



# South Tipperary Beekeepers Association



## Newsletter April 2017

<b>Contents:</b>	◇ STBA Update
◇ Editorial	◇ Drone Genetics
◇ Hive Inspection - Reading your hive	◇ How is your Mead brewing
◇ First Inspection	◇ Apiary News
◇ Monitoring Colony Progress	◇ BEE BIZ Board
	◇ Worker-Bees development stages

### DITORIAL

Another year and the excitement is surely building. It's incredible how fast the year goes by. Removing of the crop roll into the first spring inspection very quickly. This is really a very exciting time of the year for beekeepers. It is usually our first chance to see how the bees survived the winter. I know there will be some disappointment as losses are inevitable. It's one of the down sides of beekeeping. Hopefully 2017 will be that bumper year we yearn for. As usual lots of interesting articles in this edition. Knowledge is key to becoming a successful beekeeper. You never know too much and you certainly will never know it all. Just because you are beekeeping for years does not mean you can neglect this aspect, we all develop bad habits and we all certainly forget. The best way to avoid falling into that trap is to attend all lectures and read all you can. Looking back over the last number of years we are very lucky in STBA to have such a dedicated committee who provide us with the most up to date research. Congrats to Dennis Ryan who just completed his three years as Chairperson. Dennis is a firm believer in the transfer of knowledge. Thanks Dennis for your input. We now have our new man at the helm Tom Roche and we look forward to see what direction he will take the club. I wish you all a successful year.

### HIVE INSPECTION - READING YOUR HIVE

You often hear beekeepers talking about "reading the frames". It simply means you are examining the hive content in detail. Compare it to reading a book where you go from page to page reading every word to get the full meaning. Each frame is considered a page of the hive and to get a full understanding you need to look at every cell in order to get a clear picture.

There should always be a purpose for opening your hive. Remember the least disturbance to the foraging activities of the bees the more honey you will get. Usually you open a hive to see what happened or more importantly what is going to happen over the next number of days or weeks.

When you remove each frame the first learning is to be able to recognise each component of the colony: honey sealed and open, fresh nectar, granulated honey, pollen, brood sealed and unsealed, the age of the open brood, queen cups charged and uncharged, queen cells at different stages of development. Worker and drone brood is different, can you differentiate between both. All the above will not be learnt from a book but from practical experience so regularly attend your outdoor demos.

The main point to look for are as follows:

- ◆ Is the queen present and laying the expected number of eggs?
- ◆ Does the queen have sufficient room until the next inspection?
- ◆ Compared to other colonies is it at a comparable strength?
- ◆ Is there enough room for the workers (super Space)?
- ◆ Have the colony sufficient room for nectar storage?
- ◆ Are stores adequate until the next visit?
- ◆ What is the pollen status in the colony?
- ◆ What stages of development are the drones at?
- ◆ Any signs of swarm preparation cups or cells?
- ◆ What is the disease status of the colony?
- ◆ What condition are the brood frames in?
- ◆ What is the Varroa count?

If you can answer all or most of the above questions you can have a great story to tell about your hive. Like all great stories if you don't write it down some or all of the content is lost. **Record keeping is essential** if you want to get best value from your examination and it will avoid unnecessary disturbance of your bees.

### FIRST INSPECTION TOM PRENDERGAST

Most beekeepers cannot wait for the first inspection, it's almost like waiting for Christmas morning if any of you can remember back that far. Of course just like that great morning it can be a time of great joy or sadness. Everyone is hopeful that their colony will have survived over the winter. A colony surviving is only part of the success story you also need an excellent queen in the hive that will build up.

If you see plenty of bees flying as the weather gets milder, bringing in pollen and if you gave them candy which they used, then there is a fair chance that the colony is in good condition. For me the first inspection is all about giving the colony what it needs at that time and getting it ready for further inspections. Remember this will be the first time in six - seven months you have opened this hive so the bees will have rearranged the furniture to suit themselves. When you remove that crown-board you are usually greeted by all the top bars full of propolis and burr comb and lots of it if you left the high side of the crown board down after treating with Apiguard. Your first objective should be to remove this mess otherwise if any honey/syrup starts to run down the combs you could cover the queen. Either way it will make manipulation very difficult. All this material can be scraped into a bucket or into a low sized container and left over the crown board where the bees will clear it and only the wax is left. Use a 40mm paint scraper and move fast to avoid honey dripping down between the frames. If you take short sections of the top bar you will not create a mess and there is a possibility that all the burr comb will have crystallised honey. It's a good policy to change the crown board now or scrape it down at the hive. If you are taking the old one home clean and sterilise it. If you left the queen excluder on it will be pretty well blocked up and it needs to be cleaned. After doing all that cleaning and scraping I usually don't like going into the middle of the brood nest as there is still a lot of sticky mess on the frames. Remove a few frames away from the brood nest. You can determine where that nest is by the activity of the bees, the cluster is always around the brood. When you remove a frame or two keep going towards the position of the brood. You will find pollen first and then brood. Have a quick look, if it looks ok stop there and start replacing the frames you took out. If you think the bees are confined for space then remove a few of the full frames of brood and replace with either drawn comb or foundation. April is the dandelion starts to bloom, is a great time for the bees to store comb. If there is a shortage of stores then feed. Reassemble you hive close up and within an hour or two the bees will have all the mess cleaned up. Next visit you can then move into the brood nest, taking note of the number of frames of brood, how the queen is laying, any sign of diseases, did they draw out the foundation and also check for stores. If you spot the queen, mark her and if you feel comfortable about it clip also.

### MONITORING COLONY PROGRESS TOM PRENDERGAST

The objective of every beekeeper is to build up his colony to a strength that it can collect a crop of honey. In nature this happens naturally so in theory the beekeeper doesn't have to do anything except remove the honey at the end of the year. As beekeepers, we need to understand what is the difference between what we want the bees to do and what nature intended. One aspect that beekeepers neglect is that in nature bad colonies do not survive beyond April, they simply perish away because of lack of food, bad queens and disease. We as beekeepers sometime keep these colonies alive by nursing them on throughout the year hoping that we will get a crop the following year. If a colony is suffering from a disease such as Nosema it may clear itself during the summer but will not be good enough to gather a crop or replace the queen. The following spring it will be in the same position. The really sad point is that it will dilute your gene pool of its good characteristics if any drones from this colony mates with your good queens. That does not happen in nature as the colony would have perished before any queen mating, therefore the first part of monitoring is culling. Cull any diseased or too small a colony that will not survive on its own. I'm not including colonies that are small because of stores shortage, remember you robbed them last autumn, it's up to you to remedy a problem of your making, feed them. To maximise you honey crop you need to get the bees to fill 3 - 4 supers of bees and that means a brood box full of brood. At your first examination check the number of frames of brood. This number will vary from year to year. Don't ever worry at this stage as a good queen will always catch up under the right conditions. Counting the brood frames now is just a starting point. What is more important is how the number increases at each examination. The queen is the power house of the colony. Her egg laying ability will determine the final outcome. Check her brood viability, how many cells are empty in the frame of brood. As experience grows you can estimate this. As a beginner use a thombust to mark off 100 cells, count the number of empty cell and allow for eight empty cells for natural reasons. So, if you had 28 empty cell take away eight that leaves 20 empty cell in a hundred, therefore the queen viability is eighty percent which is considered on the low side. You can have it as low as fifty percent and the colony will survive but will not collect a crop for you. A figure above ninety percent is what you should aim for. Under performing queens should be replaced at the first opportunity. The best time of all to replace is the previous Autumn. Colonies that are stressed will not perform, disease will stress a colony, varroa is the number one stressor in our colonies it must be controlled. If the colonies are suffering from Acarine or Nosema you need to take action. If in doubt about the levels of disease send away a sample for testing. Examine colonies very thoroughly during the early part of the season for any diseases. Do not unite diseased colonies it never happens in Nature, I wonder why. Make sure the queen has enough room to lay. Are there empty combs beside the last frame of brood? Sometimes colonies are store bound in the Spring time. If so then remove one combs of stores and replace with drawn comb or foundation.

If you are happy with the queen & disease status, check for room and food. Your future regular inspections will still include checks for all the above points but the most important criteria from now on is "queen progress", how is she laying, has she increased her egg laying, are the number of frames of brood increasing. As the season progresses from mid-April to early June the colony should be expanding. The number of frames of brood will be increasing during each examination anything from two to three frames can be laid up. As the frames of brood increase so will the number of young bees in the box and like all young ladies they need their own room so start putting on supers. By mid-June all colonies should have at least two to three supers of bees. All this progression is moving towards the start of the honey flow. If you have a good queen, disease free colony with low mite counts it will progress to fill the brood box with frames of brood and then supers of bees. YOU ARE THEN READY FOR THE HONEY FLOW.

Also during this build up you could have to deal with queen cells. This is where most beginners make a mistake and suddenly the swarm escapes and the supers are empty of bees. Feeding is sometimes necessary during early June, a time of year known as the "June Gap", when there is little or nothing in flower and they quickly eat through their stores.

### BEEKEEPER ON A HIKING HOLIDAY IRENE POWER

This June I was lucky to do some hiking in Tirol district in Austria. We based ourselves in a beautiful picturesque Austrian resort called Ehrwald with a dramatic glacier backdrop. The wild-flower strewn meadows were most striking, like a technicolour carpet. I am no expert on flowers and would like to have had an identification guidebook with me, which I did try some shops for but in vain, so I had to rely on my limited knowledge and that of our walking guide and others in the group plus taking some photos and checking with the experts back home.

Lush greens, rich yellows, glowing pinks, deep purples, the colours and shapes were limitless. It seems these wild flower meadows are protected in some parts of Austria and the flowers cannot be picked or damaged. Some rare flowers such as orchids, iris, grape hyacinth and sundew can all be admired. On one of the walks our guide pointed out the Lilly of the Valley flower and told us a story about a recent incident of a walker who had mistaken it for wild garlic, eat the flower and got very ill afterwards. Concerning the toxicity of lily of the valley plants, experts advise wearing gloves when handling them. All parts of the plant are considered poisonous if ingested. I believe that the scent does attract bees and they do get nectar from it. Other flowers seen were Granny's Bonnet, they are used for food source for moths & butterflies and we did see the most beautiful colourful butterflies flying around the meadows. Your granny's Bonnet is also a major source of food for certain species of bumble bees. We saw lots of white campion, alpine snowbell, wood Anemone, moss campion, alpine bellflower, fields of cotton and so many different flowers. Surprisingly enough we did not see a lot of honeybees foraging on these wild flower meadows and on enquiring from the guide he told me that over the past few years he has noticed a big decline in the number of honeybees. The varroa mite is active in the region and also there has been some problems with EFB & AFB. Beekeepers can make 2 harvests a year, end of May and end of July and sometimes 3 if it is a very good year. Talking to the locals I learned that transhumance (seasonal movement of people with their livestock to new pastures which can be quite far away) is a common practice for the professional beekeepers in the north of Austria (to Robinia's forest in South-East Austria) for example. Big beekeeping farms could have up to 300 hives and is doing the transhumance to lower Austria ~ 200km away.

On one of our hikes we came across an apiary! 12 colonies, 6 on each side of a forest track. A non-beekeeper walker could walk straight past and not even notice. All the hives were polystyrene, double brood nationals with average of 1-2 supers on them. The bees, small dark in colour, were flying well, bringing in lots of lovely pollen, and very docile, given they were right next to a frequently used forest track and also I got some close-up photos and they took no notice of me. The record cards were positioned in a holder on each of the hives. Also there was a solar wax extractor, decoy hive and a bug box in the apiary. I was quite excited to happen upon the apiary and got lots of bee related decoration from my fellow walkers for the rest of the trip...

The memories of those beautiful natural pastures will stay with me for a long time. Reflecting on such beauty I just wonder why we as a nation cannot have the same, good for insects to forage, mixed herbs for the grazing animals and a pleasure for us to watch. Ah well maybe someday.

### PLANTING FOR BEES TOM PRENDERGAST

It now seems to be fashionable to voice your objections to any cutting or removing of trees, ditches or plants that our bees could use. It is a crying shame that we are losing some of our landscape to so called progress. Looking at it from another view point progress is necessary and sometime it is necessary to remove plants & trees for safety or other reasons. I never worry about removing a tree or two if I need to. What would worry me is if I didn't do my usual planting. Every year I plant several trees, shrubs, plants and bulbs that benefit our insects. I like to look after the butter flies, solitary bees and of course our honey bees.

When it comes to planting there are endless options. There is no excuse, we can plant in something as small as a window box to several acres of trees. I like to mix what I plant. Some seeds can be purchased others can be collected in the autumn. At our February lecture we handed out several Hazel trees. I collected the seeds in September 2015 and stored them in a cool place in moist peat. These were planted in the following spring and dug up this year for distribution to our members. Hazel is one of the first plants to provide pollen in the late winter early spring just when our bees need it. Why not grow a whole hedge of hazel? Other trees that are very easy to collect seeds from are the Sycamore, Blackthorn and the Spanish Chestnut. Again store them and plant the following spring. Some seeds such as the Hawthorn, Chestnut need to be stored for two winters before you plant them. If you cannot plant trees why not consider some wild plants. Again, you can collect seeds, but remember you do not remove them all. About 20% of the seed heads should be used, the rest left there to do as nature intended. Do not remove any endangered species. Some of my favourites are both the Devils-Bit and the Field Scabious. This plant produces a wonderful orange pollen. The Oxeye Daisy is loved by our solitary bee and is very easy to grow. Other plants are the vetch family, don't forget the knapweed which is much visited by our autumn butterflies. Why not consider leaving an area of the well-manicured lawn (the lawn that nobody really admires except you) go wild and set a few plants in it. I bet when it does come into flower you will have several neighbours copying your new trend. Leave it grow for the year and cut after the seed heads have fallen. If you want to buy wild seeds, there are several on-line companies selling them. The most successful packages can be bought in LIDL so watch out for them when they come into stock.

**STBA UPDATE TOM PRENDERGAST** If you take August as the start of the bee year our first event was our honey show. Congrats to all who participated in the show. Mary, Eamon and family were there to greet all participants, printing those extra tickets and organising their helpers. Overall the show was a great success even if the numbers were down due to a lower yield for some areas. Our lectures before Christmas were down in attendance. AGM had the usual number of faithful followers. Dennis Ryan vacated the chair after three years. We would like to thank Dennis for all his work during his term. Our new chairman is Tom Roche. Martin Nolan is our Treasurer and is always anxious to hear from past members wishing to re-join. It is in everyone's interest to join before the start of the calendar year. The FIBKA year runs from January to December so if you do not pay your subscription until now you still have to give the full amount and you just missed out on four months of insurance and An Beachaire. The fact that you are reading this article means you are a paid-up member. We are not posting copies to non-members. Walter Jones is our secretary, Walter looks after the text alert system. He informs all by text and email, if you are missing out on either and want to be included send your details to Walter, phone 089 462 8062 or email southtipbees@gmail.com. Apart from the officers we have a full committee, some serving for years and we always try to elect at least one new member every year. This year newbie is Erika Reeves. From the committee, sub committees are elected to look after various events. We have a honey show committee and an apiary committee.

Our lecturers are always in demand, all treading the four corners of Ireland spreading the bee gospel according to Dennis, Irene, Tom, Redmond, Aoife and Michael. I'm sure there's great satisfaction in giving a lecture but it is also a fantastic opportunity to promote our club.

Of course, it's not all work. We do occasionally organise a social occasion. We had our honey show dinner after the judging and as usual we had our early season night out in January. Both were very enjoyable nights.

By the time you receive this edition our last lecture for the year will be about to start and then followed on quickly with the outdoor demos. Finally did you hear the latest we are now on FACEBOOK check out South Tipperary Beekeepers' Association

### DRONE GENETICS MARK HEARNE

I'm sure ye all know that drones have only one set of chromosomes a fact known as haploid. Queens and workers who possess two sets of chromosomes are diploid. Due to the fact that queens possess the two sets of chromosomes it is a common belief that a queen can only produce two genetically different types of drones. This is not true and each drone can be genetically different in many ways from each of his brothers.

During the reduction process of the diploid nucleus to that of a haploid nucleus the 32 chromosomes are firstly doubled to 64 and later separated into 4 nuclei of 16 chromosomes each. While these changes are taking place small sections of chromosomes break off and are exchanged with those of the corresponding chromosomes at many different positions. This random exchange happens at about 20 times the rate it happens in humans. As a result of this the genetic combination in the nucleus of every egg differs from the next, the queen produces drones that differ genetically in several ways. However, all the sperm produced by a drone are identical so up to 10 million sperm are identical. The net result of this is the production of super sisters.

In the human family we have full sisters. Mummy produces an egg and Daddy fertilises it with a sperm. No two sperms are the same so each daughter has its own unique genetic material from both parents. In the bee world the queen lays two eggs both will be full sisters from the queen's side but if both are fertilised by sperm from the same drone both will get identical genetic material from the drone. Therefore the two workers will be full sisters from the queen's side but will get identical from the drone's side. This gives then a closer relationship and are therefore called super sisters.

### HOW IS YOUR MEAD BREWING? IRENE POWER

Last year we had an introductory talk from Redmond Williams on Mead making. Several of the audience committed to entering a few bottles of mead in our honey show. Redmond kindly offered to order the necessary equipment for them. A few others have also got their own kits and are happily brewing the golden liquid. Our objective is to have a good number of entries in this class and we are relying on all those who got the kits to support the honey show in September.

Mead is simply produced by mixing honey to water adding a few other chemicals and then a yeast which reacts with the sugars in the honey which produces alcohol and a Carbon Dioxide gas. It's as simple as that apart from a few tricks and best practices that need to be observed. Mead can be either sweet or dry. In dry mead all the sugars are used by the yeasts and therefore there is no sweet taste from the finished product. In the sweet mead there is some unfermented sugar remaining and this gives the mead a sweet taste.

Raw honey contains many wild yeasts which will grow and ferment which I'm sure we have all experienced at some stage. The problem with wild yeasts is that they can leave unpleasant flavours and aromas. Another problem with these yeasts is that they are not very alcohol tolerant and therefore only produce low concentrations. The most important criteria for successful mead making is sterilisation of all equipment and the avoidance of any cross contamination of the mixture as it ferments.

All details of Redmond's lesson are on our Fact sheet "Mead making". I'm not saying it's simple but if you don't start you will never make a glass of mead. A few books recommended on the fact sheet are:

The Complete MEAD MAKER by Ken Schramm. A very good book especially if you are really interested in the chemistry of Mead making. We have this book in our STBA LIBRARY.

MEAD Making, Exhibiting & Judging by Harry Riches This is definitely the book for the beginner who just wants the basics, with the prospects of a card or two at the honey show. Who knows maybe it will be good enough to impress our judges and get first prize.

Both books are filled with several variations of different Meads some with herbs and others with fruit. I just cannot wait for the summer fruits to ripen and then have honey red currant mead. I might try the black currants and the gooseberries also.

### APIARY NEWS

Last year was the end of our three-year plan. Well done and thanks to our apiary committee for all their input. I think we achieved a lot and now have an apiary we can be proud of. We have a large selection of hives, nuc boxes, supers and poly nucs. We are well equipped. This year we hope to build on what we have. We will not be investing in any large amount of equipment. The gardens need a little rearranging, the sheds need painting. We have a few shelves to put up and are going to build a frame holder to keep them in perfect condition ready to go into the hives.

The main function of the apiary is the education of our young beekeepers and we should always have that as our top priority, next is the supply of nucs for those beginners and finally produce a crop of honey. Of course the apiary is not exempt from losses and no doubt we will have some. Hopefully we will be able to satisfy our beginners with overwintered nucs.

Last year we did try to organise teams but that failed for various reasons, the weather, people not turning up every week. Not to worry nothing ventured nothing gained or so my mother says. This year I have a new plan and all will be revealed at the outdoor demos. Our first night is reserved for this year's and last year's beginners. After that all are welcome.

### WORKER BEE STAGES.... List day number for each stage ?

**WHATS IN FLOWER RIGHT NOW** (end of February) Snowdrops, Crocus, Wild white and pink Cherry, Gorse, Viburnum, Forsythia (spotted it this morning) Red Currant (now who said you may open your hive when you see that shrub in bloom), Wallflowers and Tulips are out. Hazel tree is in full bloom. Spotted one Dandelion. There are a few flowers appearing in the Rape Seed. In the garden Mahonia, winter heathers, Japanese quince and Kerria Japonica are all appearing. There are plenty of plants out there now just when the bees need them. Have a look at the hive entrances and watch the different pollen going in.

**STBA Nucs for Sale.** We hope to have a number of Nucs for sale. First come first choice. Email tom@southtipbees.com

Remember we have a large selection of books available in our Library. Our Librarian is Tom Hayden

**Beginners Course** will be held in LIT Clonmel bypass. Two Saturdays starting on the 8<sup>th</sup> April and 22<sup>nd</sup> April. All are welcome spread the word

**Varroa Count** We would like to hear from beekeepers who are willing to check their hives for varroa drop down. Assess one hive or more if you like one week every month. If you are interested let us know by email southtipbees@gmail.com

