

National Bee Unit

2019 Wales Annual Report

The 2019 Season



Animal &
Plant Health
Agency

We probably didn't expect it but it's been another great year for beekeeping in Wales. After a mild winter, there was a very warm spell at the end of February and it didn't get cold again in March, so colonies got off to an extremely strong start this season, catching out people who do their beekeeping by the calendar rather than watching the weather, and the brood nest in the hive. Swarming came early, April and May didn't disappoint but there was a noticeable June gap and a wet first half of the month so colonies which had swarmed or been split in May struggled to get their queens back and mated, which resulted in some inevitable drone laying queens. Those who took a spring crop of honey found that feeding was necessary where forage wasn't available.

July was warm and dry, there was even a second wave of swarming, with some early swarms having another go. By the end of the month the honey flow had dropped off, but where both spring and summer flows were strong, so as long as the bees were well managed, large yields were achieved. This was prevalent, but in some places what had started looking like a wonderful season turned out to give only a little above an average harvest. There was no income whatsoever from some heather sites which often do produce a little heather honey and a small crop from others.

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. So hives which had not been fed and had too much honey removed, were at the point of starvation in September. Wasps were a problem in some places, but it did vary from location to location, and there were fewer European hornets around than in the previous year.

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 high stress levels due to varroa and deformed wing virus. There was a noticeably high level of sacbrood virus seen in colonies throughout Wales.



Sometimes we do find the impossible - photos Adam Parker

Honey yield: The average honey crop per hive in 2019, as recorded by the Welsh Seasonal Bee Inspectors for their own area, is 55lb. That's virtually the same as last year.

The Team in Wales

We were sorry to lose Edmund Thomas and Ade Bowen this year, Edmund made a career move into different employment after 7 years with us, and Ade Bowen retired mid-season, after 10 years as an SBI. However we are pleased to welcome to the team Daniel Baxter from Pontypool, Daniel underwent training at the National Bee Unit in York in April and field training in Wales for the first half of the season, he now covers Cardiff, Vale of Glamorgan and Bridgend. We will be recruiting to fill Ade's vacant post in the New Year via Civil Service Recruitment, I'd be happy to have any expressions of interest in the meantime.

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
Frank Gellatly	Mid Carmarthenshire 01267 202732	07775 119480
Seasonal Bee Inspectors	Area	Contact
Jonathan Garratt	Anglesey, N Gwynedd & Conwy	07775 119479
Tony Davis	Flintshire, Denbighshire, Wrexham	07900 166018
Paul Aslin	South Gwynedd, North Powys,	07867 351605
Karen Smith	Ceredigion	07979 119374
Shane Jones	Powys	07827 552312
Chris Welton	N Pembrokeshire, SW Ceredigion	07900 166143
Maggie Gill	S Pembrokeshire, S Carmarthenshire	07979 119373
Vacant	Swansea, Neath Port Talbot, Rhondda Cynon Taf, Merthyr Tydfil	
Daniel Baxter	Cardiff, Vale of Glamorgan, Bridgend	07771 038646
Adam Parker	Monmouthshire, Newport, Torfaen, Blaenau Gwent	07990 138902

During the winter period of October to March please direct all enquiries to the RBI.

Beekeeper numbers

There are currently 3,647 beekeepers in Wales registered on the NBU's online database Beebase. Between them, they have 24,040 colonies in 5,040 apiaries – an average of 6.6 colonies per beekeeper and 4.8 colonies per apiary. Over the past 5

years, the number of new beekeepers registering on Beebase in Wales has fluctuated - in 2015 there were 347 new beekeeper registrations, dropping to 246 in 2016, 205 in 2017 and 216 in 2018 but rising again to 317 in 2019.

The graphs and figures in this report are available on the public pages of Beebase, the NBU website (www.nationalbeeunit.com) in 'Bee Pests, Diseases and Maps'. The site also offers several pages of tips, advice and downloadable leaflets on disease control and bee husbandry.

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 Wales 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 in Wales in the coming season.

Inspections

This year Seasonal Bee Inspectors visited a total of 634 beekeepers in 1026 apiaries and inspected 5288 colonies in Wales. This represents a slight drop in beekeeper and apiary numbers but a rise in the number of colonies inspected compared with 2018. We also carried out 6 import inspections following up the importation of queens from other EU countries.

Imports 2019

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, faxing or emailing it to the NBU office. Alternatively, if self-registered, 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.

Further details can be found on the Imports/Exports pages of Beebase at <http://www.nationalbeeunit.com/index.cfm?sectionid=47> which will require reference for any changes after Brexit.

Disease and Pests

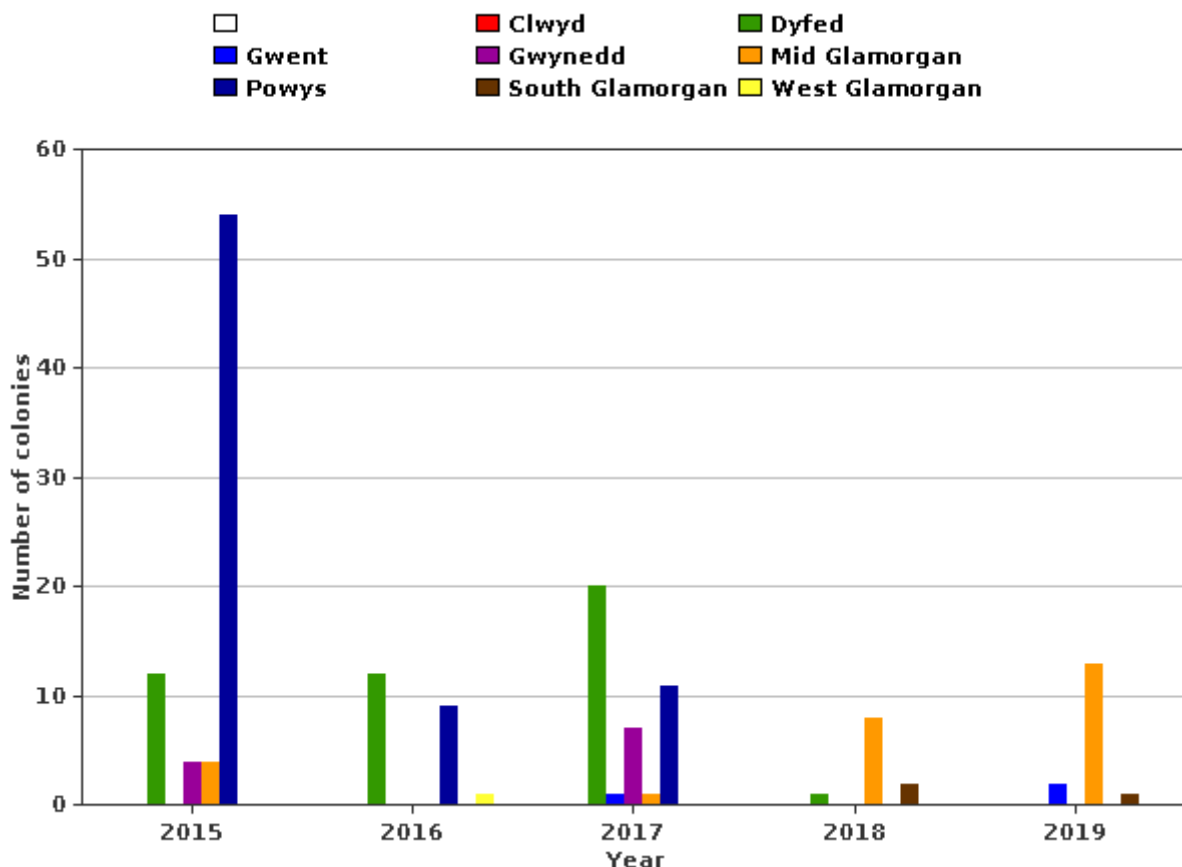
Notifiable diseases: European Foulbrood (EFB) and American Foulbrood (AFB)

This season, foulbrood was diagnosed in 20 apiaries, affecting 33 colonies, compared with 2018 when 11 apiaries were diagnosed affecting 14 colonies. This is an 82% increase in apiaries and a 136% increase in colonies diagnosed with foulbrood.

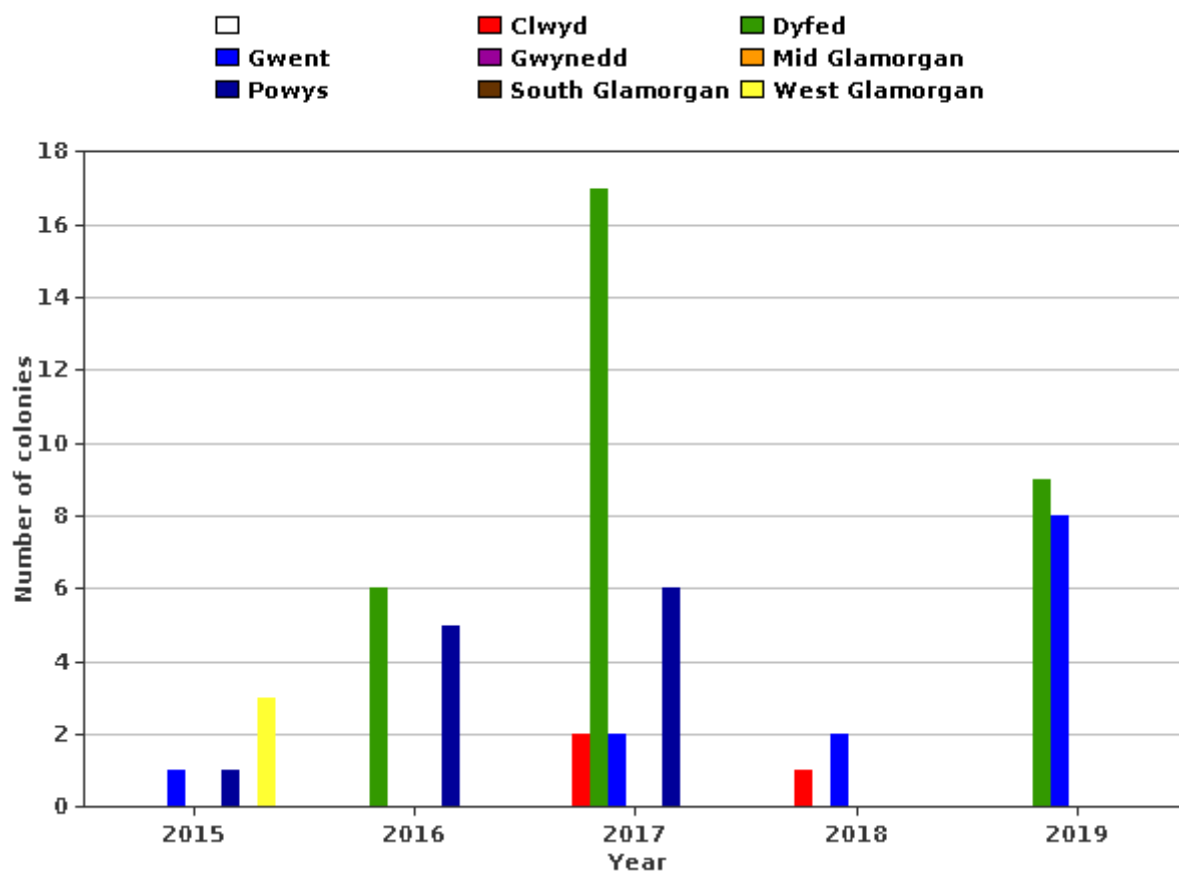
The extremely good season last year gave a low incidence of disease. This year the number of beekeepers and apiaries with EFB has remained the same but there has been a rise in the number of colonies affected.

Numbers of beekeepers, apiaries and colonies affected by AFB have risen and are in the counties of Monmouthshire, Carmarthenshire and Pembrokeshire.

Incidence of EFB in Wales 2015 – 2019 (per preserved county)



Incidence of AFB in Wales 2015 – 2019 (per preserved county)



Further details and mapping can be found on the disease incidence pages of BeeBase at www.nationalbeeunit.com . It is recommended that these are checked regularly to see if there is any foulbrood disease close by.

Varroa

The long term goal of any queen breeder is to breed for varroa resistant 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 Integrated Pest Management. 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 more natural 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 effective products without rotation or other biotechnical methods.

There's a legal requirement that the use of 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

NBU contingency exercise 2019

Running contingency exercises in England and Wales are a key performance indicator in the bee health programme and this year the National Bee Unit (NBU), in liaison with Welsh Government, ran a contingency exercise in July to tackle a simulated outbreak of *Aethina tumida*, Small hive beetle (SHB), from a forward operating base (FOB) at Welsh Government Offices, Llandudno Junction. At the FOB an incident command system (ICS), based on that used by emergency services was used, involving set roles of incident commander, sector commander, and command support. The two day exercise was designed to test procedures both in command and field activities, specifically –

- FOB operation with daily briefings, monitoring of field activity and handover procedures where spans of control and command are maintained.
- Daily reporting from FOB to NDCC (National Disease Control Centre) to LGD (Lead Government Department).
- Liaison with local beekeeping associations and beekeepers with apiaries in the area, booking and monitoring inspections in the field and reacting to unfolding events as a result of the inspections.

A total of 129 colonies in 28 apiaries were inspected during the exercise, requiring specific inspection procedures following the contingency plan for Small Hive Beetle, details at <http://www.nationalbeeunit.com/index.cfm?pageid=206>. Feedback was

collected from participants and the major conclusions recorded for future implementation.

Exotic Pest Surveillance

In Wales we carried out 358 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 and movement continues.

We have 14 Sentinel Apiaries and 8 Enhanced Sentinel Apiaries (ESA) in Wales. 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 Tropilaelaps mites. All postage costs, equipment and paperwork is supplied free of charge to the beekeeper who then collects and sends samples for analysis at the NBU laboratory in York.

ESA apiaries are located near to high risk points eg 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

In 2019 three Asian Hornet nests have been located and destroyed by the National Bee Unit, following sightings by members of the public. The first one was near Tamworth, Staffordshire on 6th September.

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 investigate relatedness 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 have 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 report any suspect 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 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.

I was selected to go to Jersey in late August to undergo Asian Hornet nest location track and trace training. I, together with a colleague from England, spent 5 days with Alastair Christie, the Jersey Government Asian Hornet coordinator and his team of volunteers. The following photos are a sneak preview of an article about my experience which will be in the spring issue of Welsh Beekeeper magazine.



*Bait station with feeding Asian Hornet.
photos F Gellatly*



Nest, Portelet Bay, Jersey

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.

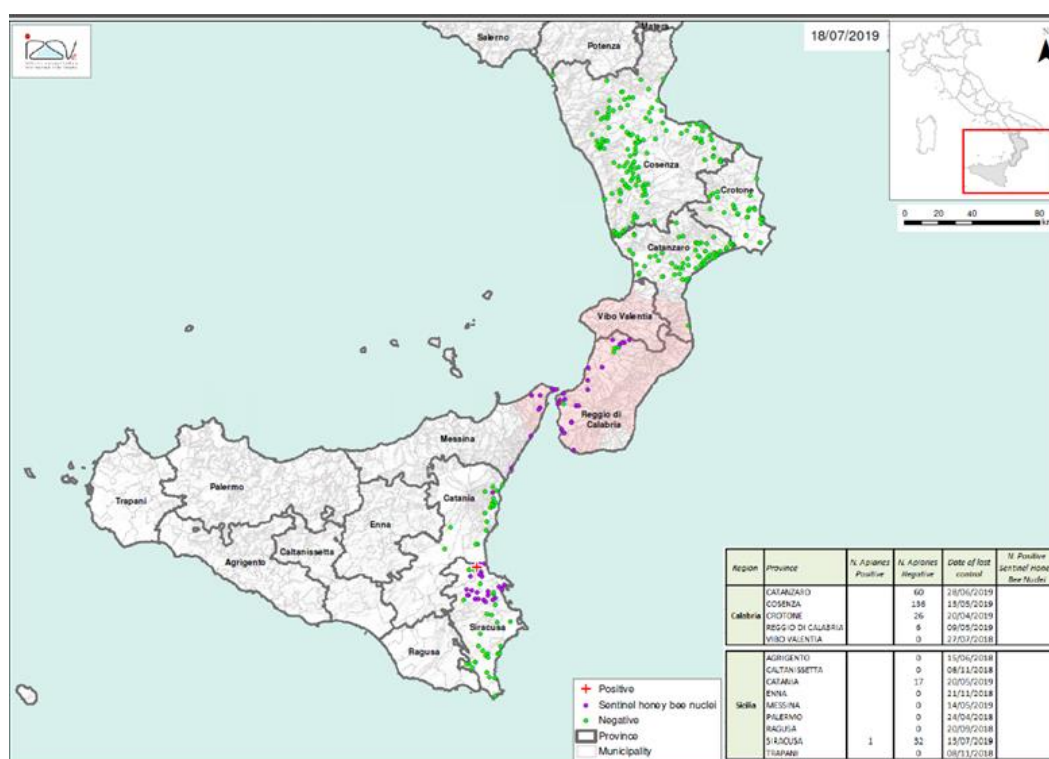
Aethina tumida had only been detected once in Sicily prior to this outbreak, on 7th November 2014. SHB adults were detected in a migratory apiary in the municipality of Melilli, located approximately 35 km away from Lentini. At the time, the epidemiological investigation had shown that the colonies were 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.



The 100 km surveillance of SHB in Calabria and Sicily, dated 18th July 2019

The 100 km surveillance of SHB in Calabria and Sicily, dated 18th July 2019

Welsh Government (WG) Action Plan for Pollinators

The Action Plan for Pollinators in Wales Task Force has made a submission to the recent Welsh Government *Sustainable Farming and our Land* consultation to promote actions to support, maintain or establish healthy and diverse pollinator populations for environmental, social and economic benefits. Wild pollinators, including bumblebees, solitary bees, parasitic wasps, hoverflies, butterflies, moths and some beetles, as well as honey bees, are important pollinators in Wales for

crops such as fruit and oil seed rape, clovers and other nitrogen fixing plants that improve the productivity of grazing pasture and wild flowers. They contribute to the diversity of plant species, habitats and wildlife in Wales, as well as supporting its resilience and natural beauty.



Leafcutter Bee – photos Maggie Gill

Beekeeper Training

We attended the Welsh Beekeeping Convention in March with the NBU stand and the Welsh inspectorate team, 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 in June with Montgomery BKA, Conwy BKA and at the National Botanic Garden of Wales. These comprised a presentation for beekeepers looking at bee health and good practice, and at Henfaes and the National Botanic Gardens beekeepers had an opportunity to join in an inspection at the apiary, where we demonstrated inspecting hives the NBU way.

Indoors beekeepers had the chance to see diseased combs, displayed under special licence, to give attendees first hand experience of brood disease. Workshops looked at different pests and diseases and relevant good beekeeping practice, from varroa control to biosecurity and exotic pests.

Members of the team have delivered talks to their local associations providing an opportunity for beekeepers to meet some of the NBU team in Wales, to get an understanding of the purpose and value of the Inspectorate's work and, most importantly, to develop their knowledge and diagnosis of the key pest and disease threats to their bees.



Bee Health Day Conwy BKA, Henfaes - photos Barry Griffiths

Finally

Lastly, I would like to take this opportunity to thank all the inspectors in Wales 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 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!

Frank Gellatly

Regional Bee Inspector, Wales | Arolygydd Gwenyn Rhanbarthol, Cymru

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