



Newsletter

Inside this issue:

<i>Lost & Found</i>	2
<i>Neonicotinoid news</i>	2
<i>Lagoon Saga</i>	3
<i>Hot off the Press!</i>	3
<i>Up Coming Projects</i>	3
<i>Pollinator Corner</i>	4

The [Buzz Club](#) has arrived! Thank you for joining our new charity, which hopes to help answer important questions about insects and bees, whilst encouraging everyone to learn more about and take an active part in scientific research. This is our first quarterly newsletter. Within

its pages, we hope to keep our members up-to-date on the projects we run, upcoming events and current news on general scientific research in the field of insect and pollination ecology. This issue is edited by Dr. Rob Fowler. Each issue will

be edited by a different member of the [team](#).



Current Project Updates

P.A.N

The second year of our Pollinator Abundance Network (P.A.N.) project (the first official project under the Buzz Club banner) got off to a great start this spring with more volunteers signed up and undertaking the project than last year. This project is very exciting, with the data hopefully giving us real usable information about the current abundance of pollinators across the country. The project is still being run as we speak, and thank you to those who are taking part. Once all the samples are sent back to us, we will begin to sort through and identify what you have caught, and we'll let you know all about it in the next newsletter.

Hoverfly Lagoons

Our first Hoverfly Lagoon project began in spring this year, intended to examine how best to provide breeding habitat for the hoverflies that lay their eggs in wet, rotting organic matter. This has never been tried before, and is an idea dreamt up by one of our team, Dr Ellen Rotheray, who is our resident hoverfly nut. There are 9 common species of hoverfly in the UK that may use lagoons, and 5 rare species. Our lagoons were found containing larvae just 4 weeks after they were put out, and since then we have had over 30 pupae from around 6 lagoons. Adults of two species have already emerged: *Myathropa florea* (a ubiquitous species, larvae are found in almost any type of wet decaying material) and *Helophilus pendulus* (a species associated with accumulations of decaying



Myathropa florea



Helophilus pendulus

vegetation in ponds, farmyard manure or silage). Not surprisingly, then, *H. pendulus* were found in lagoons containing silage (cut grass), and *M. florea* were in silage and wood chip lagoons. Watch this space to find out what else is surfacing in our hoverfly lagoons!

If you have any pictures or interesting experiences with insects or pollinators please feel free to send them to buzzclub.uk@gmail.com, or tweet to us @The_Buzz_Club and we will add them into our newsletters.



Upcoming Event: Lost & Found Exhibition

Dr Beth Nicholls



For the past few months The Buzz Club has been part of an exciting collaboration with the artists Jane King and Neil Mabb from [Pale Blue Dot](#), and at the start of August some of our research on pollinators and pesticides was exhibited as part of an installation entitled 'Lost & Found'. The exhibition uses prints and video installations to explore the effect that the food industry and our culture of overconsumption has on the countryside and the wildlife that lives there. The artists even produced a replica of one of our laboratories in miniature- it was very funny to visit the

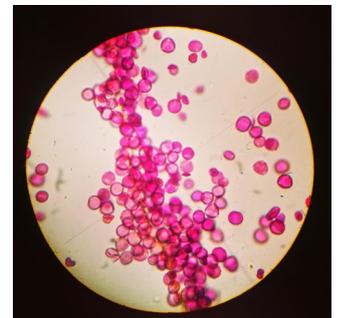
gallery on opening night to see some of our equipment and data sheets in place as part of an art exhibition! We hope that the exhibition will raise questions about the sustainability of current food production methods and, like The Buzz Club, help visitors to understand what it's like to conduct scientific research, and remove some of the barriers of communication between scientists and the public.

and politics on 12th September. See link below for more details, and please do come along to this event if you're local.

<http://onca.org.uk/upcoming-exhibitions/lost-found/>



As part of the exhibition we will also be hosting a free public debate about pesticides, pollinators



Neonicotinoid news



Prof Dave Goulson

"These neurotoxins are incredibly poisonous to bees, and are very widely used on arable and horticultural crops."

As many of you are aware, there is currently intense controversy over the impacts neonicotinoid pesticides are having on bees and more broadly on the environment. These neurotoxins are incredibly poisonous to bees, and are very widely used on arable and horticultural crops. As a result, the EU has imposed a ban on their use on flowering crops, but the UK government contests the ban and voted against it. If you would like to find out more, watch this [video](#).

Recently, there have been some interesting developments. Firstly, we now have crop yield data for the crops grown since the ban was introduced – maize, sunflowers and oilseed rape. Across Europe, there were bumper yields *without* neonicotinoids. The yield of OSR in the UK for 14/15 was a little higher than average, with one farmer in Lincoln-

shire breaking the UK record, getting the highest yield ever. Despite this, NFU presented a written case to Defra for permission to ignore the ban and use neonics on OSR anyway.

While this was happening, government scientists led by Dr Giles Budge at FERA were publishing a scientific paper which shows that honeybee colony losses across the UK are strongly linked to levels of neonicotinoid use in the local area. The same paper also shows that neonicotinoids provide negligible benefit to the farmer in terms of increased yield, confirming what has been seen across Europe in 14/15.

Despite all of this, Liz Truss granted our farmers permission to go ahead and use neonics on OSR across large swathes of central England. The case that NFU made is being kept

secret on the grounds that it is "commercially sensitive", though my suspicion is that the real reason is that it is embarrassingly flimsy and full of holes.

Our own lab at Sussex continues to do research on this subject – watch this space for news of some exciting (and depressing) work that will be released soon.

Of course all of this means that it is more important than ever to have a good monitoring program for wild pollinators, so that we can measure the impacts of farming practices on our bees and have solid evidence to present to government. Hence the need for Buzz Club!!

Lagoon Saga

Dr Ellen Rotheray

Inspiration for the hoverfly lagoon project came from developing techniques for captive rearing an endangered species called the pine hoverfly, *Blera fallax*. This species depends on rot holes in Caledonian Pine stumps, so in the UK it currently resides in Scotland. Edinburgh Zoo (with help from the BAP steering group for this species, the Malloch Society, and RSPB) is currently fine-tuning these techniques for pine hoverfly husbandry by captive rearing a Finnish population of this species, in preparation for housing a Scottish population, but also to promote interest in the species and the importance

of its lagoon habitat. For more information, pictures and footage, see [here](#).

Hoverfly lagoons are simply buckets or other containers, filled with water and organic matter such as leaves, cut grass or wood chips, and left to rot. We want to know what works best, and so are asking our members to give it a go.

Lagoon enthusiasm is contagious – it's caught the imagination of our resident worm expert in the Buzz Club, Kate Basley. Kate caught some local adult *Eristalis tenax* to attempt to captive breed and rear generations through in the lab,

encouraging females to lay eggs in silage-filled lagoons. If successful, this beautiful so-called dronefly, will help her find the answers to important environmental questions related to the health of our pollinators. So far it's going well! At least 2 wild-caught females have deposited 50 to 100 eggs on the surface of the silage, which are now very healthy, squirming, churning larvae en route to pupation.



Eristalis tenax eggs on the surface of a silage lagoon



Adult male pine hoverfly, *Blera fallax*

Hot off the Press!

As we are active researchers in pollination ecology, we will also try to bring you news of current research that is being undertaken in both our own institution, the University of Sussex, and also important new studies from around the world.

PhD student Thomas Wood has been studying how farmers planting beneficial plants adjacent to their crops can improve bumblebee

populations. In a recent [paper](#), Thomas found that if known bumblebee forage plants are present (e.g. common bird's-foot trefoil (*Lotus corniculatus*), common knapweed (*Centaurea nigra*) and red clover (*Trifolium pratense*)), a greater numbers of common bumblebees were found on farms and, importantly, bumblebee nesting density was higher, suggesting a growth in the population of bees in these farms. However, this was not

the case for rarer bee species which forage closer to their nests (e.g. Large Garden Bumblebee *Bombus ruderatus*), suggesting that although a great benefit to bees, these flower rich patches are too scattered in the landscape for certain species.



Common Carder Bumblebee, (*Bombus pascuorum*)

NEW Projects—Volunteers Needed!

We are currently planning more projects which can be both enjoyable and educational for our members, but also help us generate usable data on pollination ecology in the UK.

One such project will be part of Janine Griffiths-Lee's PhD

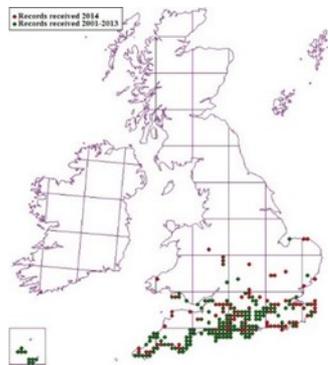
research. Janine joined the research group earlier this year and is currently setting up a large-scale experiment at a local vineyard in the South Downs looking at the effects of wildflowers on the diversity and populations of pollinators and parasitoid wasps.

Janine also needs

eager green-fingered volunteers with allotments and gardens that can help with a 2-year study on the benefits of sowing wildflowers for pollinators. You will be sent all the kit needed, including packs of wildflower seeds to be sown in your allotment or garden

in the Spring of 2016. Please contact Janine for more information or keep an eye out for updates j.griffiths-lee@sussex.ac.uk

Pollinator Corner: the Ivy Bee



We are mad about pollinators! They come in a huge range of shapes sizes and colours, all with a cacophony of different behavioural and evolutionary traits. That's why we want to showcase a pollinator or group of pollinators for every newsletter we produce, outlining their ecology, what plants they tend to pollinate and when and where you are most likely to find them.

For the first newsletter, we have selected the Ivy Bee (*Colletes hederæ*).

This species is relatively new to Britain, first found in Dorset in 2001, and it has spread throughout southern England and southern Wales (see map). This bee is also present in Guernsey, Herm, Jersey and Sark, and is widespread in western Europe where it is

also spreading rapidly, with records from Austria, Belgium, Croatia, Cyprus, France, Germany, Greece, Italy, The Netherlands, Serbia, Slovenia, Spain and Switzerland. This range expansion goes against the tide of the range decrease of bees in general, and is currently being followed by The Bees Wasps and Ants Recording Society (BWARS).

This species has the latest flight period of any other solitary bee in the UK, with its main period of activity between September-November. As its name suggests, it feeds predominantly on flowers of ivy (*Hedera helix*). However, it feeds on a variety of other plants too, including *Eryngium amethystinum*, heather, red bartsia, and flowers from the Asteraceae

(daisy) family. They nest in aggregations in the soil, and are commonly seen nesting in lawns or flower beds. To find out more about this fascinating pollinator, please visit [here](#).



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We are a group of scientists and non-scientists, adults and children, working together to find out more about bees and other pollinators. The Buzz Club's goal is to ensure that we look after our wild bees and other insects, giving them a future. We can only do this if we understand more about them; why are some disappearing, how many are left, and where are they? How fast are they declining? What can we best do to help them? Together, we undertake fun nationwide surveys and experiments.

Visit our website

www.thebuzzclub.uk

Help us study and save pollinators!!

