

Beetalk

Newsletter of Darwen and District Beekeeping Group. May 2014

Welcome to the newsletter of Darwen and District Beekeeping Group.

As most of you will know we are a small group of Beekeepers from East Lancashire, covering the areas of Darwen, Blackburn, Rossendale, Burnley, Accrington and the Ribble Valley.

We formed this group in November 2013 as a result of some issues we had with other groups in the area who we felt were going away from what hobbyist beekeeping was all about.

We are a very informal group, but we are also a diligent group, who want and will help members become responsible and confident beekeepers.

We run courses for beginners, which unlike others, do not charge you and most important of all, our courses take a full season to complete, as we feel to learn and to be able to manage bees in the correct way which is both safe for the beekeeper and he bees takes longer than a few weeks which some clubs advocate.

Anyone can join us by going to the website at www.blackburnbeekeepers.com and filling in an application form, but we must point out that the membership is limited to 50 members.

Group SERVICES

Bayvoral - Apiguard - Oxalic Acid Thymol Etc.

These Chemicals for treating bees can be obtained from:
Bob Fulton Phone 01254 - 772780

Bob will have them available at beekeeper's meetings.

MEMBERSHIP

REGISTERED MEMBER.

Subscriptions for the 2014 season will be £15.00

SUBS SHOULD BE PAID TO Bob Fulton. HON. TREASURER Phone 01254-772780

Address :::::: Bob Fulton, The Mound, Pole Lane, Darwen, Lancashire. BB3 3LD

Association Swarm Catchers. For the 2014 season.

A small charge is made to collect swarms to cover expenses which is up to the discretion of the individual collector.

BLACKBURN, DARWEN, ACCRINGTON and ROSSENDALE AREAS

Bob Fulton. Telephone 01254722514

BURNLEY, NELSON, RIBBLE-VALLEY AND SURROUNDING AREAS

Michael Birt

Telephone **0161-408-4607**

Please feel free to ring any of the above in your area and they will do their best to sort out the problem.

Swarm collectors will not come out to Bumble Bees and Wasps problems

Please bear in mind that the swarm collectors will only deal with honey bee swarms and will not deal with bumble-bee or wasp problems.

FUTURE BRANCH MEETINGS.

16/3/2014

Part 5 Basic Manipulation.... Lesson 1 ::: 1st Inspection of the year

30/3/2014

Part 5 Basic Manipulation.... Lesson 2 ::: Varroa Control.

13/4/2014

Part 5 Basic Manipulation... Lesson 3 ::: Looking for problems within the hive.

Details of all the meetings can be found on the web site on the events page at www.blackburnbeekeepers.com

We will, at every lesson and meeting open hives so you must bring along your protective clothing.

DISCLAIMER

The views expressed in any of the articles in 'Bee Talk' represent the personal opinions of the Contributors and in no way should they be regarded as the official opinions or views of the 'Lancashire & North West Beekeepers Association' nor of our local Branch of this association 'The Blackburn & East Lancashire Branch'

For Sale

Protective Clothing

- 1.Cotton Bee Protective Boiler Suits all sizes a bargain at £20 each
 - 2.Net Veils that need to be fitted onto a hat at £3 each
- 3. Box of thin but very strong gloves at £3 for a box of 50 pairs.

These are available by ringing Bob Fulton on 01254-772780

3. Available from Early March 2014 Fitted Veil at £15. All in all if you buy the protective Suit, Veil and Gloves you will have yourself fully protected at a cost of £35

compared to something like £85 to £100 from other suppliers.

UK Honey Labelling Regulations

Below is our simple advice on honey labelling. For more detailed information - go to the website of the Food Standards Agency. www.food.gov.uk

- 1. The Word HONEY's required.
 2. The weight must be on the label we will
- 2. The weight must be on the label we will ensure it is the legal size and format.
- 3. You can specify the area where the honey is produced. For example, Lincolnshire, Forest of Dean, Scottish Borders.
- 4. You can specify the type of honey. For example, Heather, Borage. The honey must be at least 75% of that particular type.
- 5. If you are selling the honey, you must have your name and address on the label. It does not need to be complete but you should be able to be found from the information.
- 6. If you are selling the honey through a third party, you must have a lot number.
- 7. New for 2003 You must have a best before date on the jar. We suggest 2-5 years from now.
 - 8. New for 2003 You must have a country of origin on the jar. For example Produce of England, Product of Scotland, Harvested in Wales. Adding the country to the end of your address is not

acceptable.

E H Thorne (Beehives) Ltd disclaims all responsibility for all consequences of any person acting on, or refraining from acting in reliance on, information contained above.

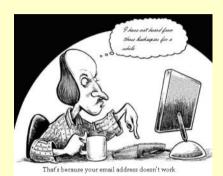
From EH Thorne's online catalogue 2010 - other sources are available



What's in the Honey Pot

A few snippets of news and information that may be of use to you

Editorial



Our membership secretary reports that several members' email addresses no longer work and emails are bounced straight back at him by the "mailer-daemon". If you've been feeling neglected by your Association lately, please check that we have your correct email address. You can rectify this problem, if it applies to you, by emailing webmaster@blackburnbeekeepers.com

Editorial.

Hi all.

Welcome to the second edition of Beetalk, by now your bees should have, with a bit of autumn preparation, decent winter and a bit of luck, have come through the winter and another season as began.

Your queen should all be marked up and laying well, and you should be all prepared with your equipment for the swarming season, which is only weeks away. Have everything ready to artificially swarm, it does not matter which method you use, but you will have to use one unless you want the bees to do it themselves, thus making the whole point of being a beekeeper a waste of time.

As far as our little group is going on, we are not well into the beekeeping for beginners course with 12 new beekeepers in attendance and all taking in what Bob and I are teaching them.

We bought in 5 nucs from Birmingham way, fresh with new queens and are now in place at 5 of the new beekeepers sites, so with a little bit of care there should be honey off these by the time its ready to be taken off.

Great start for the new beekeepers as its always a joy to obtain your first lot of bees.

Enjoy the magazine.

Updates of all events and any new can be found on the website at www.blackburnbeekeepers.com

Michael

Michael (Editor)

Meet a couple of our members.



Bob Fulton.

Bob is our education man. All the lessons are carried out at Bobs home in Darwen and at his Apiary, also in Darwen.

Bob as been keeping bees for over 40 years and as gained more practical experience that most beekeepers have forgot.

You will always be in safe hands with BOB.



Michael Birt.

Michael as been keeping bees since 1977. He now lives part of the time in Thailand where he is the education officer for the largest educational bee farm in the Far East. He also manages over 200 hives.

When in the Uk he helps out Bob with the beginners Beekeeping course and he as also wrote a book on Beekeeping for beginners.

Again with Michael your are in safe hands

Facebook and Twitter.

We have put a Facebook and Twitter page online. Not sure how they work as its all new to me, but seems very interesting.

Have a look and make a contribution or a Twit.

They are at. https://www.facebook.com/groups/1442937712600956/
And

https://twitter.com/darwenbees

HONEY& DIABETICS.

Honey is composed mainly of a variety of sugars, traces of pollen and water. There are also enzymes present. Because the sugars in Honey depend upon a carrier to move them across the membrane barrier, they are limited by how much carrier is available. This means that there is less of a "rush" of sugar to the body with honey i.e. ...Less of a strain on the pancreas to suddenly produce large amounts of insulin... Less likelihood of large peaks and valleys in the insulin /sugar curve... Less likelihood of hypoglycemia.

The main practical difference in behaviour between that of cane sugar and the complex sugars in honey is the manner in which the body absorbs them. Sugar is absorbed via osmosis. This means that it simply enters the bloodstream, penetrating directly through membranes, when it is being digested. The implication is that large amounts of sugar can rapidly enter the system. This rapid entry can cause an overreaction of insulin production by the pancreas, resulting in the quick burning of the sugar in the system. A crash back to lower levels of sugar (caused by the over stimulation of insulin production/rapid digestion of sugar) may occur.

The complex sugars contained in honey are absorbed by a process known as "active transport." While the term "active" may seem to denote that this occurs quickly, the opposite is true... Since the transport of the sugars through membranes and into the bloodstream is accomplished by an actual carrying agent (a chemical that binds the sugar), the speed with which it is absorbed is regulated by the availability of the transport agent. So complex sugars move into the bloodstream at a slower rate and are, therefore, less likely to cause an over stimulation of insulin production. Add to this the fact that honey is twice as sweet as sugar, you can use half as much in a given recipe, and you can see that diabetics are far less likely to shock themselves with honey as a sweetening agent than sugar.

May beekeeping Tips.

We will be soon approaching the swarming season which can even start in April if the weather is mild enough. May though is the time it all starts to happen. We all know the old beekeeping song about the swarm in May is worth a load of hay, well it's so true. What you should be looking for is a build-up of drones in the hive as this is a sure sign of the bees getting ready to swarm. The only want drones for one reason and that is to mate with a virgin queen. One they are of no use they are ejected from the hive, usually around august time.

Bees unlike mammals cannot reproduce individually, but have to multiply, hence they swarm. You then have 2 colonies instead of one, thus reproducing them. If they did not swarm the whole population of bees throughout the world would die out, it's as simple as that.

So we have by early May a rapid build-up of bees, there will be plenty of pollen coming in, which is used mainly for brood rearing as it's the protein they are after to feed the brood. Just go and look at your bees bringing it in and you will soon know what I mean.

What should we do about it, let the bees alone and wait for a swarm to come out. NO WAY, this is silly beekeeping; it is irresponsible beekeeping for the following reasons. When the bees swarm, only the flying bees leave the hive, they are all the ones that bring in the honey, so what you have is a loss of production. Also they bees that leave eat as much of the stored honey in the hive as they can as they have no idea when the next meal is coming from. So you have most of the honey gone and no bees to bring any in until the house bees are ready to forage. A total disaster as far as you getting any honey in August. You will get some but not as much as you would if you had sorted the job out now. Also when bees swarm they could go into next doors garden, sting them and you will have trouble from them which you can do without. So what do you do, you swarm them yourself, This will ensure that at least everything is under control, you will not have the flying bees eating the honey and you will not have trouble with the next door neighbours.

There are many different methods of swarm control for the difficult ways to the easy ways. I use the Curry Method of swarm control which I find is easy to carry out and is very effective.

I have put, a link below, showing the method. If you are in doubt after reading it contact your mentor or club, they will be able to put you right.

http://www.blackburnbeekeepers.com/Curry%20Method%20with%20Pictures.pdf

If you want to just split a hive instead of doing the Curry method, just do the following instead. This will just get you a small nucleus of bees which will build up into a nice strong hive. Don't expect to get any honey of the split. Here is the link with the instructions.

http://www.blackburnbeekeepers.com/Making-nucleus.pdf

Please note that it is the only time in the spring and summer months that you can treat part of the colony with oxalic acid as the swarmed colony will be broodless.

So swarm control in May is very important, but there are other tasks that need looking at too, these

- 1.Make sure that your queens are all now marked up. She will be very difficult to find later if you need to find her for queen rearing or indeed any other manipulation you may have to do which involves finding the queen.
- 2.Make sure, if you have not already done so, that you have enough equipment ready for swarm control and honey gathering. This means an extra set of brood boxes and frames as well as has many supers you need for the honey flows that are on their way.
- 3. Keep your eyes open for Varroa infestations as the mites will have built up whist the queen has been slow in laying and the colony has not built up. This is the time when the mites increase more that the queen lays and it's when you have a potential problem on your hands. There are many methods to control Varroa, but one I wold not recommend at this time of year is drone uncapping. To me it's a waste of time at this time of year as you need the drones for possible mating and also you are knocking down drone's cells where the workers will only make more, so instead of making worker cells and increasing the population of the hive they are making drone cells for you to break down. Same with honey production and all because of Varroa control, whereas there are many other ways to control. It's OK later in the year to do a bit of drone trapping, when all the swarming and queen rearing is over, but not now. Talking about other ways to control Varroa, there is now a great product on the market called Hive Clean, which can be used at any time of the year. I have used it in Thailand to control Varroa and also tropolelaps mite and its really good stuff. Details are available from the usual suppliers. Here is some info on the product by way of a utube video which you should find interesting.

https://www.youtube.com/watch?v=6s hBdHHisI

4. Some of you may want to have a go at queen rearing, there are lots of different ways of going about this, but as above with the hive spit or the curry method of swarm control, its already been done on a small scale. It's if you want to make a few more, that the process becomes more complicated and there are many different ways of going about it. I have put on a PDF file on a few ways of going about it. Written by Khalil Hamdan Apeldoorn, of the Netherlands it as all you need to know about queen rearing. The link is at

http://www.countryrubes.com/images/Raising_Honey_Bee_Queens_8_30_10.pdf

- 5. Attend meetings as there is a lot of knowledge out there amongst other members and remember that the more people who share information, the better.
- 6. You should be registered with bee base Defra site and dept. dedicated to us beekeepers. You can find them at https://secure.fera.defra.gov.uk/beebase/index.cfm there is lots of information on the site for you and if you have any doubts about anything you can always ring up and ask for a visit from your local bee inspectors, who are very helpful, especially to new and beginner beekeepers. It's all free too.
- 7. There are always other things to do such as keeping all your equipment up to date, removal of dirty frames, which should be an ongoing process, as checking for, and removal of damaged and dirty frames is an essential part of beekeeping. A clean, disease free hive is a happy one.

I think I have covered most of what need to be done. So enjoy your beekeeping and ets hope the weather is kind to us all.

Michael and Bob.

Marking the Queen



Having a marked queen is such a help to hive management that I am surprised that more beekeepers don't make the effort to do it. It also means that you are more likely to see her before you squash her or drop her in the grass. The best time to find a queen is early in the year and there is a technique which can be used, even by those with little experience. Before you start, have the marking pen and cage, if you are using one, where you can put your hand on them without taking your eye off the queen. The first points to realise are that finding the queen is psychological to some extent! Be determined and you will probably succeed, be doubtful and you probably will not.. You are not looking for an individual bee, but rather a different pattern or way of moving on the comb. Try the following:

- 1. Use as little smoke as you possibly can, none at all if possible and be extremely gentle.
 - 2. Remove the first frame as before, quickly inspect it and put it to one side.
- 3. Disregard outer frames filled with stores, she may be here, but is unlikely to be if you have not disturbed them.
- 4. When you reach the frame which has lots of pollen on it, usually just to the side of the brood nest, start your careful inspection, which should be thorough but fairly quick.
- 5. Remove each frame containing brood in turn and, HOLDING IT WELL AWAY FROM YOU OVER THE HIVE, turn it over immediately so that the side away from you in the hive (the dark side) is facing you. Take your eye quickly round the outside of the frame, spiralling inwards to the centre, then turn and repeat on the other side. 6. Before you reach the end of the brood box she should have revealed herself, but, if not, go back through the frames, in reverse, a second time.

If the queen is still proving illusive, there is another trick.

Remove the outer frames, leaving just those frames with brood on them. Pair these up so that each pair has space around it but the frames in each pair have the usual spacing. Then leave the hive open for a while, perhaps while you inspect the next colony. When you go back take each pair of frames out together and immediately look on the dark side, that is opening the frames like a book. (This is much simpler if there are two of you so that you can each look at one frame.) The queen will almost certainly be on the inside of one of the pairs of frames.

I have seen this work even for complete novices.

Celia F Davis.

Courtesy of Warwickshire Beekeeper and ebees.

TAKING THE HONEY.

A sort of procession advanced from the front door. It consisted of Enoch, the trapper, carrying a spade on his shoulder and a lantern dangling in his hand; then came Mrs Day, the keeper's wife, the light of the lantern revealing that she bore in her arms a curious object about a foot long, in the form of Latin crosses (made of lath and brown paper dipped in brimstone - called matches by bee fanciers); next came Miss Day with a shawl thrown over her head; and behind all, in the gloom, Mr. Federic Shinar.

"Here I be, Enoch" said a voice; and the procession advancing further, the lantern's rays illuminated the figure of Geoffrey Day, the keeper, awaiting their arrival beside a row of bee hives, in front of the path. Taking the spade from Enoch, he proceeded to dig two holes in the earth beside the hives, the others standing around in a circle, except Mrs. Day, who deposited her matches in the fork of an apple tree, and returned to the house. The party now remaining were lit up in front by the lantern in their midst, their shadows radiating each way upon the garden-plot like the spokes of a wheel and the preliminaries of the execution were arranged, the matches fixed, the stake kindled, the two hives placed over the two holes, and the earth stopped round the edges.

"They were a peculiar family", said Mr Shinar, regarding the hives reflectively.

Geoffrey nodded.

"Those holes will be the grave of thousands!" said Fancy. "I think 'tis a rather cruel thing to do".

Her father shook his head. "No", he said, tapping the hives to shake the dead bees from their cells, "if you suffocate them this way, they only die once: if you fumigate 'em in the new way, they come to life again, and so the pangs o' death be twice upon 'em".

"I incline to Fancy's notion", said Mr Shinar, laughing lightly.

"The proper way to take honey, so that the bees be neither starved nor murdered, is not so much amusing as a puzzling matter", said the keeper steadily.

"I should never like to take it from them", said Fancy.

"But 'tis the money", said Enoch musingly. "For without money man is a shadder".

The lantern-light had disturbed several bees that had escaped from hives destroyed some days earlier, and who were now getting a living as marauders about the doors of other hives. Several flew round the head and neck of Geoffrey; then darted upon him with an irritated bizz.

Enoch threw down the lantern, and ran off and pushed his head into a currant bush; Fancy scudded up the path: and Mr Shinar floundered away among the cabbages. Geoffrey stood his ground unmoved, and firm as a rock. Fancy was the first to return, followed by Enoch picking up the lantern. Mr Shinar still remained invisible.

"Have the craters stung ye?" said Enoch to Geoffrey.

"No, not much - only a little here and there", he said with leisurely solemnity, shaking one bee out of his shirtsleeve, pulling another one from his hair, and two or three more from his neck. The others looked on during this proceeding with a complacent sense of being out of it.

"Are those all of them, Father?", said Fancy, when Geoffrey had pulled away five. "Almost all, - though I feel a few more sticking into my shoulder and side. Ah! there's another just begun again upon my backbone. You lively young martels, how did you get inside there? However they can't sting me many more times, poor things, for they must be getting weak. They may as well stay in me till bedtime now, I suppose".

"Bring hither the lantern, Fancy: the spade can bide".

In Geoffrey's storehouse at the back of his dwelling Fancy was now kneeling beside the two inverted hives, one of which rested against her lap, for convenience in operating on the contents. She thrust her sleeves above her elbows, and inserted her small pink hand edgewise between each white lobe of honey-comb, performing the act so adroitly and gently as not to unseal a single cell. Then cracking the piece off at the crown of the hive by a slight backward and forward movement, she lifted each portion as it was loosened into a large blue platter, placed on a bench at her side.'



The Small Hive Beetle

The Small hive beetle (Aethina tumida), is a potential threat to European and UK beekeeping. This beetle, indigenous to Africa, has recently spread to the USA, Canada, Mexico, Jamaica and Australia where it has proved to be a very serious pest of European honey bees. There is a serious risk of its accidental Introduction into the UK. All beekeepers need to be aware of the fundamental details of the beetle's lifecycle and how it can be recognised and controlled.

Could we eradicate the Small hive beetle from the UK?

Probably not. Unless the Small hive beetle is detected very soon after its arrival in the UK, it will rapidly spread into the surrounding honey bee population, making eradication very difficult. A major limiting factor to eradication would be the unknown distribution of managed bee hives and the potential for populations of the beetle to survive in wild hosts (e.g. feral bees and bumble bees).

We have a leaflet from Fera on the website that you can look at and print out. Its at

http://www.blackburnbeekeepers.com/Small%20Hive%20Beetle.pdf

EFB and AFB Diagnostic test kits - how do they work?

They look simple, they are not made from much, mainly plastic, disposable bits, so why do they cost so much and how do they work.... The test kits are classed as "Immune Assay test kit", and work in a similar way to a rather more commonly known diagnostic kit "True Blue" a pregnancy test kit. In basic terms, the test kits should give you one of two results, a single blue line to say the kit has worked, and a double blue line to say there is a positive test result and the test has worked. But what is it made of and how does it give the results?

Firstly I think need to try and explain some of the terminology.

Antigen This is the surface molecular shape, that is specific to only this bacterium (that is, *Melissococcus plutonius*, for EFB, or *Paenibacillus larvae* for AFB), and cannot be found on any other bacteria. Your own body's immune system takes full advantage of the fact that all bacteria and viruses have "glycol proteins" (sugar coated proteins) that are very species specific, and this is what the body's immune system generates antibodies to. The sugars that are fixed to the proteins on the bacteria's coating help the bacteria normally to evade detection, and protect them from the environment and also help them to attack or stick to their specific targets. The medical trade has taken advantage of the fact that some bacteria or viruses do have similar surface "antigens", for example the smallpox inoculation is based on the cowpox virus, a virus that is similar enough to give a strong immunological response, and immunity to smallpox.

Antibody These are very large proteins that bind specifically to a specific antigen at one end and to the body's immune cells on the other end. In nature they are produced by your immune cells to attack bacteria and viruses that are invading your body. They stick to the outside of the invading bacteria and enable your own immune cells to engulf and digest the invading bacteria: they act like molecular handles for your immune system to recognise foreign bodies at a molecular level. Each different antibody is produced by its own cell line, and the body holds millions of cell lines in specific tissues which analyse the content of bacteria in the body. When the particular cell line recognises its antigen, it replicates and produces antibodies in great abundance to attack the invader. This is know as the immune response memory, so once you have overcome an illness you should not get it again. The antibodies used in this test kit will be made in "cell tissue culture" within a laboratory, where cells that produce this correct antibody will be brewed in a batch and then the antibodies will be harvested and purified. For this test kit, the antibodies are bonded to microscopic latex beads on the ends that would normally bind to the immune cells. Many antibodies will be fixed to one latex bead, and the latex bead also holds the blue colour which helps later in the test, as the die is soluble in latex.

The test strip is a small strip of chromatography paper that has printed and fixed on it a test line containing antibodies: the control line is where a line of antigen is fixed to the test strip. So on with the test. You take your one suspect larva, put it into the pot of solution supplied and give it a shake. The solution contains a "buffer" to keep the antibodies in good condition so that they will still bind to the specific antigen (the buffer regulates salt concentrations and the pH to 7.6). Some small glass beads are in the solution to help to break up the larva to release any bacteria. Lastly and most importantly some microscopic latex beads that are coated in the antibodies for the test, as described above are also in the solution. When you have shaken the sample you let the glass beads settle out. You then put the correct number of drops of the solution onto the test with the sterile dropper or pipette supplied and wait for the solution to migrate across the test strip, over the two marked test lines. The colour will then start to develop on the marked lines.

A negative test occurs when the latex beads coated in the antibodies stay in solution and move along the chromatography paper and stick on the line of antigens (which is the "control" line) indicating that the test is viable, that the antibodies work, and therefore that the test works..

A positive test occurs when some of the latex beads covered in the antibody will stick to the target bacteria that were released from the larva into solution, forming small "clots": the remaining latex beads will stay in solution on their own. When you put this on the test strip the bacteria stick to the antibody line which is the "test line" with clots of the latex beads stuck to these bacteria, and those free latex beads in solution stick to the antigen line, which is the control line. So now there are two blue lines, indicating a positive result.

For those of you that would like to see a picture of this, then look at the manufacturers' website at www.vita-europe.com/Map enscript/frmbuilder.php?dateiname= %2Fen%2Fproducts%2Fefb dignosyic.htm

The normal caveats really do apply to these tests, only use one larva per test, do not re-use the test, and follow the instructions. They are very sensitive, but true forensic science is in your hand, not just a bit of cheap plastic and a couple of solutions. The sophistication of these biochemistry kits is what you are really paying for.

With thanks to Robin Hereward-Isaac, West Wilts BKA

Good reason not to import queens

The Canadian Food Inspection Agency (CFIA) has been informed by provincial apiculturists that an adult small hive beetle (SHB), as well as first and second star larvae, were found on the packing material of queens imported from Hawaii on April 7, 2011, with destinations in Manitoba and Alberta. This represents the first shipment from Hawaii to Manitoba and Alberta this year. The total number of queens shipped was 500 queens to Manitoba and 1000 queens to Alberta.

Once inspections were performed and the findings were confirmed, producers were instructed to move all queens into new queen cages before introduction into colonies. Producers were also instructed to incinerate all original packing and shipping material. Inspections are continuing to ensure that no SHB larvae have been introduced to Canadian hives.

The CFIA shares importer information with each of the provincial apiculturists under a legal agreement (Memorandum of Understanding) held with each of the provinces. This allows the provincial apiculturists to follow-up on imported shipments of honeybees and to investigate potential disease risks (or in this case, risks associated with the introduction of pests). Ongoing communication between the provincial apiculturists and importers is to continue throughout the import season.

The CFIA has also been in contact with officials at the United States Department of Agriculture (USDA). The USDA has taken our concerns very seriously and they have investigated the situation in Hawaii. Our import conditions will be modified to help further mitigate the risk of introducing SHB into Canada. Exporters in Hawaii are already making changes to their protocols to help ensure a safe supply of queens to Canada.

CFIA will continue to monitor the situation closely throughout the honeybee import season.

Written by Horacio Mezziga Sent in by Ron Hoskins, with thanks to Swindon BKA

Why are our bees disapearing

The secret is out – bees have been disappearing for <u>almost a decade</u> now, and scientists are scrambling to understand why. <u>Some sources relay</u> that the colonies all across the world are vanishing due to pesticides, electromagnetic frequencies, mites, and even GMO crops, but what researches have recently found to be the cause of the bee catastrophe will shock you.

According to a recent report in <u>Quartz</u>, a first-of-its-kind study determined that large numbers of bees are dying due to cross-contamination of pollen and various pesticides.

"Scientists had struggled to find the trigger for so-called Colony Collapse Disorder (CCD) that has wiped out an estimated 10 million beehives, worth \$2 billion, over the past six years. [...] Scientists at the University of Maryland and the US Department of Agriculture have identified a witch's brew of pesticides and fungicides contaminating pollen that bees collect to feed their hives. The findings break new ground on why large numbers of bees are dying though they do not identify the specific cause of CCD, where an entire bee-hive dies at once"

Researchers behind the study, which was published in <u>PLOS ONE</u>, collected pollen from hives on the east coast – including cranberry and watermelon crops – and fed it to healthy bees. The tested bees experienced a serious decline in their ability to resist a parasite that causes Colony Collapse Disorder.

It was found that the pollen the bees were fed had an average of nine different pesticides and fungicides, and one sample contained a deadly concoction of over 21 different chemicals. Furthermore, the researchers found that bees that ate pollen with fungicides were three times as likely to be infected with the parasite.

WHAT DOES THIS STUDY CONCLUDE?

That fungicides play a larger role in Colony Collapse Disorder than previously hypothesized. While neonicotinoids have been linked with mass bee deaths, it seems most fungicides are widely believed to be harmless to bees. The study shows that it is more than just pesticides, but a combination of toxic chemicals, which is harming the bee colonies.

Unfortunately, there's more to the scenario. It's not just the types of chemicals that need regulation, but spraying practices, as well. The samples tested on the bees were not foraged from crops, but from weeds and wildflowers, which means the integral insect is more widely exposed to pesticides than thought.

The <u>authors summarized</u> in their study:

"More attention must be paid to how honey bees are exposed to pesticides outside of the field in which they are placed. We detected 35 different pesticides in the sampled pollen, and found high fungicide loads. The insecticides esfenvalerate and phosmet were at a concentration higher than their median lethal dose in at least one pollen sample. While fungicides are typically seen as fairly safe for honey bees, we found an increased probability of Nosema infection in bees that consumed pollen with a higher fungicide load. Our results highlight a need for research on sub-lethal effects of fungicides and other chemicals that bees placed in an agricultural setting are exposed to."

While the situation might seem simple – chemicals sprayed on crops are killing bees – the details of the issue continue to become more complex. Concerns include: what can be sprayed, where, how, and when to minimize the negative effects on bees and other pollinators while still assisting in crop production.

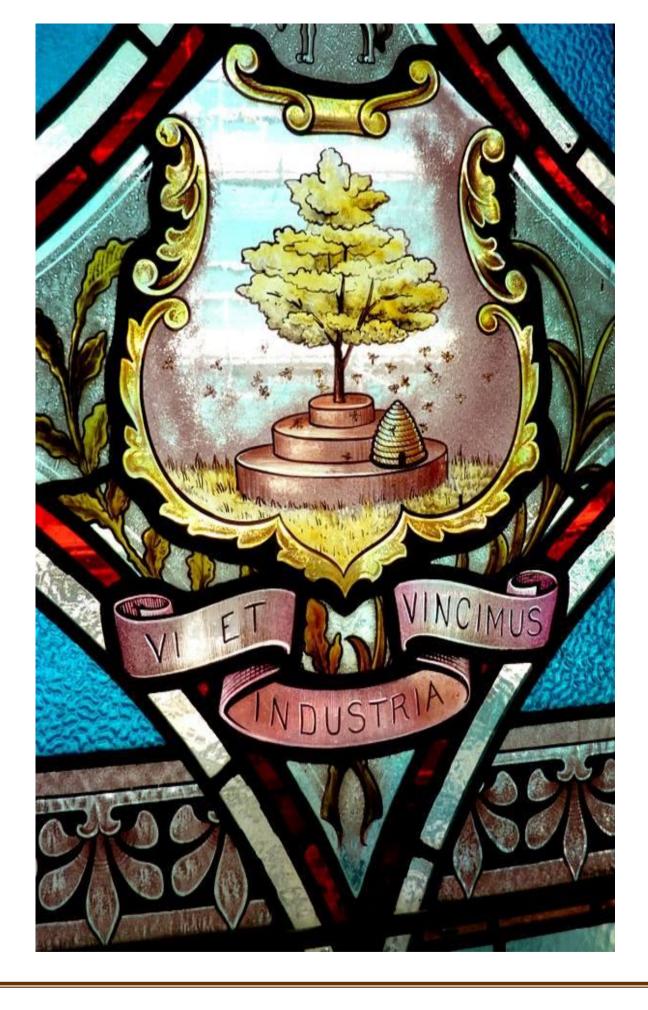
To create <u>balance between mankind and the ecosystem</u>, changes need to be implemented, but at a rate which will not disastrously affect the economic status. For this reason, becoming a sustainable world is a challenging task.

Presently, scientists are still working to discover to what degree bees are affected and by what. The time line before new systems are regulated and implemented means the public must step up to protect the valuable workers which are essential for sustaining life on Earth.

Choosing <u>organic foods</u>, environmentally responsible products, and helping to create awareness regarding the current issue may do wonders to radically shift the bee decline affecting everyone.

ABOUT THE AUTHOR

Amanda Froelich is a staff writer for TrueActivist.com, where this article was originally featured.



Last night as I was sleeping, I dreamt a marvellous error! That I had a beehive here inside my heart.

And the golden bees were making white combs and sweet honey from my old failures.

Last night as I slept, I dreamt a marvellous error! That it was God I had here inside my heart.

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