



Newsletter

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Welcome to the 9th issue of the Buzz Club quarterly newsletter. It is coming towards the end of the summer and we've all been busy, we had lots of beautiful entries to July's competition, making it a difficult job to choose the winners. In this issue we will be taking a look at the winning photo's and some other favourites from the competition. Professor Dave Goulson updates us on neonics in garden

centre plants. Dr Ellen Rotheray introduces the exciting new Hoverfly lagoons schools project and tells us about some exciting finds from the wider project. We will be explaining what makes wasps useful and why sometimes the only way to gather data is to use lethal traps.

Plus a chance to win £50 of garden centre vouchers!



This Issue is edited by Balin Davenport

Neonicotinoids in garden centre flowers: update



Bombus terrestris or lucorum on Dahlia, Dunhurst ODW

Following our recent research revealing that the plants on sale in garden centres, and including those marketed as "bee-friendly", mostly contain cocktails of pesticides including the notorious

By Prof. Dave Goulson

neonicotinoids, it is great to be able to report some positive steps from many retailers. This spring Friends of the Earth used our study to launch a campaign to put pressure on garden centres to remove neonicotinoids from their plants. Nine of the ten biggest garden centre chains in the UK, including Hilliers, Notcutts, Wyevale, B&Q and also Aldi have all committed to selling only plants free from neonicotinoids. Only Homebase have so far failed to respond positively. This is great news for pollinators, and also encouraging for us scientists; it is rare to see one's research having an effect in the real world!

However, we should not be complacent. The garden centre plants contained complex mixtures of pesticides, including many

fungicides and three different types of insecticides; the neonicotinoids, and also organophosphates and pyrethroids. Friends of the Earth chose to focus on neonicotinoids, but to my mind this is missing the bigger picture. Pyrethroids and organophosphates will certainly kill bees too. Withdrawing neonicotinoids may lead to more use of these other insecticides on the flowers. To my mind, plants sold as "bee friendly" or "perfect for pollinators" should not contain insecticides of any type.

Interestingly, the Royal Horticultural Society, who produce the "perfect for pollinator" logo, have so far failed to make a clear policy statement on this issue. It would be great to see some leadership from them.

Wasp going on?

By Balin Davenport



solitary wasp (left) and Common wasp *Vespula vulgaris* (centre)

With the recent launch of an exciting citizen science project “the Big wasp survey” from the royal entomology society, UCL and University of Gloucestershire, what better time to talk about wasps. Here at [Buzz Club](#), we are often asked, what is the point in wasps? Most of us are aware of the common wasp *Vespula vulgaris*, one of the species that is often an unwelcome guest at late summer barbeques and picnics.

These wasps are social in their nesting habits. Much like their cousins the honey bee, social wasps live in large colonies, building their paper nests from wood pulp; gathered from fence panels, trees, stumps and any other wood they can get their mandibles into. You might also be familiar with hornets, but there are several other social species in the UK.

There are around 9000 species of wasp in the UK, only 9 of these are social and most are solitary species.

Social wasps live in colonies; after emerging in spring the queen builds a small nest and begins by raising a small number of non-reproductive daughters on her own.

This first brood extends the nest by raising more sisters. Once there are enough sisters to forage for surplus food, sexual offspring are raised. These sexual offspring emerge in late summer, mate, then fatten up for winter before hibernating. They then emerge when the weather starts to warm up, and begin the cycle again.

Despite the common media narrative that wasps are a dangerous pest, these fascinating insects play an important ecological role. The social wasps are generalist predators, they prey upon a wide range of insects that some themselves consider pests (e.g. aphids, flies and spiders).

While most of us are more familiar with the common wasp and hornet, there are many more solitary species. Some build smaller nests in small burrows in sandy banks, dead wood or behind bark. Many are parasitoids, species which have no nest but lay their eggs on or in their host. Others lay their eggs within the hosts nest or on their. These parasitoids tend to be specialists, with a wasp that parasitizes almost every pest insect, spider, caterpillars, beetle, fly species, even mosquitoes.

It seems obvious that wasps could be a useful biological control, but could they also be pollinators? Seeing wasps visiting flowers and drinking nectar is a very common sight, and more often than not you’ll see pollen attached to their bodies – so it seems very probably that they contribute to pollination services. Several studies confirm that they do. Broad leaved helleborines (a species of orchid) actually trick common and European wasps into pollinating their flowers with the scent of meat. Several other orchid species depend on wasps entirely for pollination. While few studies on wasp pollination efficiency have been done, perhaps it’s time we learnt more.

The big wasp survey aims to find out much more about the different species of social wasps and their distribution across the UK. To find out more visit <http://www.bigwaspsurvey.org>

The big wasp survey asks participants to set lethal beer or juice traps to collect population data on social wasps. While the project received some criticism for using the publics general dislike of wasps to achieve their goal, they timed their project to coincide with the death of colonies - once the new queens emerge the colony goes into decline and the workers die. Setting traps at this time of year was carefully planned to minimise the impact on wasp numbers.

The methodology of taking specimens that this and other projects employ is controversial from the general public’s point of view. With wildlife photography becoming such a popular hobby do we really need to take specimens for identification? Unfortunately photographs often miss, or can’t see all of the important defining features. For many species we must examine genitalia, minute bristles, jaws or surface sculpturing to make a positive ID (and even then it’s not always easy).

It would be impossible to do meaningful research into the

ecology, behaviour or conservation of a species without being able to identify it reliably. Having specimens also allows verification of previous identifications to ensure they were correct or to re-identify a specimen in light of new research or changing taxonomic grouping.

In general, only a miniscule portion of the population are normally sampled and scientists think long and hard before doing any destructive sampling at all. Although it seems like backwards thinking to kill something in order to study and save

it, sometimes it is the only viable option.

Wasps might not be on the top of your list for protection but they are an essential part of the ecosystem, they are important pollinators and predators, and they are as fascinating and valuable as any other species we might consider for conservation. We don't expect you to welcome them to your picnic, but do try and tolerate them in your garden.



The beewolf, *Philanthus triangulum*, is a solitary wasp that stocks its nest with paralysed honeybees

A Hidden Buzz!

The winners of July's competition and just a few of our other favourite entries



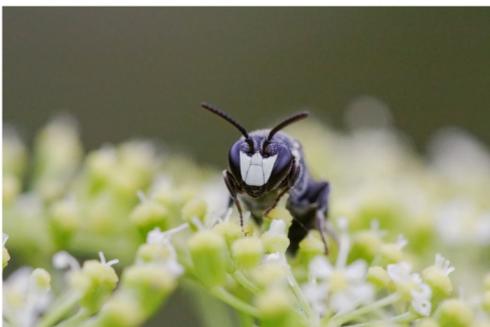
1st place, Tuc Ahmad's hoverfly silhouette



2nd Gail Pickett's wasp and friends



3rd Lucy Hodson's, leafcutter close-up



4th Sarah Marshall's, yellow-faced bee



Fortheloveofbees bee



Stuart Schaum's hornet mimic hoverfly



Debbie Rowlands' hoverfly



Beinen Nachrichten's Rose Chafer



Sarah Marshall's wool carder bee

Hoverfly Lagoons 2017

Dr Ellen L. Rotheray

It's been a mixture of highs and lows for the Hoverfly Lagoon project 2017. We've had the greatest response from volunteers this year, with reports of up to 102 larvae, 56 pupae, and 22 adults recorded from one lagoon, the latter of which were all *Myathropa florea*, the 'Batman' hoverfly. There have been several lagoon types, but most have been grass, leaf litter and wood chip. New to the Hoverfly Lagoons project have been reports of predatory muscid larvae, see inserted photo (below), which while an interesting and natural member of the lagoon community, can be very effective at consuming the entire hoverfly larvae population in a single lagoon.



Tiger hoverfly *Helophilus pendulus* ovipositing eggs on the underside of an ivy leaf (left), adult reared from eggs (right)



Predatory muscid larvae

resident lagoon expert, Dr Ellie Rotheray is available to visit and introduce the children to hoverfly larvae and help them create their lagoons.

Please see [http://thebuzzclub.uk/ Hoverfly Lagoons.php](http://thebuzzclub.uk/Hoverfly_Lagoons.php) for more information about the project, and links to the methods and fact sheet designed for schools.

Lagoons are made from empty milk bottles, the project doesn't cost anything, and it's very easy to take part.

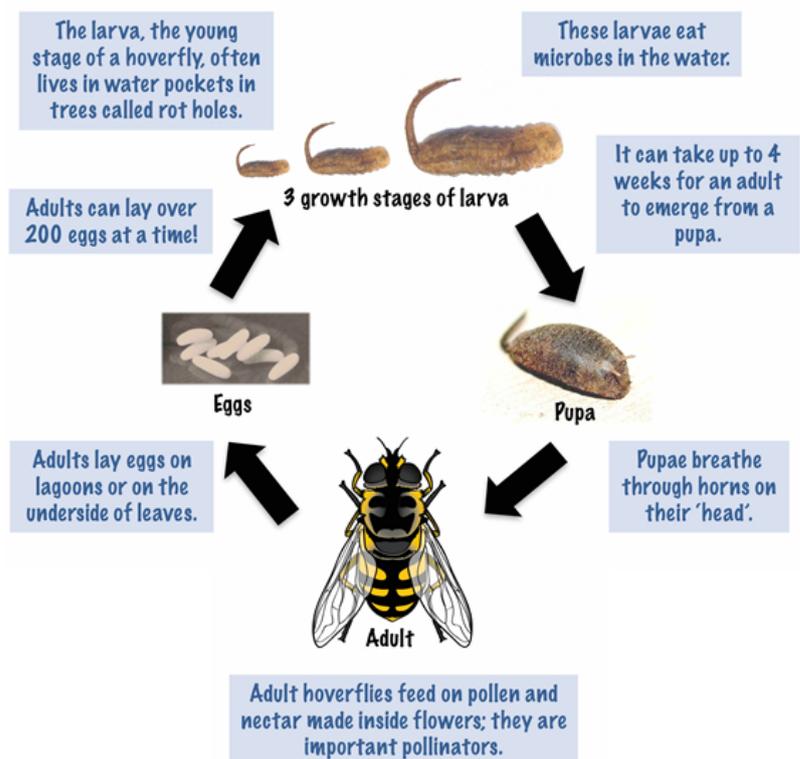
Excitingly, we not only managed to observe and photograph the tiger hoverfly *Helophilus pendulus* ovipositing eggs on the underside of an ivy leaf above a lagoon, but we also managed to rear a sample of the eggs to adult in 3 months, see inserted photo (top right).

Schools!

The Hoverfly Lagoons project are searching for schools to volunteer to take part. We're asking schools to set up lagoons on their school grounds now, and start monitoring them once a month from May until September next year. Our hope is to educate children about hoverflies as important pollinators, that part of their life cycle depends on these 'rot holes', and to create some important habitat to support them while collecting important data on lagoon design.

If your school is in East Sussex, our

Life Cycle of the semi-aquatic hoverfly



Help us create a Buzz!

In order to better be able to help our pollinators, the Buzz Club needs more members! Can you think of any friends, organisations, schools or community groups that have an interest in nature or may be interested in joining the Buzz Club and taking part in our projects? Alternatively, are there any places near where you live that would be happy to display Buzz Club leaflets? Would you like to help promote the club and increase our membership more widely throughout the UK? If so, don't hesitate to email us at buzzclub.uk@gmail.com for more information about how you can help. Thanks!

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.

Team Pollinate

Grow your own fruit and veg?



Take our survey for a chance to win

£50 of garden centre vouchers!



Do you grow your own fruit and veg? Why not take part in our online survey to help us understand more about the practices and challenges faced by people growing their own food in the UK. The survey will take 5-10 minutes to complete and at the end you will have the option to enter a prize draw to win £50 of garden centre vouchers!

<https://tinyurl.com/ycvujqda>



University of Sussex
JMS Building
Falmer
Sussex
BN1 9RH



Email: buzzclub.uk@gmail.com

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!!