

National Bee Unit

Western Region Annual Report - 2019

The 2019 Season



Animal &
Plant Health
Agency

Overall, this has been a fairly good year for beekeeping in our Region - not an outstanding one, but one with the usual mix of successes and disappointments and a reasonable honey crop (in most parts!)

After a mild winter, there was a warm spell at the end of February and it stayed mild in March, catching out people who look at the calendar rather than the brood nest! Swarming came early, and later there was a noticeable June gap followed by a wet period which was not good for queen mating – drone laying queens were widespread. The gap in forage had people out with syrup – but not everyone spotted the problem - we saw quite a number of colonies that would have benefited from feeding.

The ivy flow came late and when it did eventually start it rained nearly every day, making it difficult for the bees to add to their normal weight for winter. Wasps were a problem in some places, but it did vary from location to location, and there seemed to be fewer European hornets around than last year.

We had quite a few call outs through the season to beekeepers with piles of dead bees in and outside the hive which all turned out to Chronic Bee Paralysis Virus. This was quite widespread this season and as yet we have no remedy or husbandry tips to avoid its effects. Details and typical signs are on BeeBase at <http://www.nationalbeeunit.com/index.cfm?pageid=275>



Noel Parker (now retired) with colleagues from Fera Science, at the BBKA Spring Convention

Inspectors noted a high level of varroa in colonies this year. It is important to monitor levels and to be prepared to help colonies with a treatment if necessary; we do still find a lot of colonies failing to thrive and suffering due to varroa and deformed wing virus.

The Team in Western Region

We were at full strength with 6 inspectors across the Region. Jonathan Axe, who joined us at the end of last summer attended further training at the National Bee Unit HQ in York in April and he is now very settled in his area. We were sad to lose Noel Parker (West Midlands/South Shropshire) at the end of the season – we wish him well in his retirement.

From April 1st 2020 you can use the post code search on the contacts page of BeeBase to check for your local SBI, who can be contacted on the numbers below from the beginning of April until the end of September.

| Regional Bee Inspector | Area | Contact |
|-----------------------------------|--|-------------------------------------|
| Colin Pavey | Located between Ross on Wye and Hereford – covers whole region | 07775 119471 01989 740864 |
| Seasonal Bee Inspectors | Broad Area | Contact No. |
| Benjamin Bowen | North & Central Shropshire, West Staffordshire | 07557 178512 |
| Noel Parker – retired 31/10/19 | West Midlands, South Shropshire, North Herefordshire | Contact Colin Pavey – details above |
| Colleen Reichling | Warwickshire, East Staffordshire, West Midlands, | 07990 138898 |
| Gordon Bull | Worcestershire and west of the Malverns | 07867 351626 |
| Elizabeth Gardner | Gloucestershire (exclu. F of Dean) | 07867 351610 |
| Jonathan Axe | Herefordshire and Forest of Dean | 07867 151641 |

During the winter period - October to March - please direct all enquiries to Colin Pavey.

Beekeeper numbers

There are currently 3,876 beekeepers in our region registered on the NBU's online database BeeBase. Between them, they have 20375 colonies in 5,653 apiaries – an average of 5.2 colonies per beekeeper and 3.6 colonies per apiary. 2019 saw 361 new beekeepers registering on BeeBase, a substantial increase on 2018 when the figure was only 212.

| | Number of Beekeepers | Number of Apiaries* | Number of Colonies |
|-------------------------------|----------------------|---------------------|--------------------|
| Gloucestershire | 853 | 1255 | 5226 |
| Herefordshire | 347 | 633 | 1646 |
| Shropshire | 593 | 796 | 2412 |
| Staffordshire | 412 | 618 | 2913 |
| Warwickshire | 550 | 847 | 3149 |
| West Midlands | 530 | 617 | 2292 |
| Worcestershire | 591 | 887 | 2737 |
| Western England Totals | 3876 | 5653 | 20375 |

*includes vacant, 'no bees at present' apiaries which may be active in future.

BeeBase Registration and Association Membership Lists

I would like to remind everyone how important it is that all apiaries are registered on BeeBase so that we can identify any that are at risk of notifiable disease or an exotic pest incursion into the Region and target control measures effectively. Self-registration is free at <https://secure.fera.defra.gov.uk/beebase/public/register.cfm?> , or you can register by contacting the NBU office on 033 303 0094 or your through Regional Bee Inspector.

All beekeepers registered on BeeBase with a current email address will receive an automatic email alert if disease is found within 3km of the registered apiary. If you are self-registered, it is helpful if you keep your apiary records up to date. Self-registration is recommended as it also gives beekeepers secure password protected access to personal details and inspection records.

It is helpful if your association sends us their list of members, they can do this if they satisfy the requirements of GDPR. The easiest way for this is to amend the membership renewal form to contain something similar to the phrase;

“Please note that a condition of membership is your agreement to membership details being held on a computer. This information will be used for the efficient running of the association by its officials, for the distribution of the WBKA magazine, for WBKA Insurance, for Bee Disease Insurance, and passed to the Regional Bee Inspector for inclusion on BeeBase to aid them in the control of notifiable bee diseases”.

These lists are very useful to us as they allow us to identify new beekeepers and to update contact details for existing beekeepers. Secretaries – if you currently have this in place, please email me your current membership list, so I can ensure our records are as accurate and complete as possible. This is something that will be exceedingly important if we are unfortunate enough to find Small Hive Beetle in the UK or Asian Hornet again next season.

Inspections

This year our region Seasonal Bee Inspectors visited a total of 397 beekeepers in 711 apiaries and inspected 3619 colonies. This represents a modest increase in beekeeper and apiary numbers but a significant rise in the number of colonies inspected compared with 2018.

| Year | Beekeeper inspections | Apiaries inspected | Colonies inspected |
|------|-----------------------|--------------------|--------------------|
| 2019 | 397 | 575 | 3619 |
| 2018 | 381 | 560 | 3247 |
| | 4.2% increase | 2.6% increase | 11.4% increase |

Imports

Nationally, 20,081 queens and 2623 packages of bees were imported – monitoring and checking these imports are an increasing part of our work. Our inspection figures

include 43 import inspections of queens and packages of bees from other EU countries.

Import or export of bees, (including queens, packages and colonies) is permitted only if accompanied by an Official European Union (EU) or Third Country health certificate issued by the competent authority where the bees originated. It is a legal requirement that you notify the National Bee Unit of imports of bees from outside the UK. You can do this by completing the Importer Notification Form and posting or emailing it to the NBU office. Alternatively, you can log in to the Beekeeper pages of BeeBase and click the 'Import Notifications' link from the left hand index.

It is, of course, illegal to import bees, queens or any bee-related products from within the SHB exclusion zone around the affected areas in southern Italy.



NBU Inspector taking a debris sample from an imported package of bees

Further details can be found on the Imports/Exports pages of BeeBase at <http://www.nationalbeeunit.com/index.cfm?sectionid=47> please check for any changes in the rules and requirements, post Brexit.

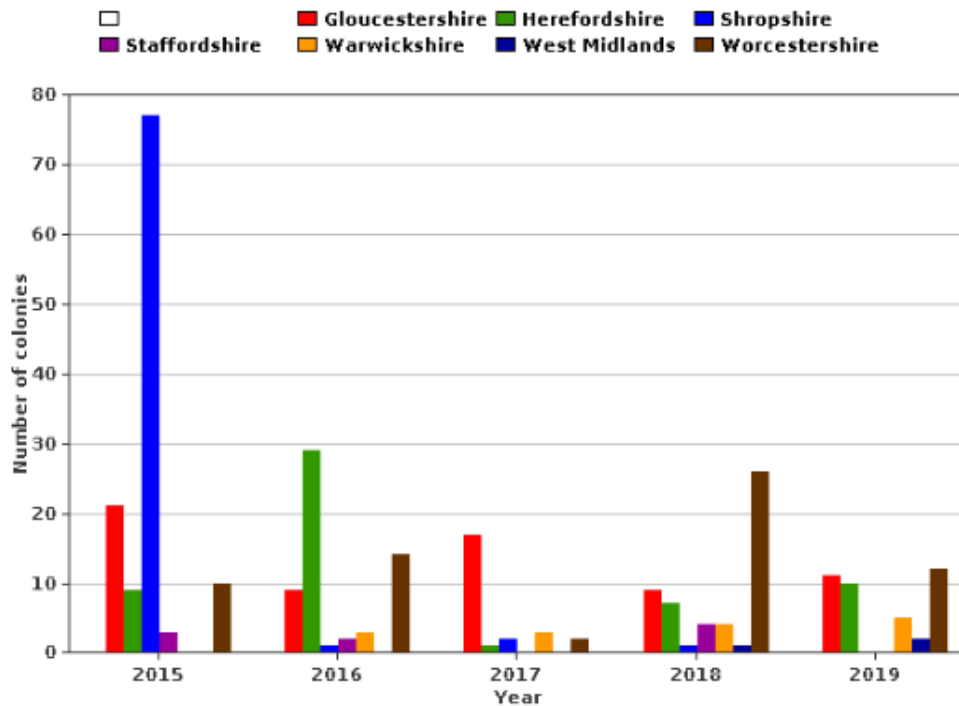
Disease and Pests

Notifiable diseases: European Foulbrood (EFB) and American Foulbrood (AFB)

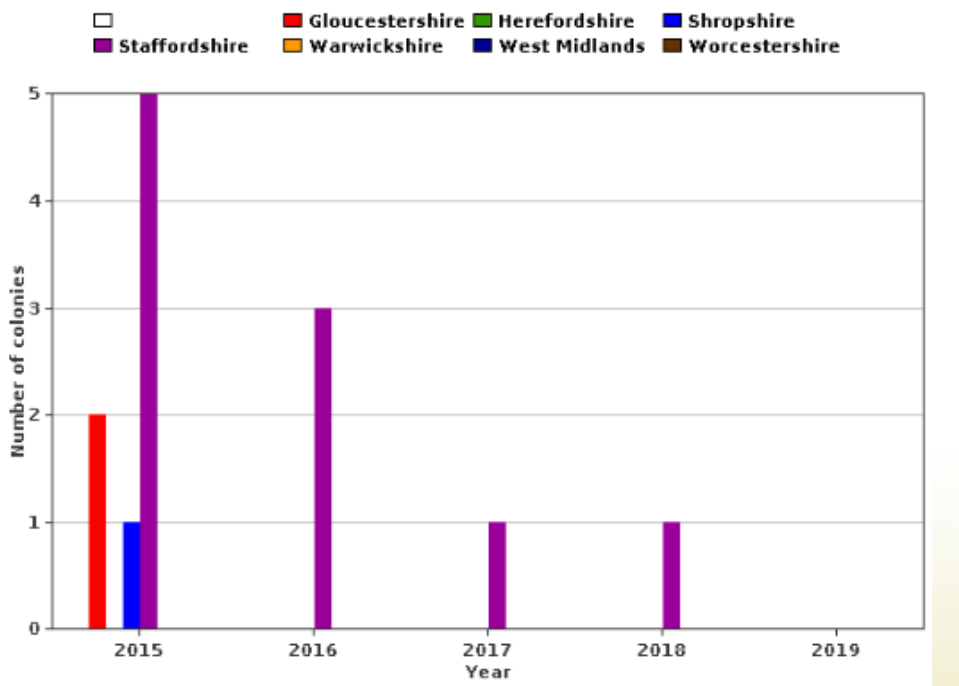
This season, all our disease cases were EFB – there were no cases of AFB (1 case in 2018) – we have to consider ourselves fortunate in this regard. To keep us AFB free, we have to check carefully any colonies coming into the region, destroy any old suspect combs and not feed bought honey to bees – honey from some regions may contain AFB spores – imported honey is the big risk.

European foulbrood was diagnosed in 32 apiaries, affecting 40 colonies, compared with 2018 when the same number of apiaries, 32, were diagnosed affecting 52 colonies. Our whole region level is about the level of the county of Kent – we have regionally low levels and need to keep it that way! There is no room for complacency, outbreaks can take off rapidly. Nationally, 2019 showed an increase in colony cases of EFB, down to 3 factors, the NBU had more inspectors 'on the ground' inspecting, beekeepers not recognising the signs in previous years, leading to localised outbreaks this year and environmental conditions were right for the bacterium to develop and cause the disease.

Incidence of EFB in Western Region 2015-19



Incidence of AFB in Western Region 2015-19



Further details and mapping can be found on the disease incidence pages of BeeBase at <http://www.nationalbeeunit.com/public/BeeDiseases/diseaseIncidenceMaps.cfm>

It is recommended that these are checked regularly to see if there is any foulbrood disease in your 10km square.

Varroa

The long term goal of any queen breeder is to breed for varroa tolerant stock, but sadly we're not at the stage yet where resistant strains are available 'off the shelf', so until we get there the NBU promotes monitoring of natural mite mortality and Integrated Pest Management control measures. Most beekeepers follow this practice to a degree, whether by design or not, using biotechnical controls such as splitting, induced brood breaks, drone brood removal, and open mesh floors.

When it comes to treatments it's important to use products authorised by the Veterinary Medicines Directorate (VMD), administer as directed in the instructions, and not to apply the same varroa treatment several times in a row.

Since my last annual report there have been no new varroa treatments authorised for use in the UK, however there are a number of highly effective products on the market containing naturally occurring active ingredients including thymol, formic acid and oxalic acid as well as the chemical miticides containing synthetic pyrethroids or amitraz. Beekeepers the world over have demonstrated how easy it is to breed for varroa resistance to miticides, simply by using the same products year in, year out!

With any livestock, and bees are no exception, there's a legal requirement that any treatments are recorded, and these records must be kept for a minimum of 5 years. Full details can be found on this link -

<http://www.nationalbeeunit.com/index.cfm?sectionid=110>

The BeeBase website has pdf links to numerous free fact sheets including the 'Managing Varroa' booklet.

<http://www.nationalbeeunit.com/index.cfm?pageid=167>



The worst effects of varroa - parasitic mite syndrome (PMS) and deformed wing virus - photos Meg Seymour

Exotic Pest Surveillance

The prime risks here are Tropilaelaps and Small Hive Beetle, which so far, have not been found in the UK. In Western Region we carried out 292 inspections specific to exotic pests in 2019, targeting a combination of identified risk points and random sites. It is natural, after recent high profile incidents, for the beekeeping community to focus on the threat from Asian hornet, but we must not drop our guard in relation to the other

pests. SHB can be transported into the United Kingdom unintentionally through international trade via bee imports, food products and even in soil when they are in the pupation stage. Although bee imports are prevented from areas where SHB are known to be present, other trade continues.

We have 15 Sentinel Apiaries and 4 Enhanced Sentinel Apiaries (ESA). Sentinel apiaries are situated within areas considered 'at risk'. A volunteer beekeeper at that location agrees to monitor their colonies specifically for exotic pests. As well as a visual inspection, floor debris from the designated hives are sampled twice a year and tested for any trace of SHB and Tropicola mites. All postage costs, equipment and paperwork is supplied free of charge to the beekeeper who collects and sends samples for analysis at the NBU laboratory in York.

ESA apiaries are located near to high risk points e.g. freight ports. They are visited by their appointed SBI in April, June and September. The colonies are inspected in detail, and samples sent for analysis. SHB traps are also provided for placement in colonies at both sentinel and enhanced sentinel apiaries.

I would like to thank those beekeepers who currently carry out this work, but do please contact me or your SBI if you would like to be involved in the future.

Asian Hornet

This year, it was proved that we have to be vigilant! Association AHAT groups investigated a number of plausible sightings – which luckily proved to be of European Hornets or other similar insects. This activity is a great help to the NBU, saving valuable hours of work for other purposes.

During September and October, three Asian Hornet nests were located and destroyed by our teams - the first one being in our region, near Tamworth, Staffordshire.

Luckily for us, a member of the public noticed what turned out to be Asian Hornets feeding on pears in his garden, they were photographed and a report made on Friday 30th August. They were confirmed as AH from the photos and in a field visit by our Inspector, Colleen Reichling on the Saturday and a working base was set up on the following Monday. Following fieldwork – marking foraging hornets and tracking flight paths - the nest was located on the Wednesday of that week and destroyed a couple of days later.



The Tamworth AH nest finding Team

On 4th October a further nest was destroyed following the confirmed sighting of an Asian hornet near Christchurch, Dorset and a second nest was destroyed nearby on 11th October. The latter is likely to be a primary nest, related to the nest destroyed the previous week. Genetic analysis will be carried out to check any relationship between the nests.

In addition there have been two confirmed individual sightings of Asian Hornets. The first was on 3rd July of a female Asian hornet in New Milton, Hampshire; based upon visual examination, the hornet was likely to be a queen. A further sighting was reported by a member of the public to the south west of Ashford, Kent, on 9th September where a single hornet was captured, surveillance continues in both areas. The NBU sent out an alert to encourage all beekeepers and members of the public to watch for Asian hornets in their apiaries, on fallen fruit and on flowering plants such as ivy.

We ask beekeepers and the general public to remain vigilant and where possible, get a sample or a photo of the suspect insect. You can report sightings using the iPhone and Android app 'Asian Hornet Watch', by filling out an online report form or by emailing alertnonnative@ceh.ac.uk .

- The 'Asian Hornet Watch' app is available to download free from the Apple and Android app stores.
- Members of the public can also report sightings by email to alertnonnative@ceh.ac.uk . Please provide a photo along with the details of where you found it and a contact number to reply to.
- Reports can be sent via the online submission form on the Non-native Species Secretariat website, again with a photo.
- Details on the identification of an Asian hornet can be found on the Bee Base guide or the NNSS Asian hornet ID sheet.



An AH marked for track & trace operations, grabs a wasp at a bait station.



The Tamworth nest, 60foot up – not easy to spot

Surveillance of Small Hive Beetle (SHB) in Italy in 2019



SHB (Aethina Tumida) adult and larval stages - photos BeeBase

On the 18th June 2019, the presence of *A. tumida* (SHB) was again confirmed in eastern Sicily, in an apiary located in the municipality of Lentini in the province of Syracuse. Two adults of SHB were detected in two different colonies, this apiary had been under surveillance since May 2019 as on 2nd May, the authorities had intercepted a movement of 64 colonies from Sicily without any accompanying documents at the port of Villa San Giovanni on the Italian mainland.

The colonies were sent back to the apiary of origin in Sicily. Several inspections were subsequently carried out in this apiary to look for *A. tumida*. During one visit 13 colonies of unknown origin were discovered and SHB was detected in two of them. Epidemiological investigations showed that these 13 colonies had been stolen on 9th June in the protection zone of Reggio di Calabria located on the mainland.

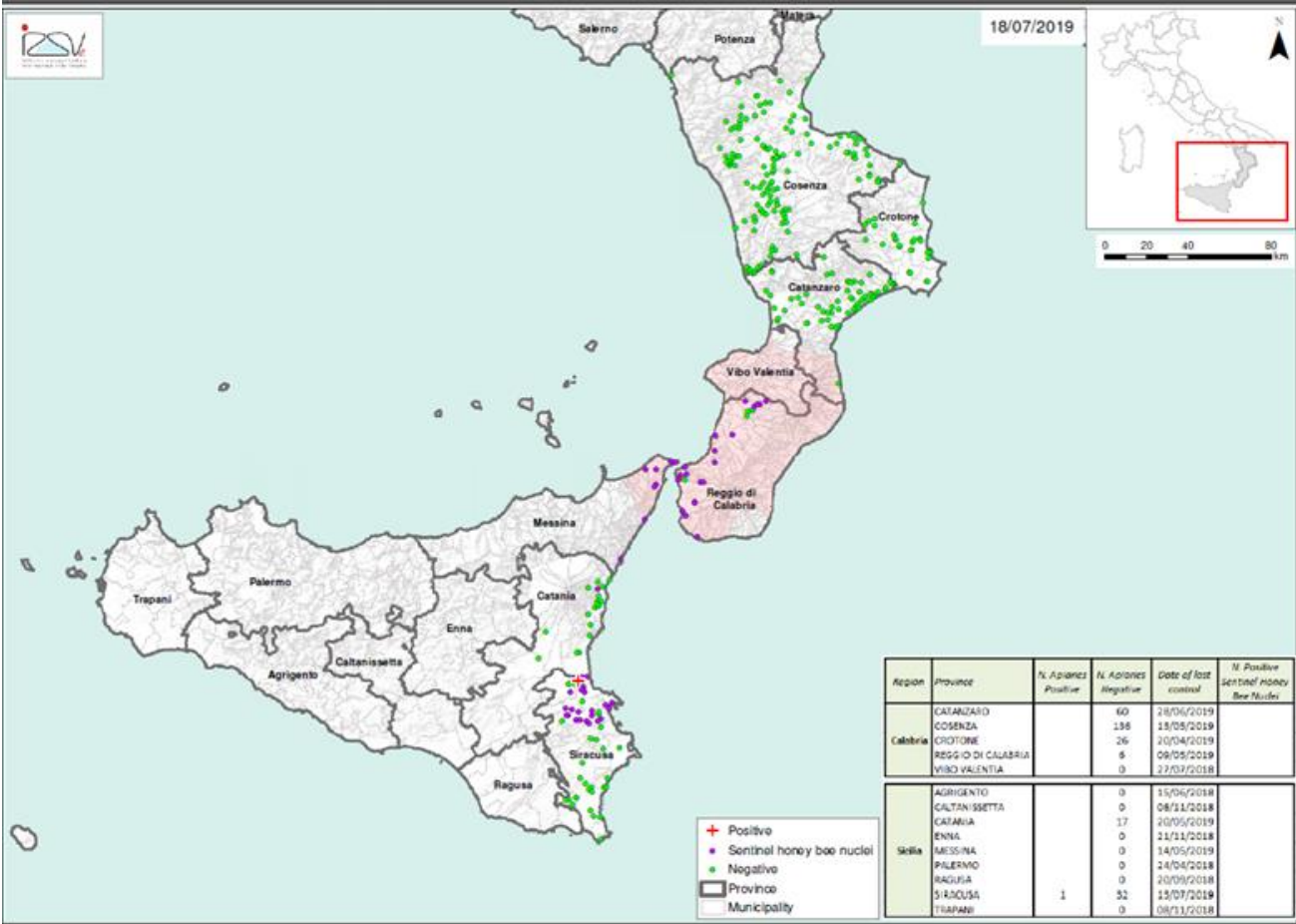
Aethina tumida had only been detected once in Sicily prior to this outbreak, on 7th November 2014. SHB adults were detected in a migratory apiary in the municipality of Melilli, located approximately 35 km away from Lentini. At the time, the investigation had shown that the colonies were present in Gioia Tauro between April and August 2014. Gioia Tauro is the municipality of the Calabria region where the first detection of SHB appeared. Following this outbreak, surveillance was subsequently carried out every year with inspections in selected apiaries and sentinel apiaries.

As no new case had been discovered in the two years following this positive find, a Commission Implementing decision of 1st March 2017 had removed Sicily from the list of areas subject to protective measures in relation to SHB in Italy. A phylogenetic analysis was carried out on the specimens detected in June 2019. The results showed that the genetic profile of the specimens was similar to the one of other specimens

previously isolated in the Calabria region but different from the genetic profile of the specimens isolated in the previous outbreak confirmed in Sicily in November 2014. It confirms that the outbreak was due to an illegal movement of colonies from the protection zone of Reggio di Calabria and not a consequence of the spread of SHB in Sicily.

The infected apiary was destroyed on 23rd June 2019 and the soil was treated with a permethrin solution. A protection zone of 5 km radius around the site was set up and inspections are being carried out in the 54 apiaries registered in the zone.

No new outbreaks have been reported in the protection zone of Reggio di Calabria, the original outbreak site on the mainland, since November 2018 when the last detection occurred in a sentinel apiary. No new outbreaks have been reported in the province of Cosenza (situated in the North of Calabria) since September 2016. It has to be noted that surveillance is ongoing in Italy and not all the scheduled inspections have been carried out and reported, for the moment.



Beekeeper Training

We attended the BBKA Spring Convention at Harper Adams in April with the NBU stand and a number of Inspectors, a good opportunity to meet beekeepers both old and new and disseminate information on bee health and exotic pests.

This year we held four Bee Health Days with Burton on Trent, Shropshire, Gloucestershire and Worcestershire BKAs. These events which are rotated around the Region, comprised a presentation for beekeepers looking at bee health and good

practice. Beekeepers have the chance to see diseased combs, and to participate in workshops with a focus on keeping healthy bees.



Bee Health Day - photos Barry Griffiths

Finally

Lastly, I would like to take this opportunity to thank all the Inspectors in Western Region for their help and support over the year, and the Beekeeping Associations for their enthusiasm in hosting our Bee Health events. Thanks are due also to you, the beekeepers, for co-operating with our inspectors when they are requesting access to your colonies. Please be vigilant, check regularly for brood disease and look out for Asian Hornets, if you don't look, you don't find! It's a good excuse to spend a bit more time in the apiary, just watching!

I wish all beekeepers out there a very enjoyable 2020, let us hope that we have another great year, that your supers are filled and you stay healthy!

A handwritten signature in cursive script that reads "Colin Pavey".

Colin Pavey – Regional Bee Inspector Western England

**National Bee Unit
Animal and Plant Health Agency (APHA)**

Telephone: 01989 740864 | Mobile: 07775 119470

Email : colin.pavey@apha.gov.uk
Website: www.gov.uk/apha

National Bee Unit Website (BeeBase): www.nationalbeeunit.com

Address: National Bee Unit, National Agri-Food Innovation Campus, Sand Hutton, York, YO41 1LZ