thrandeston, IP21 4BU, TM1176 1079 at 2pm.

9th June

Wordwell Hall orchard, alder carr and woodland and pond
Wordwell, Brandon Road, Bury St Edmunds, Suffolk IP28 6UW Grid ref
TL827 721

The farm is in Higher Level Stewardship and work has already started to enhance the habitats. Last year an SNS field excursion was made to the orchard site (with interest mostly on the epiphytes); this year the carr, woodland and pond is available for study. Interest is expected to be in invertebrates including freshwater and in flora of the wet woodland, which has not been surveyed.

Meet at the Hall at 2pm. Off the main Wordwell Hall entrance, take the first track to the right and park behind the farm buildings. Please be sure not to block any gateways. Meet outside the hall at the bottom of the main driveway.

25th August

The Traditional Orchard, a guide to this new national priority habitat

Meet at Thrandeston, near Eye, and from there visit three nearby small farm orchards recorded on the Suffolk Traditional Orchard Inventory, and discover from the Suffolk Traditional Orchard Group, who will lead the meeting, why these are a new national priority and how both wildlife and crop diversity are equally fundamental to the habitat. The area is in the centre of the claylands orchard area where every farm once had its own small orchard, now known to be a major centre of traditional tree crop diversity. Too early for most apples but early pears and many plums should by then be a source of interest for insects (and us). We will travel to the sites using your own transport, and return to Home Farm for tea (and fruit)!

Meet at Home Farm, Great Green, Thrandeston, IP21 4BL, TM1276 8936 at 2pm.



Studying bryophytes in Suffolk is essentially a wintertime occupation: in summer most species become very dry and are thus very difficult to identify. However, there are some species of moss which can only be identified from ripe spore capsules and since these are produced in the summer months they are undoubtedly under-recorded. In March of this year during a 'moss' walk around Westleton Common (TM46K) which I led for the Westleton Commons Group a small group of *Bryum* species of moss was observed with immature capsules. I returned in July to look for these again and collect ripe capsules. To my surprise there were two species present, one was *Bryum algovicum* var. *rutheanum* a rare species in the county but the other turned out to be *Bryum archangelicum* (*B. imbricatum* in the flora). There is only one recent record and the last one from East Suffolk was from Felixtowe and attributed to W M Hind (Bloomfield 1901). He died in 1894 so this is the first record from VC25 for well over one hundred years. I then went on a search for other examples of these two species in suitable habitats across the county. *B. algovicum* var. *rutheanum* turned up in three places (two of them new tetrad records) but there was no sign of *B. archangelicum* so I think it is genuinely very rare in the county.

Tetrads from which there were no previous records have again been targeted and sixty-six of these were visited with an average 'score' of forty-two taxa.

Some records of bryophytes worthy of note from this year and a few from other years that were omitted from the Flora, because I was unaware of them, are listed below. Where names have changed those used in the flora are given in brackets.

Mosses:-

Aloina ambigua Sand by boating lake, Lackford Wildfowl Res. TL87A 2nd January 1996 (D.F.Strauss).

Bartramia pomiformis Ramparts field, Icklingham. TL77V 19th August 1993 (T. D. Easter).

Bryum algovicum var. *rutheanum* Sandy ridge nr. the sea, Aldeburgh. TM45S 20th May 2001 (D. F. Strauss). Sand dune, Walberswick. TM46P 23rd July. River wall, Slaughden. TM45S 4th August.

Bryum donianum In churchyard at Pettaugh TM15U 5th May and bank of stream at Carlton near Saxmundham 6th April.

Fissidens gracilifolius Gulley around church, Bradfield Combust. TL85Y 7th October.

Grimmia dissimulata Top of a tomb, Tannington churchyard. TM26W 12th February. Base of the wall of the church at Barrow TL76S 5th October, Fornham all Saints 11th October and Haverhill 16th December.

Grimmia trichophylla Top of grave stone, Halesworth Cemetery. 3rd February and top of churchyard wall, Whepstead. TL85J 30th April.

Henediella macrophylla Bank of River Lark, near the weir, Mildenhall. TL77C 13th October. Second county record.

Herzogiella seligeri Rotting log, Waveney Forest, Fritton TG40K 16th June.

Leucobryum juniperoideum Rotting log, Scottshall Coverts, Minsmere TM46T 22nd March.

Microbryum floerkeanum Margin of stubble field, Rattlesden TL95Z 21st September.

Orthotrichum striatum Branch of oak tree, Dunwich Forest TM47R 30th March.

Orthotrichum straminium Dead elm sapling, Bird's Folly Halesworth TM37Y 26th January. Branch of oak tree, Dunwich Forest TM47Q 4th March.

Plagiothecium laetum Base of *Tilia cordata* Barking Wood TM05W 30th November 1993 (K J Adams & R Kilshaw) First record from VC25.

Pogonatum aloides Small sand pit, East Hill, Walberswick. TM47W 25th April.

Pohlia lutescens Side of track in woods Thorington. TM47G 28th April.

Racomitrium fasciculare Roof of an out building, Barton House, Great Barton TL96D 6th June.

Racomitrium heterostichum Lid of tomb in churchyard, Westerfield TM14T 20th October. Second county record.

Scorpidium cossonii (*Drepanocladus cossonii*) New area of Market Weston Fen TL97U 18th October.

Syntrichia papillosa Tarmac path in churchyard, Blyford. TM47I 22nd January. This species is now fairly common as an epiphyte, particularly in urban areas but this is a very unusual habitat.

Liverworts:-

Cephaloziella hampeana Rotting tree trunk, Brandon Park. TL78X 14th January. 1996 D.F.Strauss

Cololejeuna minutissima Trunk of oak tree Walberswick. TM47W 25th April. Second county record.

Lunularia cruciata Plants with immature archegonia in churchyard at Felsham TL95N 18th May.

Metzgeria consanguinea (*M. temperata*) Trunk of birch in Hintlesham Great Wood TM04B 18th February.

Riccia cavernosa Abundant on exposed mud around mere at Red Lodge. TL67V 27th August.

References

Bloomfield, E.N. (1901) A list of Suffolk Mosses. *Trans Norfolk and Norwich Nat. Soc.* 7: 227-242.

Hill, M.O., Blackstock, T.H., Long, D.G. & Rothero G.P. (2008) *A Checklist and Census Catalogue of British and Irish Bryophytes*. British Bryological Soc.

Sanford M. N. & Fisk R.J. (2010) *A Flora of Suffolk*. D.K. & M. N. Sanford, Ipswich.

Richard Fisk

Snow Sprinter

While everyone's eyelids were fastened shut
White flakes descended all night long
I did spy at first light an arctic blanket
A good eight and a half deep
Immaculate and innocent, intact and pristine
Boughs bowed, hedgerows gleamed
Blackbirds squabbled over the berries
Blue tits were on the nuts
A redwing alighted on the crab
Swiftly I put my boots on
And along a field I went
The snow creaked under my feet
Breaking the insulated silence
Rabbit footprints among beet tops
Had got there well before me
And a hare had leapt across the landscape
Along the sunken lane a wren dashed across
An anxious pheasant scampered away
There was a startling bang in the distance
This gingery animal came dashing along
Suddenly stopped this snow sprinter
Not quite twenty yards in front
Showing off a lustrous tail, a pointed snout
His piercing eyes caught mine, mine his
Before swiftly disappearing into the hedge
The exit just as quick as the entry

Rasik Bhadresa

AUSTRALE OR APPLANATUM?

Most of us are familiar with the large brown bracket fungi seen growing near the base of various tree species. Some will even know the name 'Artist's Bracket', so called because of the way the fertile under-surface can be easily scratched and by virtue of an oxidation process be used to produce some marvellous drawings.

But which one is the Artist's Bracket, scientific name *Ganoderma applanatum*? I ask because there is another almost identical brown bracket now called the Southern Bracket, *G. australe* (formerly *adpersum*) and both are more or less evenly distributed throughout the UK.

These are perennial species, producing a new fertile layer of tiny densely packed tubes each year with each tube producing several thousand spores. In the photograph you can just make out some individual tubes sticking out at the top right hand of the sliced sample, looking like loose fibres. Both species feed on living and dead hardwoods, but in Suffolk they seem to like *Betula* and *Fagus* although they are not restricted to these two trees.

People often tell me they have seen the Artist's Fungus growing on a tree in their garden, but I'm reluctant to add this to the database as there is no reliable method of telling the species apart without having access to a good microscope with an eyepiece graticule, properly calculated using a stage micrometer, and measuring the length of the individual spores.

The spores are very easy to obtain. Just go along to your local wood after a warm still night in summer or autumn, find a *Ganoderma* bracket, and dab a moistened finger on the upper surface of the bracket or any nearby ivy leaves with a chocolate brown coating on them, and voila, you will have 1,001 spores on your finger.

There is no guarantee they will all be *Ganoderma* spores, which is why you have to measure at least ten to obtain a mean size. To obtain details of microscopic characteristics you will need a specialist book, but luckily Roger Phillips 'Mushrooms' gives the spore measurements. They are 8-13 x 5.5-9 μ (microns) for *G. australe*, and 6.5-8.5 x 4.5-6 μ for *G. applanatum*. Spore sizes of the two species overlap in the 8 - 8.5 μ region, this is why it is important to obtain an average of ten or more.

Ganoderma is in the Class Basidiomycetes, and as such, they drop their spores by gravity down those very narrow tubes. Only the very bottom and most recent layer will be fertile. So how, you may wonder, do the spores end up *on top* of the bracket?

Well, as you can imagine, the spores are extremely light so they become caught up in warm rising air currents and are deposited when the air cools higher up. Then they fall, usually on to the nearest shelf sticking out of the tree.

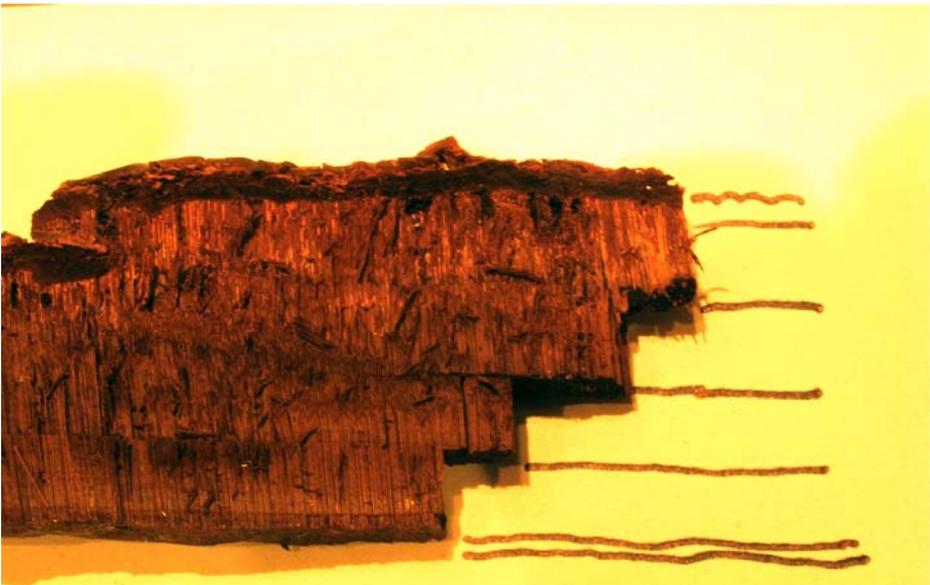
So, does this mean that without a microscope there is no way of reliably telling apart these two species of *Ganoderma*? The short answer is yes, but there are several less reliable ways. *G. australe* is said to be thicker in appearance, but not

always. *G. applanatum* has a preference for *Fagus*, but again, *G. australe* can also grow on *Fagus*.

There is also a destructive method of which I do not approve because it involves removing the bracket from the tree which is all part of the woodland atmosphere, but there is the possibility you may come across one which has become dislodged somehow. If the bracket is broken in half and a cross section made as seen in the photo, the tube layers will either be a reddish brown suggesting *G. australe* or more chocolate/purplish brown suggesting *G. applanatum*. Another way is by close examination of the tube layers. These two species being perennial will produce a new tube layer each year. The photo shows a cross section starting at the bottom with the current year's growth (of about 2 mm) followed by four previous years' growth layers with finally the thin crust layer of another 2 mm.

Careful examination with a 10x lens will sometimes show a thin infertile layer between each pore layer: only *G. applanatum* has this. The photo shows *G. australe*. It is worth pointing out that before writing this, I went to Captains Wood to obtain a tiny slice of a known *G. applanatum* to show here for comparison, but unfortunately the bracket had been removed with many others which had been present throughout the wood on its opening day back in 2006. Therefore, I strongly urge readers not to remove any brackets and if they want to send me just a record of an Artist's Fungus from their garden, I'd be happy to accept it as such.

Neil Mahler



Section of *G. australe* with pore-bearing tubes displayed

Photo: Neil Mahler



Photo: Keith Garside

Bathroom Spiders

The excellent photograph of mating spiders and observations which follow were kindly provided by Keith Garside, who emailed them to me from his home at Milverton in Somerset. The male can be clearly seen holding his sperm sac against the female's abdomen. His endeavours, Keith informs me, resulted in 43 spiderlings, which over the course of several weeks spread all over the bathroom ceiling. The male survived his amorous adventure and has since re-visited the female but his approach on this occasion was not as successful and he lost his front legs for his trouble. But at least he escaped being devoured by his mate. However, having only six legs is no obstacle to this male's amorous intentions or to his getting about - he is now back trying his luck again!

Paul Lee, SNS Spider Recorder, has examined Keith's photograph and identified the mating pair as "almost certainly Daddy Long-Legs *Pholcus phalangioides*. Almost certainly, because a very similar species has been collected in Leicestershire but does not seem to have spread". Paul says he would need a clear view of the underside to be absolutely sure.

Daddy Long-Legs spiders remain perfectly still during the day unless disturbed,

when they vibrate rapidly on their web. They are found almost exclusively in buildings, where they are sheltered from cold weather. The spiderlings initially stay close to their mother but as they moult and grow they spread out to avoid becoming prey to a brother or sister. The species is widespread in England and Wales but absent from much of northern Britain, though there are records from as far north as Shetland.

A distribution map can be found by visiting the Spiders and Harvestman Recording Scheme at:

www.srs.britishspiders.org/portal.php/p/Summary/s/Pholcus+phalangioides.

Keith Garside, now retired, is a former student (1962-1970) of Woolverstone Hall Grammar School, Ipswich. He is a keen wildlife gardener, wildlife observer and beekeeper. I thank him for sending me the photograph and observations, and Paul Lee for identifying the spiders.

Colin Hawes

Deformities in Great Tits

Three Great Tits (*Parus major*) have appeared at the bird table this winter with facial deformities and one with a leg deformity. They had large swellings on the brow and red soft sack swellings on the cheeks. One bird had a large pink swelling on the thigh. I believe the birds perished a day or so after being seen. I have not seen deformities of this sort before and wondered if they had been recorded elsewhere.

David Dow

The size of the human population on Earth

The letter from Mr Searle requires some response.

Of course, one can say there is an unequal distribution of the resources on the planet, but that is only a partial truth. It is not true that there have been no natural famines. The last 25 years of east African history shows several famines, compounded by local population increase. So, is Mr Searle suggesting it is politicians who are at fault by not getting everyone learning to live together in happiness and willing to share all our resources throughout the world? We have only to think about various elements of our own society and, dare I mention ‘bankers’ bonuses’?

The reality is the human population really is too large for the earth to support. Desertification is increasing due to bad use of resources by the local people. In Britain, we are overcrowded and have perhaps twenty million too many of us to be self sufficient in food. Much of our food is flown or shipped in from countries around the world, often from countries having insufficient food for their own population. Again, at home, providing water to those living in south-east England is an increasingly difficult problem because too many live there.

There are some minerals, restricted in distribution and quantity worldwide, which

are rapidly running out. Even the gas, helium, is a finite resource on earth with vital industrial uses and yet we squander this material by blowing up balloons for children's parties.

It has long been known that when mammal populations increase and become overcrowded, aggression and disease increases. Watching the world news and seeing what is happening in our own cities, shows such hostility between 'tribes' of all kinds is becoming more frequent.

Thus, in the absence of tolerance and sharing of all resources between all mankind, the population on this planet is already far too high. Encouraging individuals to consider their family size is one way to limit the overall population and politicians have the ability to encourage small families by financial incentives. But will they do that?

The Suffolk Naturalists Society is concerned about the survival of our native wildlife. We know there have been declines in many species largely due to the fact we ask farmers to cultivate land intensively to produce more food for our population. The fact we cannot now feed ourselves in Britain deserves consideration by those believing we are not overpopulated.

Robert Stebbings

President SNS

Wasp specimens wanted!

In next year's *Transactions* I am hoping to write a paper on the social wasps of Suffolk (yes, those yellow and black picnic spoilers) following on from a review of the bumblebees in the previous edition (currently being printed). Despite being quite common, social wasps tend to be under-recorded. Many people assume that the record won't be interesting, just because it is a common species, but this is not so! There are, in fact, several closely related and similar looking species, some of which are quite scarce.

I would be delighted to receive any specimens from members across the county as an aid to this paper. I do not expect anyone to dice with the threat of a sting - wasps are quite often found dead on windowsills, in light units, sheds etc and these are all valid records. Even swatted ones can be identified if you've not hit them too hard! Please send me any specimens along with your name, address, date of finding the specimen and, ideally, an Ordnance Survey grid reference of where you found it, but do not worry if you're not familiar with this. Put the wasps in a small tub or pot (old 35mm camera film tubs are ideal but becoming harder to get hold of in this digital age) and post them to me at Jessups Cottage, London Road, Capel St Mary, IP9 2JR.

Adrian Knowles

Hymenoptera Recorder

SUFFOLK NATURALISTS' SOCIETY BURSARIES

The Suffolk Naturalists' Society offers five bursaries, of up to £500 each, annually.

Morley Bursary - usually awarded for studies involving insects (or other invertebrates) other than butterflies and moths.

Chipperfield Bursary - usually awarded for studies involving butterflies or moths.

Cranbrook Bursary - usually awarded for studies involving mammals or birds.

Rivis Bursary - usually awarded for studies into the County's flora.

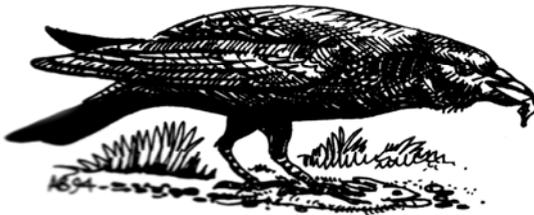
Simpson Bursary - in memory of Francis Simpson; this will be for a botanical study where possible.

Any member wishing to apply for a bursary should write, with details of their proposed project, to the Honorary Secretary. As applications are normally considered at the Council meeting in May of each year, proposals should be with the Hon. Sec. by 30th April.

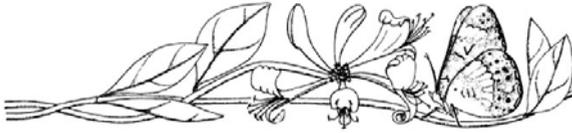
Applications made at other times will be considered but, even if considered worthy of an award, may not be successful if all the bursaries for the current year have already been taken.

The following two conditions apply to the awards:

1. Projects should include a large element of original work and applications must include a breakdown of how the bursary will be spent.
2. A written account of the project is required within 12 months of receipt of a bursary. This should be in a form suitable for publication in one of the Society's journals: Suffolk Natural History, Suffolk Birds or White Admiral.



THE SUFFOLK NATURALISTS' SOCIETY



FOUNDED IN 1929 by Claude Morley (1874 -1951), The Suffolk Naturalists' Society pioneered the study and recording of the County's flora, fauna and geology, to promote a wider interest in natural history.

Recording the natural history of Suffolk is still one of the Society's primary objects, and members' observations are fed to a network of specialist recorders for possible publication before being deposited in the Suffolk Biological Records Centre, which is based in Ipswich Museum.

Suffolk Natural History, a review of the County's wildlife, and *Suffolk Birds*, the County bird report, are two high quality annual publications issued free to members. The Society also publishes a newsletter, *White Admiral*, and organises two members' evenings a year plus a conference every two years .

Subscriptions: Individual members £15.00; Family membership £17.00; Corporate membership £17.00. Joint membership with the Suffolk Ornithologists' Group: Individual members £28.00; Family membership £32.00.

As defined by the Constitution of this Society its objects shall be:

- 2.1 To study and record the fauna, flora and geology of the County
- 2.2 To publish a Transactions and Proceedings and a Bird Report. These shall be free to members except those whose annual subscriptions are in arrears
- 2.3 To liaise with other natural history societies and conservation bodies in the County
- 2.4 To promote interest in natural history and the activities of the Society

For more details about the Suffolk Naturalists' Society contact:
*Hon. Secretary, Suffolk Naturalists' Society, c/o Ipswich Museum,
High Street, IPSWICH, IP1 3QH. Telephone 01473 213479*

The Society's website is at www.sns.org.uk