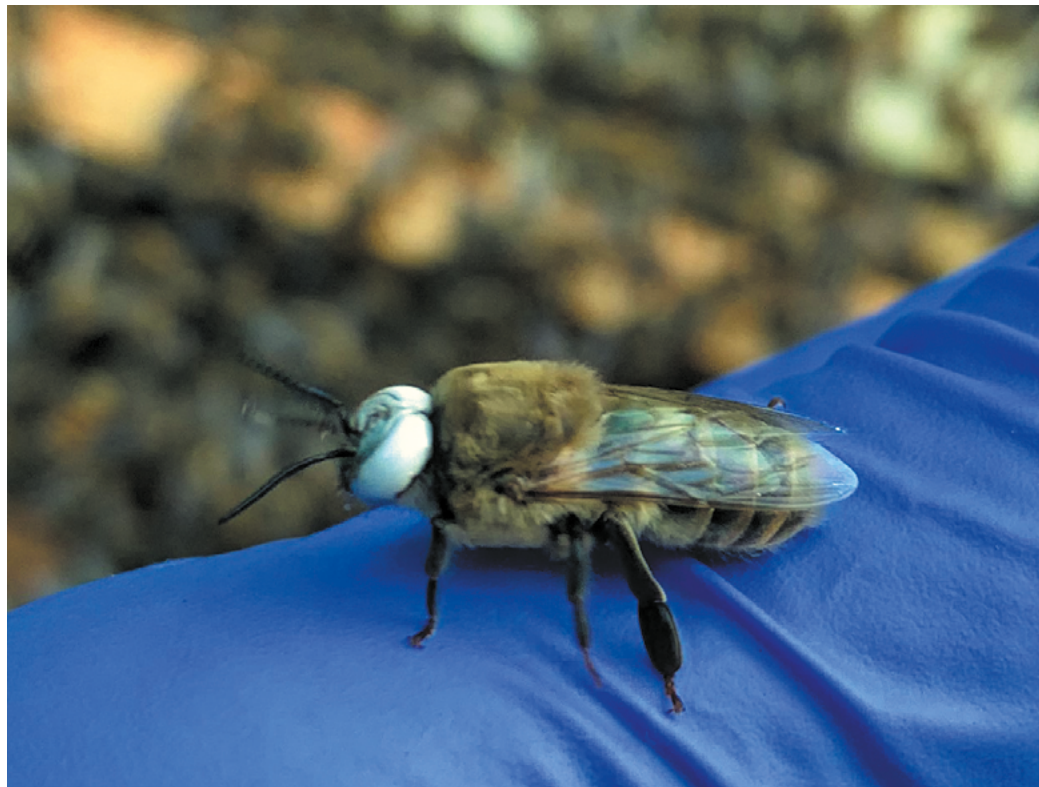




YORK AND DISTRICT BEEKEEPERS 2023/2024

President	Sue Hesp	01904 489449
Vice Presidents	John Fuller	01757 638388
	Rob Coleman	07930 893383
Committee		
Chairman	Bob Parnaby	07831 658124
Vice Chairman	Bruno Hannemann	07854 020879
Secretary	Alan Addison	07771 671721
Treasurer and Membership Secretary	Jonathan Sanders	07551 386550
Equipment Officer	Rob Coleman	07930 893383
Education		
Web Master & Publicity	Bruno Hannemann	07854 020879
Events	Christine Johnston	07899 007880
Librarian	Paul Appleton	07764 655718
AHAT Coordinator	Bob Parnaby	07831 658124
Other committee members		
	Adam Fairweather	07948 481947
	Andy Marsden	07703 120606
	Matthew Roberts	07810 473751
	Steve Kritikos	07899 007880
Other post holders		
Combings editor	Kate Wallace	07842 703984
Assistant Editor	Alan Johnston	
Apiary Manager	Ben Morgan	07723 036897
Regional Bee Inspector	Dhonn Atkinson	07775 119437
Seasonal Bee Inspector	David Bough	07824 408973

The password for the members area of the YDBKA website is: beesatyork

“Combings” is the newsletter of the York & District Beekeepers Association. Views expressed in the newsletter are those of the individual contributors and not necessarily those of the Association as a whole or of the editor.

Contributions to, and comments on “Combings” are always welcome. I would particularly appreciate your pictures for “Reader’s Hives”.

Please send any copy or comments to: combings@gmail.com

Combings is published quarterly.

Please note the last date for copy for the next edition is: 18th August 2024

TWO EDS.

We can all agree that it's been a poor start to the season but hopefully the weather will settle into a better pattern and that we can see some honey harvest.

The weather has impacted the early season queen mating; the poor weather and noticeably fewer drones than usual will have taken its toll. My own colonies with early season queens have already begun to build supersedure cells.

The strange-looking image on the front page is of a white-eyed drone which YDBKA Chairman Bob Parnaby found in one of his colonies. Bob tells more about this on page 6.

CAN YOU HELP?

YDBKA are in urgent need of someone to cut the grass at the bee pavilion at Murton. If you can help out, please contact Chairman Bob Parnaby.

FROM THE CHAIR

As I started writing this article on the 20 June, the first day of meteorological summer, the weather had not been good for beekeeping, except for a few days in early May which produced a short, but productive, honey flow. The unsettled weather then returned, with lower-than-average temperatures, accompanied by wet and windy conditions.

There is now some warmer weather forecast and indeed this started from yesterday, 19 June, which has allowed the colonies to start packing in nectar which hopefully will turn out to be a good summer harvest.

However, it is noticeable that flowers are appearing earlier than normal, I have seen Himalayan balsam in flower, starting from the second week of June, with bees returning to colonies with the noticeable white icing sugar-like marking on their thorax.

The banks of blackberries in hedgerows and roadside verges are spectacular to behold.

It has been a busy time for some of our committee members, starting in early May with the YDBKA auction. This was a good event, with 209 lots of equipment and consumables. There were four colonies and three nucs of bees were for sale, most of which sold for good prices.

A few more figures for information: There were 37 buyers in total and gross sales totalled £5220.44. Our treasurer has still to finalise the figures, but total revenue for the association from commission and sales of equipment will be in the region of £800.00.

Thanks to all participants and volunteer helpers, especially to whoever arranged for the rain to stay away for the event!

Unfortunately, some problems arose on the day which resulted in some forensic work having to be undertaken to make sure all the sellers received the correct money, which they did, mainly thanks to sterling work from Alan Addison our secretary.

The committee have since met to discuss the sequence of events and there will be an updated document issued to make sure we have sufficient volunteers at the correct time to ensure a smoother operation in future.

Following on from the beginner's theory course held early in the year, the practical course started on 20 May. The "beginners-with-bees" course was at Escrick, with Bruno Hannemann, John Fuller, Rob Coleman and Greg House and the "beginners-without-bees course" was held at Murton, with Alan Johnston and myself.

Both the practical courses ran in tandem and were completed on Monday 17 June.

This article was completed on 27 June and the fine weather has held on and my colonies have continued packing nectar in and making up for lost time. I hope yours are doing the same.

Bob Parnaby

NASONOV PHEROMONE

Nikolai Viktorovick Nasonov (1855-1939) was a Russian zoologist who gave his name to a gland located at the rear-end of a worker bee's abdomen. Although his initial ideas about its function were incorrect (he thought it was somehow involved in respiration), he is still credited with the gland's discovery.

A few minutes observation of a colony undergoing an inspection will identify bees, often on the top bars of brood frames or at the entrance, with their heads down and their abdomens in the air, vigorously fanning their wings. This action disperses the pheromone which exits from the Nasonov gland at the tip of the abdomen.

The pheromone is only produced by workers and is predominately used to produce specific responses outside the hive. The chemical compounds of the pheromone have been identified and reproduced in laboratory experiments: different ratios have been found to produce different effects in different situations.

Young bees, up to two weeks old, produce little, but it increases with age and is at peak levels when bees are foraging or swarming. In foraging, it is used primarily to mark water sources, but only rarely to mark nectar or pollen sites, which presumably produce their own odours.

During swarming, Nasonov pheromones and pheromones from the queen help co-ordinate the swarm's movements and hold it together as a cohesive unit. When the swarm settles, the pheromone attracts those members of the swarm that are still in the air. The place chosen by the bees to be their ultimate location is also likely to have been pheromone-marked by earlier scout bees to enable easier location.

During your inspections, it is simply that the bees have recognized a disturbance (you!) and are dispersing the pheromone to other hive members as a cohesive signal which says that despite the beekeeper's best efforts to dismantle our home, we are a unit and we are still together.

DRONE PHEROMONE

Drones release a pheromone from their mandibular glands which help to attract young queens to the drone congregation areas (DCA).

Drones from different colonies are also attracted by the pheromone, ensuring a good genetic variation in each congregation. DCA formations gather 10 – 20 metres above ground level in calm, warm weather and will begin to congregate around noon, in anticipation of the flights of virgin queens which will, typically, take place from around an hour or so later. DCA sites may be in use for many years: the site identified in 1792 by the naturalist Gilbert White in Selbourne, Hampshire, is reputedly still in use today.

Initially, the drones locate the approaching queens by the sex pheromones that are released by the queen, but at around 50 metres away, the drones' large eyes have sight of her: once a mating has taken place, the "mating sign", i.e. the part of the drone's endophallus that is left within the queen's sting chamber, acts as a further attractant to the other drones and they form the comet shape cloud of bees that follow her to compete for further mating opportunities.

It is not known for certain how the young queen finds the DCA: they may have an inherited ability to recognize the likely topography for a DCA, it's also possible that they follow the flightpath of drones or they could locate the DCA by using the odour of the drones' pheromone.

A virgin queen will mate with up to 20 drones.

WHITE-EYED DRONES

Thanks to Bob Parnaby for sharing his images of this weird-looking mutation, which he discovered in one of his colonies.

Bob writes:

Whilst inspecting one of my colonies I came across a drone with white eyes, (see also the front page. Ed.) which is caused by a genetic mutation.

A drone bee is more susceptible to recessive genes than other bees due to being developed from an unfertilised egg and therefore has only one set of chromosomes, so recessive genes can be introduced without being interrupted by a more relevant dominant gene.

The white eyed drone might otherwise appear to behave normally in colony behaviour but however they are destined to remain in the hive because they are in fact, blind.



BEES IN TREES

John Fuller shares his thoughts about those colonies which decide to make permanent camp outdoors, such as those shown on the back page picture from the spring edition of "Comblings".

We are taught that when bees swarm, they fly directly to their new home or alight nearby while making a decision where to go, and within a short time period will move to their new home.

If they remain at their transit point for even 24 hours they will start building comb.

It occasionally happens that they are unable to find a new nesting site so continue building comb and build their nest in the open.

You will be unaware of them if their nest is in dense foliage or high up in a tree as Anthony Day's was (see the images on the back page of the spring edition of "Comblings". Ed) until the leaves fall off in the autumn. Then, being exposed to the elements, they are unable to maintain temperature and will perish.

I believe this to be a prime swarm, with a lot of young bees to build all that comb for the queen to lay in and survive to build such a large nest.

A secondary swarm would not have the numbers of bees or a laying queen to produce a large nest and would perish quickly.

In a similar vein I had a median wasp's nest in my garden in a shrub, three feet from a regularly used foot path and was unaware of its existence until the shrub shed its leaves in the autumn.

John Fuller.

MIKE MARSHALL

Nigel Davies told me that last year he had called at the home of Mike Marshall to find that, sadly, Mike had passed away in 2022.

Mike had been a member of York and District Beekeepers for many years and would be known to most of the membership.

Nigel says that "Mike was a kind and generous man who frequently visited local schools to give talks on bees and beekeeping. His wife died some years ago.

I was able to ascertain that his granddaughter and partner are living at his home in Dunnington."

WHY A QUEEN IS A QUEEN AND A WORKER IS A WORKER

...or rather “caste differentiation in the female honeybee”.

Given that all eggs within the queen's abdomen are essentially the same and that the only option is whether to add sperm to it or not (female with, drone without), it is interesting to examine why most fertilized eggs result in workers whilst very few result in queens. Both the eggs and the sperm are structurally identical for both queen and workers (16 chromosomes in each), so what causes the differentiation?

It has nothing to do with the shape or size of the cell. We know that an egg laid in a normal worker cell, destined to be a worker, can be transformed into a queen within a hastily re-designed emergency queen cell when the need arises. The cell shape is the result of a developing queen, not the cause.

The cause of the differentiation centres around what is fed to each at the larval stage. Young nurse bees are responsible for feeding all larvae: the food comprises a white component (from the mandibular gland, a clear one (hypopharyngeal glands and a yellow one (from pollen). The proportions of each vary with larval age and the intended caste. Short version – future queens are fed a greater proportion of mandibular secretion and also a greater volume of food altogether than the average worker larva.

There is also an increased amount of sugar in royal jelly compared with the standard worker brood food. The extra sugar can be sensed by the developing queen larva and is thought to trigger the desire to simply eat more and more of the royal jelly. Sugar really is addictive.

This specialized food triggers the increased production of a substance called JH (juvenile hormone) in the developing queen larva so that by the third day of larval development, JH levels are about ten times that of a comparable worker larva. It is this increased level of JH that causes the larva to develop into a queen rather than a worker, with her ovary development, sperm storage ability, her own distinct pheromones etc.

In larval development, it is most certainly true that you are what you eat!

HONEY FROM OIL SEED RAPE

Due to its high glucose content oilseed rape (OSR) honey quickly sets in the comb, which makes it just about impossible to extract. Those of us who had colonies on oilseed rape in the spring will (hopefully) have extracted the honey before it set solid in the comb. Here is a method to deal with the resulting honey.

Good OSR honey will set hard in a very short time and will set with a smooth texture, making it good for soft set/creamed honey.

To turn your bucket of solid, spoon-bending, OSR honey, into a soft, smooth, spreadable honey you will need to warm the solid bucketful. Put it in a warming cabinet at 35°C for about 24 hours or until the consistency has changed to a soft mass and you can squeeze the sides of the bucket.

Use a mixer (as sold by the beekeeping suppliers) to break up the crystals which have formed in the honey, but do keep the mixer below the surface of the honey to avoid introducing air into the honey.

When you have broken up the crystals, you should have a smooth, pourable product. This does take some time though and it's a lot easier if you have the type of mixer which attaches to a heavy-duty electric drill!

Finally, transfer the creamed honey to a settling/bottling tank and leave for a few hours to settle, before jarring-up.

Leave the jars at room temperature, and the honey will set into a smooth consistency which is spreadable.

And remember there is a class in the Honey Show for set honey...

DID YOU KNOW?

World-wide, flies pollinate far more crops than bees. There is a type of midge which is the sole pollinator of the tiny flowers of the cacao plant. No midges, no chocolate.

ROBBING BY BEES

“Bees are accustomed to gather their store by laborious visits to many sources, each of which renders but a minute quantity. The finding of a source in the open, from which many bees can load up on a single visit, causes great excitement among bees” EB Wedmore, 1932.

All insects are inveterate robbers (or “invertebrate robbers as I once saw it humorously mis-spelt) and bees are no exception. Wedmore suggests that light-coloured bees are more liable to rob than darker strains, but I’ve seen no studies to support this.

The exposure of stores for a prolonged time on a site with more than one hive can trigger robbing, as can poor apiary hygiene such as “leaving the odd frame to be cleaned out”, or the careless disposal of wax cappings etc. “Leaky” hives, which provide ingress other than via the official entrance can also invite trouble.

Robber bees trying to enter through the main entrance behave, in human terms, in a nervous, flighty manner. The robber hovers laterally around the entrance, much like a wasp, trying to dart past the guards. The colony under pressure will increase the number of guard bees if it can, and fighting at the entrance is a good indicator of inter-hive tensions.

The argument that if the honey robbed from one hive simply goes into another hive owned by the same beekeeper and that ultimately nothing is lost, should not be entertained. If there are some undetected brood problems, classically such as European Foul Brood (EFB) then robbing bees will simply spread the bacterial spores as they return home with their spoils.

The use of cover cloths to cover brood frames yet to be inspected has merit in reducing robbing, though they are little used now.

If a hive is thought to be at risk, an inspection postponed until the evening is advisable, when fewer bees from other hives are out and about. Ensure that all woodwork is sound and bee-tight, and any supers temporarily removed for brood inspection should be topped with a bee-tight cover board.

If feeding a weaker colony, which may be susceptible to robbing, fill the feeders in the evening when fewer potential robbers can see or sense the tempting syrup.

Reducing the size of the entrance, thus reducing the area to be defended by the guard bees is a standard response. There are a number of clever entrance devices now commercially available but none have been tried by the author. Ultimately if all else fails, and another site is available, the bees may need to be moved.

TOP TIP

If you find a queen cell, mark the frame its on (many of us use a drawing pin). You then know exactly where it is.

THE SWARM COLLECTORS LIST

This year I decided to re-join the swarm collectors list.

Following a winter of heavy losses and nucs of bees being expensive to buy, it was a “no-brainer”.

There were a couple of calls to swarms that had moved on by the time I got there, but mostly it was a successful conclusion, although at the time of writing all of the swarm colonies are still in quarantine at an isolated apiary; the downside to “free” bees being that you don’t know what you are picking up, and none of us

would willingly introduce a diseased colony into our apiaries. So, all collected swarms will remain in quarantine until at least two brood cycles have been completed. Regular inspections and rigorous hygiene practices should identify any problems.

If all is well, the swarm colonies will join my main apiaries later in the season.

If you are considering joining the list next year, there are a number of things to be aware of.

You will need to have your swarm collecting kit ready at all times. This year, the most frequent call-out time was around 5 o'clock, when people returned from work to find a swarm in their garden.

If the swarm is in a public place, you will need to be prepared for an audience; remember that you are representing the beekeepers' craft.

Wear a clean beesuit and use clean kit. Wash your suit afterwards and sterilise any equipment used to minimize possible disease transmission.

This may be the audience's first, and only, close encounter with honeybees and beekeepers, and there will be lots of questions. It's an opportunity to educate the non-beekeeping public about honeybees, and indeed, all pollinators. You may even plant a seed in the mind of a potential beekeeper.

If you have limited knowledge and experience it will show, as you may well be tested by some of the questions but if people don't take the opportunity to ask the question of you, they may never know the answer

For the commercially-inclined, swarm collection may be a sales opportunity so if you put a couple of jars of honey in the car, it may well reach a new customer or two.

You may be videoed, and you are perfectly within your rights to say no to that if you'd prefer not to have a permanent record of yourself sliding into a ditch with your swarm collecting receptacle in hand.

You are also similarly entitled to refuse to collect a swarm if you can't reach it in safely. Some members of the public seem to think there is a magic bee-whistle and bees can be summoned from the most inaccessible of places, so a polite but firm refusal may be necessary.

If someone asks you for money for the swarm you've collected, you can offer to put the bees back where you found them...

READER'S HIVES



Thanks to Pete Kendall for this picture of his first harvest from the oilseed rape this year.

Pete took nearly 15 kgs of honey from one hive, extracting early, as advised on page 9, and he plans (possible spoiler alert!) to make Christmas gifts of his honey crop to friends and family.