



**Montgomeryshire BeeKeepers
Association**

The BeeHolder

Winter 2018



European Beewolf (*Philanthus triangulum*)

Photo by Alvesgaspar - Own work, CC BY-SA 3.0,
<https://commons.wikimedia.org/w/index.php?curid=2603164>

See article on page 8

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We welcome as members ...

There is usually a list of new arrivals to report here. However for technical reasons members joining after about September are usually deferred till the following year.

“Give the BeeHiveMan a Buzz!”

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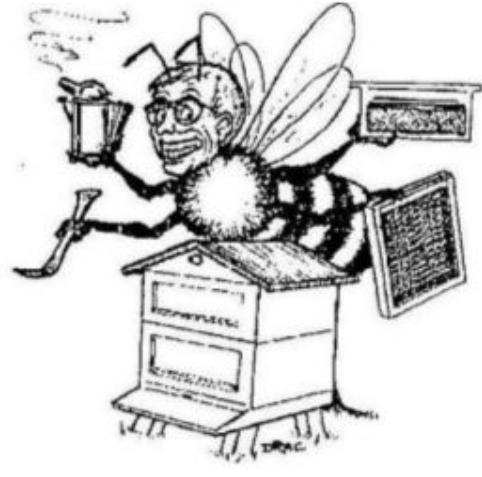
Editorial

Following rather rapidly on the Autumn BeeHolder, this doubles as an opportunity to get membership renewal forms and the annual dinner information out to our members who have opted out of email and using websites or social media. And there is no such thing as too many BeeHolders.

The summer warmth continued well into autumn but we are now feeling the cooler weather normal for the time of year. Will there be a return of the beast from the east in January/February? It is generally thought that bees benefit from a 'proper' winter which is cold enough to keep them indoors rather than wasting energy getting out to find there is little or nothing to forage.

But if the bees are active, they will be consuming stores more quickly and so could well need additional feeding. Fondant is the usual choice and this can either be home made or bought off the shelf. It could be worth checking if Roger (Stone) still has fondant available at the bulk price he obtained for the MBKA apiary. His contact details are on the commiteee page inside the back cover.

Chris



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Chairman's Christmas message

As I have never written a Chairman's address before, this is a bit of a shot in the dark. First let me say that it is no use having a chairman at all unless there is a loyal and supportive committee and a membership which is interested in what the Association is trying to do. I'm very fortunate because I have got both.

More importantly, the bee population of Montgomeryshire is fortunate because we are cooperating to keep it alive and well. The cooperative aspect is very important because it means that when we do a show, people will man the stand, members will turn up. When we do an evening talk, people turn up, ask questions, contribute. As an association we examine new ideas in beekeeping and evaluate them in the light of what we know already. Established beekeepers mentor those new to the activity. The take up of training at all levels is very encouraging. Bill and Roger continue to do sterling work at the association apiary. We have been joined by Dave and Liz on the IT side.

My thanks to all the committee members for their hard work. All of this is a result, I think, of having established a common set of aims and of leaving previous factionalism behind. Enough preaching! We've had a bumper year, we are awash with honey. We even went and sold some in France! Look after your bees this winter. Turn up for the Christmas lunch. Cheers Pete

Swansea University project

Two students of Mechanical Engineering at Swansea University have chosen to focus their final year project on the design of beehive components and sensors, which may be attractive to a wide range of beekeepers by supporting their year round practice and addressing issues they may have faced with their hives.

To assess areas where new technologies may best support beekeepers, they have created a survey (it is pretty short, 6 questions only) and would very much appreciate responses from as many beekeepers as possible. Early responses will help them to justify their project.

See [https://montybees.us11.list-manage.com/track/click?](https://montybees.us11.list-manage.com/track/click?u=a07efe6888aee826b0fb475d0&id=5e2b3985ff&e=db8fa0be5b)

[u=a07efe6888aee826b0fb475d0&id=5e2b3985ff&e=db8fa0be5b](https://montybees.us11.list-manage.com/track/click?u=a07efe6888aee826b0fb475d0&id=5e2b3985ff&e=db8fa0be5b)

courtesy of Swansea & District Beekeepers' Society

Forthcoming Events

MBKA are having evening meetings over the winter with a selection of interesting speakers coming to share their experiences for our amusement and education. Plus the hardy annuals - MBKA dinner and Annual General Meeting - coming up in January and February 2019 respectively.

20th January - MBKA Annual Dinner

12:30 at the Lakeside Golf Club, Garthmyl. Continuing the trend of the last three years, we'll be having a family friendly lunchtime meal in the surroundings of this beautiful course. See page 9 for details.

19th February - MBKA Annual General Meeting

7pm at Plas Dolerw. Your chance to get up close and personal with the running of our association. As well as the business of the meeting, there will be a session of "Bee Keepers Question Time" with a panel of experienced bee keepers eager to listen to your problems and answer your questions. Not to mention the world famous bee hive raffle, one free ticket for each membership attending!

12th March - Queen Rearing and Breeding

7pm at Plas Dolerw. Steve Rose will talk about the practical side of breeding and rearing queens, both important aspects of bee keeping if we are to keep our colonies and hives productive and healthy.

?th April - Showing Honey

7pm at Plas Dolerw, date to be confirmed. Meet your new bee inspector, Shane Jones, as he talks about showing honey for fun and profit.

The Mystery of Mating

Lynfa Davies travelled from Aberystwyth on the 28th November to give us a fascinating talk about the mating process of the honey bee. She is a very experienced master beekeeper who some of us met in the summer when she examined us for our basic BBKA assessment.

Her slides were arranged to address the "why, when, where and how can we influence" the successful mating of the honey bee queen, and reminding us that the success of the whole colony relies on the presence of a healthy productive queen. She started with a thankfully simple

explanation about the complicated genetics involved. Workers and queens have two sets of chromosomes (diploid) so, as eggs are haploid (containing only one set of chromosomes), mating is essential so that these eggs are fertilised with haploid sperm also containing one set of chromosomes. Unfertilised eggs develop into drones.

She showed us detailed photographs of the queen and drone and how their body structure differs and is adapted for successful mating. The queen is recognised by her enormous abdomen which contains two large ovaries which



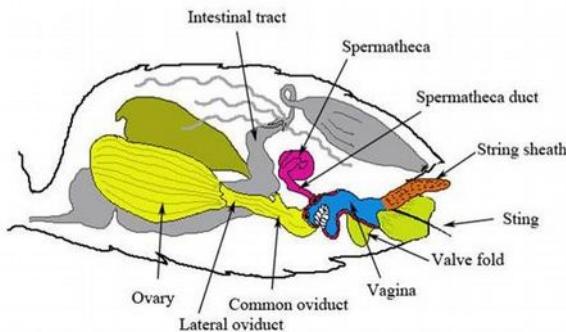
Mating flight

look like a string of sausages! Eggs move from the front of her abdomen to the rear as they mature, through the oviduct into the valve fold. If she is laying an egg in a worker cell, sperm is released from the spermatheca (an organ which stores sperm collected from her mating flights) to fertilise it but if laying an egg in a drone cell, sperm is not released so the egg is unfertilised.

The drone is highly specialised, with a huge thorax covered in hair keeping the flight muscles warm, large compound eyes with which to see the virgin queens, large antennae to pick up queen pheromones, and big broad wings built for speed. Drones and queens have shiny hairless legs as they do not collect pollen.

The mating flights usually occur from midday to late afternoon depending on the weather and temperature. Drones can fly up to 5 miles from the colony to Drone Congestion Areas (but the further the DCA, the less energy they have for mating). It is not known how or why these areas develop but theories include optimal thermal conditions, magnetic fields, changes in landscape gradient, or local vegetation. However, something is special about these areas because up to 14,000 drones representing a possible 100 colonies may congregate there.

The virgin queen takes a number of orientation flights to establish the location of her hive when she first emerges from her cell, and then the next couple of weeks she takes multiple mating flights lasting about 15 to 30 minutes. A “drone comet” of about 100 drones will pursue her, with the successful drone grabbing her, curling his abdomen under her and pushing his endophallus into her opened back end (Lynfa described this as being like a ferry opening up to allow vehicles to drive on-board!) The movement of haemolymph (the “blood”) from the drone’s body into the endophallus to facilitate mating literally makes the poor thing lose consciousness, and he drops to the ground and dies (this was news to me- I thought his genitalia and some of his abdomen were left in the queen, which



Reproductive organs of a queen bee

were subsequently removed by the workers on her return to the hive).

Lynfa completed her talk with some discussion about whether the mating process is beyond our control (e.g. we can select queens for traits we favour but unless we have very secluded apiaries, we have less control over the drones she mates with unless we use artificial insemination, a very specialist activity). She also described the various situations that occur when it goes wrong including a drone-laying queen, the queen failing to return from her mating flights leaving the colony “hopelessly queen-less”, and laying workers producing eggs from their vestigial ovaries. The latter is apparently a normal phenomenon but other workers will remove these eggs if a queen is present in the colony.

Lynfa gives presentations on a number of topics so we'll be inviting her again! She recommended the following You-tube clip if you want to see some amazing close-up aerial photography of a queen being mated:

<https://www.youtube.com/watch?v=vrN2wXAH05o>

Jill Hill

The Beewolf

I had never heard of these until researching my article for the Small Scissor bee for the last issue of BeeHolder, which in turn was inspired by the Violet Carpenter bee. So I will see what turns up in the next issue ...

Beewolves are also known as bee-hunters or bee-killer wasps. There are over 100 species within the genus *Philanthus*, of which the *P. triangulum* (see front cover image) is the most common in Europe and is a minor pest[1] to beekeepers. The adult females dig tunnels in the ground for their offspring, while the males mark twigs and other objects with pheromones to claim their territory.

As with all other sphecoid[2] wasps, it is the larvae which are carnivorous. The inseminated female hunts for bees which will be the food source for her offspring.

The wasps sting their prey at a weak point on the ventral surface where the venom quickly paralyzes the bee's major muscles, but without actually killing the bee. The bee may try to sting it back, but the beewolf holds it so that the bee can't get its sting to a vulnerable part.

The main tunnel can be up to a metre long, initially sloping downwards before leveling out. In the level section, there will be a complex of up to three dozen side tunnels each leading to a brood chamber. Each chamber is stocked with up to six bees and an egg is laid there. (Imagine if you will a tiny Egyptian tomb).

When the larvae emerge, they will eat the still live bees before pupating underground and finally emerging as adult wasps. As adults, they consume only nectar from flowers.

[1] pest. It is what people call animals they don't agree with for some reason. The irony is that people are probably the biggest pest on the planet. Discuss.

[2] Sphecoid. Now there's a word I don't normally slip into conversation. It basically means "any of several solitary wasps". It is the kind of word you use to test the full range of a dictionary.

Chris



A beewolf doing what it does

Fondant formula

Rather than just refer you to a website (and Dave Cushman's website is still one of the best for bee keeping information) here is his recipe for fondant.

For every kilo of white granulated sugar (sucrose) add 300 ml of boiling water and stir vigorously until all crystals have completely dissolved, then boil the liquid, again stirring continuously, until a temperature of 117°C is reached (when measured 25 mm below the liquid surface using a sugar thermometer). Allow to cool, without stirring, to 45°C and then re-commence stirring until the liquid appears milky, ladle or pour into suitable containers - the aluminium foil containers that are used for "take away" meals make ideal containers for candy.

These "bricks" of candy are utilised by placing face down over the feed hole of a crown board with the rim of the foil container acting as a rim of one bee space.

Timing of candy feeding is usually during late winter or early spring when feeding liquid syrup or honey would stimulate the bees to raise brood more early than it was deemed prudent.

Annual Meal

This is open to MBKA members and their guests. To book your place(s) return a completed form with menu choices to the address given, enclosing a cheque payable to MBKA for the full amount (£23.00 per adult, £16.00 per child) by **14th January**. The menu is on the next page.

WE CANNOT ACCEPT PAYMENT ON THE DAY

Forms are available on the web site, by e-mail and, for those without computer access, there should have been one in your Winter 2018 BeeHolder envelope.

If you have any questions, contact Helen (Woodruff) or Jill (Hill) - details inside back cover. I give Jill as a contact because at time of writing this Helen was having phone/internet issues and BT Openreach were being characteristically vague about the repair arrangements.



MENU

Starter

Homemade Potato & Leek Soup
served with a crusty roll (V)

Deep Fried Brie in Breadcrumbs, with a redcurrant & port sauce
Stilton and Bacon Garlic Mushrooms, with salad and balsamic dressing

Succulent Plump Prawns bound in Marie-Rose sauce,
shredded lettuce, served with a lemon wedge and brown bread



Main

Roast Chicken, sage and onion stuffing and oven-roasted sausage

Roast Pork, sage and onion stuffing and oven-roasted sausage

Roast Beef with Yorkshire Pudding

Oven baked cod with a parsley sauce

Vegetable hot pot (V)

(all served with a selection of vegetables, new potatoes)



Sweet

Sticky Toffee Pudding

Fruit Pavlova

Sherry trifle

Raspberry and white chocolate cheesecake

Apple pie



V = suitable for vegetarians

With your BeeHolder

You may notice that this issue is only 16 pages instead of the usual 20. The reason for this is to use one less sheet so that various forms can be included without doubling the cost of postage.

With this issue of BeeHolder you should also receive a membership survey form. We'd really like you to fill this in as the whole purpose is to get feedback so that as a committee we can adjust our aims and objectives to better accommodate the requirements and wishes of you, our members. So please take a few minutes to fill that in and either bring it to the next meeting or in some other way return it to our secretary, Jill.

If you have opted out of receiving information by email, you should also find your membership renewal form and an annual meal menu selection form enclosed too.

Bonjour! MBKA Trip to France

Earlier this year, MBKA had a stand next to the French Village at the Newtown Food Festival. One thing led to another so Rachel Kellaway (MBKA training officer) and Jill Hill (secretary) found themselves going to Les Herbiers in Le Vendee as part of the Newtown Town Twinning trip. We set off with other representatives from local associations and businesses on 29th November with jars of honey, candles and other items of honey and wax products to sell at the "Jum Regal" Christmas Fair.

We arrived to a warm welcome at the local town hall early Friday evening (stopping on the way to visit Mont St Michel) and met our hosts for the weekend: Yves and Marie Cecile Chevallereau. The good news was they are beekeepers. The bad news was their English was as good as our French! Thank goodness for google translator!

Yves has about a dozen colonies of various sizes in his garden and



Yves and Marie Cecile

another 80 in an out apiary. He uses Dadant hives containing 10 frames for established colonies, and small 5 and 7 frame nucs in his garden for rearing new queens. He loses about 30% of his colonies each year due to a variety of problems: poor local biodiversity, extensive use of pesticides in the area, varroa and, in September, Asian hornet. Certainly as we travelled around, Rachel and I were struck by the large flat cultivated fields with a lack of hedgerows and small bird life: very different from our home landscape.

Asian hornet nests! We saw at least 8 nests on our trip with one of them just 200 yards from Yves's garden apiary. He said he had been aware of the hornets attacking his bees and catching them in the numerous traps in his garden, but had not been able to see the nest until the leaves fell off the tree in autumn. The nest in the photo is about half its original size as a recent storm had broken it up. One of the English speaking locals told us she had found 2 nests in her garden shed in June, removed free of charge by the local authorities.



Asian hornet trap

The Jum Regal was great fun

(with wine and nibbles provided to keep us all in the festive spirit) but due to the torrential rain, was poorly attended but we managed to sell some of our products and promote Welsh beekeeping. Yves also had a stand (see photo on back of BeeHolder) selling his honey and mead but also boxes of propolis which is a very popular remedy for the prevention and treatment of sore throats in France. He harvested 2,000 kg of honey this year and has several sheds full of equipment to manage this. He explained that the area has a relatively short winter so he collects honey in April, June and then



Asian hornet nest



Yves' impressive equipment

about 600 beekeepers in Le Vendee (where Les Herbiers is) plus 20 professionals. Registration is compulsory but training is not so, like the UK, the competency of beekeepers varies considerably. There are 2 beekeeping associations in the area and we shared notes about activities and looked at our websites.

The weekend also included a gala dinner on the Saturday evening and a trip to La Rochelle on Sunday. We arrived back at Newtown in the early hours of 4th December having had a very interesting weekend and meeting some lovely people, both French and English.

August. The climate is a lot warmer and drier than Wales (although we had a lot of rain for most of the time of our visit) and Marie Cecile grows kiwi and figs in the garden. (She cooked us some beautiful meals using home grown produce despite having no kitchen as it was stripped out ready for a new one arriving the day we left-what a star!)

Yves told us there are



Our stand in France

Jill Hill

Limerick

There once was an ambitious drone,
Who attempted to take the queen's throne,
She discovered his action,
And conquered the faction,
With a good dose of queen pheromone

Chris Cheshire

I am more than happy to print poetry produced by members. We may yet discover a talent ...

Ed

**bee informed, bee up to date, bee entertained
it must be**

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BBwear offer

BBwear still offers our members 20% off all garments in their clothing range and 50% off BB10 and BB11 Gloves and Spats. Free gloves are NOT included with the full suits when purchased with association discount.

To see the range of products, their web site is <http://www.bbwear.co.uk/>.



A full spectrum of bee suits is available from BBwear

The MBKA Committee

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SECRETARY

MEMBERSHIP SECRETARY

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EDITOR

EVENTS

SPRAY LIAISON

APIARY CONTACT

SWARM CO-ORDINATOR

TRAINING AND EXAMS

facebook

Please feel free to contact any member of the committee with any questions, or if you can volunteer time to help with any aspect of the association.

see also our website and facebook page
www.montybees.org.uk



Yves stand in France

“Give the BeeHiveMan a Buzz!”

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