Newsletter

Welcome to the 10th issue of the Buzz Club quarterly newsletter. We hope our members all had a lovely Christmas and a Happy New Year! This Issue is edited by Rob Fowler

Hoverfly Lagoons Project

Dr. Ellen Rotheray

Hoverfly Lagoons Project 2017 recruited 134 volunteers. Most volunteers that returned data to us created one lagoon containing grass or leaf-litter (63%). Volunteers mostly submitted records in June, and recorded up to 100 larvae, 39 pupae, and 22 adults from one lagoon. This year, all adults identified were *Myathropa florea*, which emerged in July and August. Up to 74 larvae were counted in October's survey, and these larvae will overwinter and emerge in spring (see image below from one of our volunteer's October lagoon survey).

We will be continuing the Hoverfly Lagoons Project in April 2018, and already have volunteers sending us images of collecting leaf litter ready for lagoons (see images below). Please keep them coming! This year we are interested in asking whether leaf litter is more effective than, or significantly different to, grass lagoon content, and if height is important. We will develop protocols and send them out to volunteers by April. If you are interested in getting involved in the Hoverfly Lagoons Project, then please visit our project page at: http://thebuzzclub.uk/Hoverfly_Lagoons.php and sign up to the project, or get in contact via email hoverflylagoons@gmail.com.

Insect Armageddon

A recent study published in October reported that the proportion of flying insect biomass has reduced by 76% over 27 years. Although surveys were only taken from protected areas in Germany, the results of this paper have huge implications for the world's insects.

We, and many of our members, are concerned with the loss of pollinating insects in our country and across the world. It is something often talked about with concern, both for the ecological and economic consequences these declines could pose and also because we find invertebrates intrinsically fascinating, and want to see them survive and flourish.

Previously, there has been some debate about just how much our insects have declined as historical datasets on insect numbers are hard to come by and difficult to compare to present estimates. There have however been several recent accounts of declines of certain taxa, most notably butterflies. The year 2016 was the 4th worst for butterflies in the UK, with 70% less butterflies recorded and 40 out of 57 species showing declines. In addition, a 50% decline in European grassland butterfly abundance was shown between 1990 and 2011. Several studies also report declines in bees and moths in the UK, Europe and the US. The results of this most recent study further confirm our concerns of the continuing threat to our flying insect populations.

What are the causes of this 'Insect Armageddon'? Increased levels of agriculture, pesticide use and habitat loss are all seen as the main culprits, although there are a range of other factors that could contribute (e.g. pathogens, climate change, etc.). It now looks likely that the EU will soon ban the use of neonicotinoids on flowering crops. This *is* great news, however this will only limit the application of one type of pesticide.

What is very special and encouraging about this new research is that the core insect surveys and data collection was undertaken by members of the Entomological Society Krefeld. The data they collected over this 27 year period was priceless when it came to estimating population trends, even though they originally planned for it just to be used to monitor insect numbers in the regional conservation areas. This goes to show just how important grass-root hobbyists and volunteers are to ecological research. Without their time, dedication and experience we would be without this vital clue as to just how bad things look for insects in our world at the moment. Hopefully this paper will be a catalyst for change towards protecting insect populations across the world.

Help create Buzzing Balconies with Tesco Bags of Help!

TESCO Bags of Help

We have been successful in applying for the Tesco Bags of Help Grant Scheme where we have a chance to be awarded between £1000 - £4000 towards a brand-new project.

This project is called Buzzing Balconies and aims to help people living in urban Brighton & Hove learn about wild bees and other pollinators by creating essential habitat for them in window boxes, balconies or courtyard gardens.

In the UK, the proportion of our population living in urban areas is 81% and rising. Many children do not get opportunities to experience nature first hand, growing up without understanding the importance of conserving our environment, or appreciating how beautiful and fascinating wildlife can be. We propose to give people of all ages just such an opportunity even if they lack large gardens; a chance to learn how plants grow, watch their flowers be visited by bumblebees, hoverflies and other insects, and then to collect the fruits they produce.

We will provide 'vertical habitat' for pollinators by asking recruited volunteers to create mini wild flower meadows on balconies or in window boxes. Using tomatoes and strawberries, we will also ask children to perform simple, fun experiments to give them the opportunity to learn more about the pollinators that visit and their role in food production. The records volunteers provide of insects visiting their flowers will also have scientific value, for they will contribute to national data sets on the distributions of our wild pollinating insects.

There is already evidence that urban areas can support strong populations of pollinators; even in the centre of cities, window box flowers are visited by bumblebees, hoverflies and other pollinators. As the area covered by urbanization increases every year, there is a real opportunity to turn our urban areas into havens for wild insects.

Brighton and Hove Tesco shoppers can vote for the Buzz Club between Tuesday 2nd January and Wednesday 28th February 2018 at the stores located below:

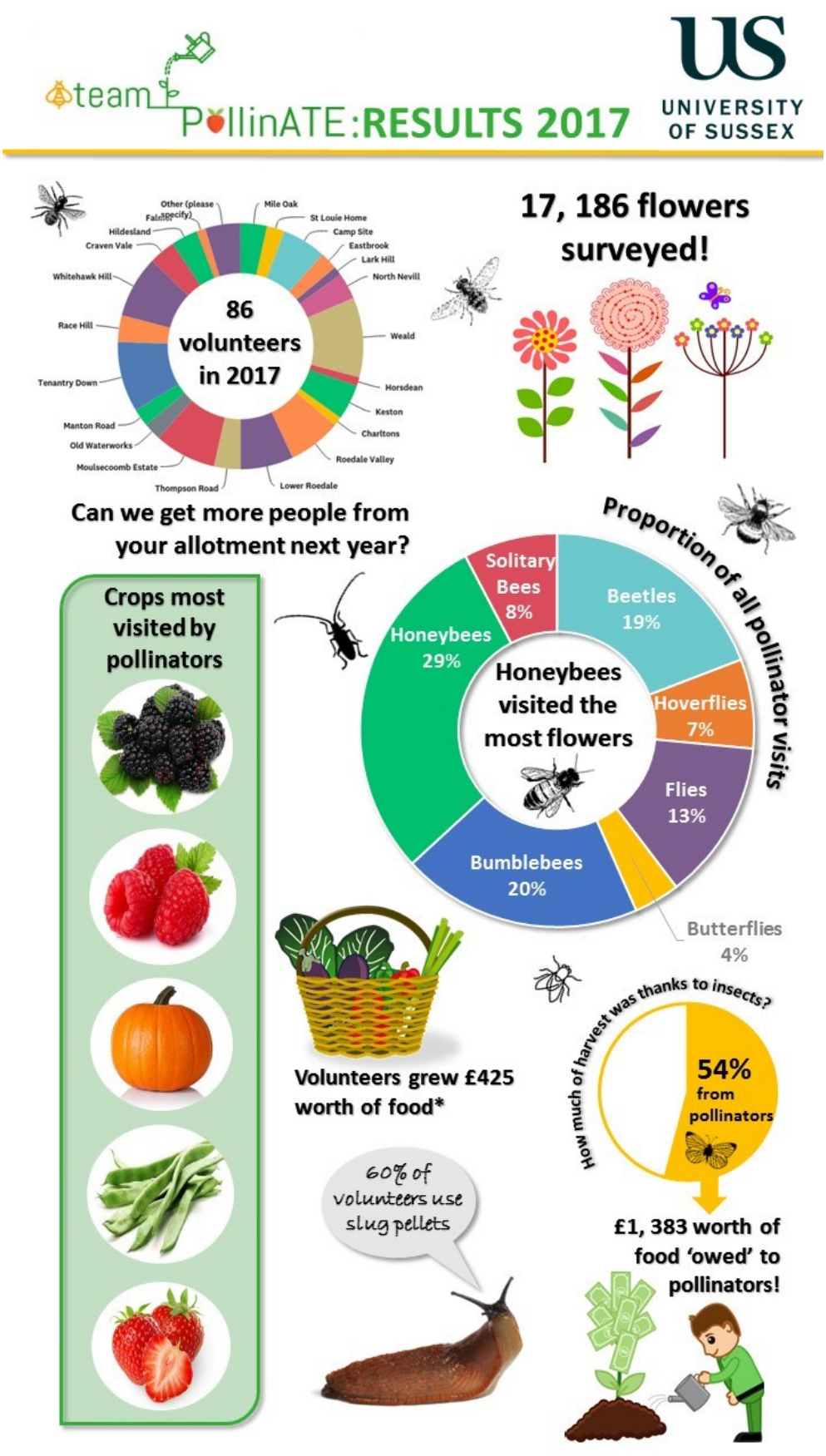
Droveway, Hove
Church Road, Hove
Denmark Villas, Hove
Dyke Road, Hove
Jubilee Street, Brighton
Boundary Road, Portslade
Western Road, Brighton
West Way, Hove
Warren Road, Woodingdean
Queens Road, Brighton

Team Pollinate! Results 2017

Dr. Beth Nicholls

Buzz Club researchers, Dr. Beth Nicholls and Prof. Dave Goulson started a new citizen science project called Team PollinATE early last year, which is aimed at understanding more about the role of pollinating insects in urban food production. Food grown in cities is thought to account for 50% of the food eaten worldwide, and so it is very important to learn more about which insects pollinate which crops, and what effect the use of pesticides in urban food growing might have.

This summer, allotment growers across the city of Brighton have been counting pollinators in their plots, as well as keeping records of how much food they harvest and any pesticides or weedkillers they use. As you can see from the infographic the data from this first year alone is very interesting, and has already taught us a lot about the behaviour of pollinators in allotments, and how much the food that people grow might be worth. If you live in Brighton and grow your own food either in an allotment or at home, why not sign up to take part next year at www.teampollinate.co.uk



Air Bee n' Bee 2018

Can you give a bee a home?

Use the sign up link below to be a part of Air Bee n' Bee, our project aimed at creating and testing solitary bee hotels across the country with your help!

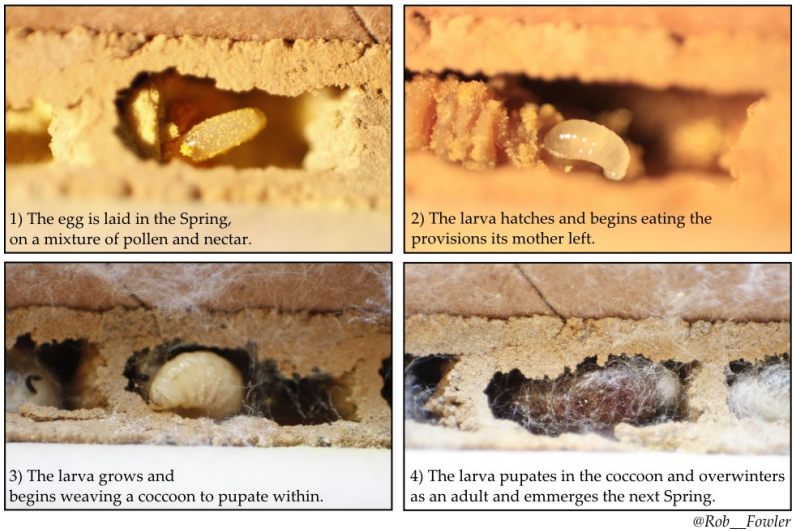
Most species of bee in the UK are solitary. Whilst some nest below the ground others nest in cavities such as old plant stems. Females create individual 'cells' inside the stems using mud or leaves, in which they lay an egg. Each cell is then stuffed full of pollen and the larvae are left to grow in the summer heat (see the pictures below!). Emerging as adults around April/May, the offspring chew their way out of the nest and go on to fulfil their role as pollinators.

We want to know what bee hotels work best, and whether simple, cheap and recycled materials can be used to provide vital nesting habitat for bees.

Building your bee hotel is easy as can bee!! We will send you a starter pack to get you on your way. It will include instructions on how to build the hotel, where to place it in your garden and even what data we need you to record. Red Mason bees and Leaf-cutter bees are likely to be attracted by the warm shelter you will provide. Finding out which DIY hotels they prefer will help us preserve pollinators more easily.

Sign Up Here!!

Inside the brood cell of an *Osmia bicornis*



@Rob__Fowler

How are we doing?

We are keen to make sure that Buzz Club members are happy with the work we do and how we do it. So we've set up a short questionnaire for you to give us some feedback on what you think we are doing well and what we could do better. If you would like to have your say, please follow the link below;

Feedback Survey Link

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.

Pollinator Quiz

One of the main limitations of studying pollinators is reliably identifying them. It is one thing to see and admire these endearing creatures whilst they nectar on a flower, but it is something altogether more difficult to confidently call out the scientific name of a wasp, bee or hoverfly whilst it does this. The ability of the few who can do this can seem extraordinary to us mere mortals. However, we have to start somewhere. So we've made a Pollinator Quiz so you can test, and hone your insect identification skills.

Pollinator Quiz Link

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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!!