Bee Talk

Newsletter of The Blackburn and East Lancashire Branch of
The Lancashire & North West Beekeepers Association
http://homepage.ntlworld.com/alan.huxley
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What's in this issue of Bee Talk

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Editorial

SEPTEMBER 2006

THANKS TO THE MEMBERS

This issue of Bee Talk seems to be bright and breezy and it is due in a great degree to the contributions from the membership, no less than four articles from our own member ship. “Good on yer” keep them coming. The more input we get from members the newsier it gets, and all the better for that.

THE HONEY’S IN

We will have removed our honey crop, extracted, bottled and stored it by the time you receive this edition of Bee Talk. So that means the end of another beekeeping season. Better still it’s the beginning of a new beekeeping season.

WINTER DRAWS ON!

So now is the time to get the bees ready for Winter. Get the hives water tight, unite the stocks that are too small to get through

the Winter, feed were necessary in another week or two so that the bees have 20 or 30 lbs of good stores. How about the frames that need attention and that extra brood box for swarms next year. It’s not too soon to get these jobs done. Turn round twice and it will be March 2007, well it feels like that to me, may be it’s just old age showing.

NEIGHBOURS

By the by let’s not forget the dreaded varroa. Now is the time to treat against the beasts if they are in your hives. Do a daily drop test to see if treatment is necessary. If you don’t know what I am on about for goodness sake ask. It is most important not just to you, but to the rest of the beekeepers around you that you don’t have an infestation at this time of year. Otherwise there is a fair chance you and your neighbours won’t have any bees come spring time.

THEY WENT ON STRIKE

It has been a different season this year, what with that very hot July. During the last week in July my bees stopped working all together, I took it to be because of the dry conditions stopping the flowers from yielding nectar, even the Balsam with their feet almost in the river bed. I thought I was going to get a poor honey crop what with a poor start, only smallish stocks and then the bees stopped working at the main time of the year. However I seem to have done better than I anticipated. I’m not the only one most I have spoken to report a good honey crop. Hope you got one too.

ROYAL BANQUET

There is an item on page19 “Food Fit For a Queen”. It’s a new pollen substitute manufactured in Canada. Sounds to be good stuff, I’m not sure we need pollen substitute in this part of the world but I’d like to give it a try. Unfortunately I can only find the address of the manufacturers in Canada, it doesn’t look as though it is sold in the UK. If you should come across a sales outlet please let me know.

BARBECUE

I hope I shall see you at the Annual Barbecue on September 17th. A few people make a lot of effort - please make it worth their while and turn up.

Ed

DOUG JONES, SEASONAL BEE INSPECTOR

At a meeting held on May 2006 with Doug Jones Seasonal Bee Inspector, we learned about a variation of the shook swarm method, called "The Bailey Comb Change Method" that does not result in sacrificing the brood.

SMALL HIVE BEETLE

However before describing the method, Doug talked about the present difficulties of varroa control and the worries of more pests likely to arrive in this country.

For example, the small hive beetle eats everything in the hive, and can fly about five miles. As a result the Bee Inspectors are concentrating their inspections around air and sea ports in the belief that the beetle may be hidden in imports of food or other similar products.

VARROA

In the case of varroa, Doug suggested that it is generally believed that the pyrethroid based strips will just not work in the next few years and other methods of control will be needed. He said that the open mesh floors are a great benefit but the sliders (inserts) must be used regularly to check on the varroa drop. Treatments such as oxalic acid and Apiguard should be used to try and reduce the risk of resistance. Thymol based treatments need a minimum of 15ºC and therefore it is probably better to close the open mesh floor for 2 weeks whilst the treatment is being used, to be effective.

THE BAILEY METHOD

First the queen is placed in a new box with 10 frames of new foundation. The old hive is left on its stand with a blocked entrance.

1. Put the queen excluder on
2. Place an eke with a notch cut out of the bottom to provide a entrance above the queen excluder
3. Place the new hive above the eke

After 3 weeks all the brood in the old hive will have hatched out and gone to join the queen in the top box. The top box should have all new drawn comb and the old comb in the lower box can be removed.

The colony may also believe that it has swarmed as it has had to draw out all the new frames to enable the queen to lay.

Doug also suggested that if you cannot find the queen move the colony to a distant part of the apiary and place a box and frames temporarily on the original stand.

The flying bees should return to the old site leaving only the young bees behind, being much fewer numbers the Queen should be easier to find. The hive can then be moved back to its stand.

Helen Howarth

THE OLD ONES ARE THE BEST

A beekeeper was feeling ill and very stressed. He and his wife went to see the doctor. The doctor examined the beekeeper for some time and then asked to see the man's wife, alone.

"Listen," said the doctor, "Your husband is way over-worked. He worries about everything too much. If some big changes aren't made, he will be dead in less than six months."

The wife asked what she should do and the doctor replied, "Well, I know you've got a great career, but you'll have to quit your job, stay home with the kids, cook lots of vegetables, keep the house spotless, and give your husband a kiss every time you see him..."

On the way home, the beekeeper asked his wife what the doctor had talked to her about. The wife looked at her husband and said, "I'm sorry dear, but you're not going to make it."

HE 'NOSE' YOU KNOW!.

Some years ago, Dr. N. E. McIndoo, of the US Department of Agriculture, reported that drones, queens, and workers all have differentiating odours. He declared that after

a few months practice he was able himself to distinguish the casts apart merely by smelling the bees. It is his theory that each individual bee within the hive has its own particular odour which can be detected by the amazingly acute smelling organs of the other inmates.

It is interesting to note that the various casts differ in the complexity of the make-up of their antennae. A queen, which rarely leaves the hive, may have only 2000 sense plates on her two antennae. A worker bee, spending much of its time abroad in the search for nectar, may have as many as 6000; while the drone, which seems to find its mate partly by scent, may have 30,000, fully five times the maximum number for the worker.

When the bee stings, the stinger, poison sac and several others parts of the bee's anatomy are torn from the bee's body. It soon dies. The action of the sting takes place almost instantaneously. The sting has barbs on it, and if it is not immediately removed, the reflex action of the muscles attached to the sting drive it deeper and deeper into the skin. This gives more time for the discharge of poison from the poison sac. The pain from the sting is increased by the discharge of toxin.

CITY BEE - - COUNTRY BEE

This French report will give some cheer to all those city beekeepers in the UK

Bees reared in cities are healthier and more productive than their country cousins, a study by French beekeepers' association Unaf has found.

Urban bees enjoy higher temperatures and a wider variety of plant life for pollination, while avoiding ill-effects of pesticides, the study said. At the same time they can filter out city pollution such as exhaust fumes. The study prompted Unaf to start a campaign promoting beekeeping in urban parks, on balconies and on roofs.

Beekeepers say urban bees' productivity can be up to four times that of their rural counterparts. "In town, the bees go out more," apiarist Jean Paucton told AFP news agency. Another beekeeper said urban hives had maintained a steady mortality rate while in the countryside many bees were dying.

The Union of French Apiarists (Unaf) is campaigning against pesticides, which it says are destroying the industry. It has expressed particular concern about Gaucho and Regent, two banned chemicals, the effects of which are still felt in rural areas. "These molecules are neurotoxins which disorientate the bee and make it impossible for it to find the hive again," Unaf president Henri Clement told AFP.

But others have blamed diversification for the decline, saying attempts by beekeepers to increase production by importing unadapted foreign varieties of bee have backfired.

HONEY AND WOUNDS

We have long heard that honey is beneficial in wound treatment, and even in the early years of the last century and right back to the ancient Egyptians, anecdotal evidence and practical use showed us just how valuable honey is as a medicinal substance. More recently, clinical trials and research institutions have shown us that the anecdotal evidence points towards the truth and now, a review article summarises the scientific data.

The review article appeared in the most recent issue of SAGE Publications' International Journal of Lower Extremity Wounds. Scientists performed 22 trials involving 2,062 patients treated with honey, as well as an additional 16 trials that were performed on experimental animals.

Honey was found to be beneficial as a wound dressing in the following ways: honey through its antibacterial quality not only rapidly clears existing infection, it protects wounds from additional infection, debrides wounds and removes malodour, reduces oedema, minimizes scarring and stimulates growth of granulation and epithelial tissues to speed healing.

The review article was written by Dr. P.C.Molan of New Zealand's University Waikato. He noted that, although the many randomised controlled clinical trials strongly support the use of honey in wound care, the trials may not have been double-blind, a form of testing difficult to achieve because honey is a very recognizable substance. Molan concludes, "The barrier to using honey that has existed for many clinicians who have been constrained to using only licensed products has been removed now that honey is available in the form of various sterile products licensed for use in wound care. Clinicians should check the evidence that exists to support the use of honey."

The article "The Evidence Supporting the Use of Honey as a Wound Dressing" and further information about the Journal can be found on The International Journal of Lower Extremity Wounds' web site at http://ijlew.sagepub.com

COFFEE BREAK QUIZ

JUST HOW MUCH DO YOU KNOW?

I have put together a list of ten questions that should take no longer than 10 minutes to complete.

Right here we go.

1. How many bee dances have been recognised and documented? 1,3,5, 7,9,11.
2. What is the name of the enzyme that is added to the nectar by the bee on her flight hack to the hive?
3. Drones develop from unfertilised eggs. What is this process called?
4. "Queens can be raised from worker laid eggs". From which race of honeybee is this true?
5. What is the type of organism that causes sac brood?
6. Which part of the honeybee does the acarine mite affect?
7. What is trophallaxis?
8. Which food do bees use to provide the protein to produce brood food?
9. During which part of the year would you expect the population of brood to increase at a faster rate than the population of bees?
10. A queen raised in 2009 will be marked with what colour?

Answers; see Page 19

By Mo Vaughan Courtesy BEES.

(I know I'm not a beekeeper but I have been helping edit Beetalk since 1999 and I didn't get one answer. Go on, be honest, how many did you get?) ***Asst. Ed.***

DR. KERR AND THE KILLER BEE *ANOTHER POINT OF VIEW (ED)*

Dr. Warwick Kerr, Brazilian scientist and social activist, was much maligned by his native government because of his outspoken stance against the military dictatorship then in power in Brazil.

Consequently, Kerr's work at improving the honey bee by importing Africanized stock was at first ridiculed and criticised within his country, and that tone was irresponsibly picked up by North American journalists because the thought of "Killer Bees" invading America sold papers.

Since the establishment of a democratic government, Dr. Kerr's work has finally been appreciated in his native land.

The following is from the Tucson Weekly.

ATTACK OF THE KILLER BEES,

"Killer Bees," known in scientific parlance as Apis mellifera scutellata, are a variety of honeybee first domesticated in central South Africa. Although their hives are small, they are said to be more productive than the strains of European honeybees to which they are related. Proponents of Apis mellifera scutellata say the African bees sets to work an hour earlier than their cousins, are more disease-resistant, and yield more and, by many accounts, better honey.

For those reasons, in 1956 the Brazilian government commissioned Warwick Kerr, to introduce the African bees to South America. At the time Brazil ranked 47th among the world's honey-producing countries With the arrival of the new variety, that country's ranking quickly rose to seventh.

Kerr lost favor in 1964, when he protested publicly against the then-military government's excesses, and he spent time in jail for exercising his conscience.

The Brazilian government was not pleased by Kerr's protests. To cast doubt on his credentials as a scientist, it portrayed him in court as a kind of Frankenstein doctor bent on mayhem and the eventual destruction of his adopted country. The lurid newspaper stories that followed touched off a panic, proclaiming that Kerr had been training his imported Africans to be "killer bees," attacking humans on command. Thanks to the diligence of the military police, the government went on to trumpet, "This foreign madman was stopped before he could put his evil drones to work".

Thus the myth of the killer bee was born.

African bees are no more venomous than their European cousins. Neither do they go out of their way to look for targets, human or otherwise. The difference lies in the African bees' defensiveness; resistant to most pests, they have natural enemies only in predators, and, survival of the fittest being what it is, the African bees have long since evolved to resist predation with extreme prejudice. When their colonies are attacked or approached, they tend to swarm and sting with abandon. Since their arrival in the Americas, the African purebreds have intermingled with European varieties of honeybee, giving birth to a hybrid, the "Africanized bee." It is these small, graceful creatures that have been crossing into the American Southwest of late, and giving so many people fits.

To call them "killer bees" is clearly wrong; the once more common German bee is more aggressive. And because Western culture tends to equate anything African with savagery, "Africanized bees" isn't much help. In Latin America the creatures are called abejas bravas, "brave bees," a name unlikely to catch on with any but the savviest gringos. Thanks to a successful lobbying effort by the Brazilian government, the formerly common name "Brazilian bees" has been quashed. Africanized bees, then, is what we'll have to make do with--with no connotations, positive or negative.

LETTER FROM BRIDGET

It's July 14th 2006 and yesterday another swarm arrived. These French bees don't behave the way Lancashire ones do.

I have just had a truly great week at the National Bee Unit (NBU) at the Central Science Laboratory (CSL) in York, practising bee handling, queen rearing and microscopy.

I was away for 10 days in all, so the first thing I did was go through my bees. With clipped and marked queens, you are unlikely to lose bees in a swarm as the queen can't fly far, and although you may lose that queen when they try, the bees will come back until a virgin emerges. The oldest larva they could choose would be 3 days old, so there could be a queen emerging at the earliest 10 days after your last inspection. 16 days (time for a queen to emerge from a newly-laid egg) minus 6 days (3-day-old larva was an egg for 3 days before that), i.e. 16-6= 10 days…..

As soon as I had left for the airport, John tells me another swarm arrived in my spare supers. I had carelessly left a box slightly out of place. They were well settled in by the time I got back, so I spent some time sorting them out, adding a brood box and queen excluder so that I can get the brood all in one place. I noticed there were a lot of bees sniffing around, and commented to John that I should move the spares further away from the house in case any more swarms arrive. Prophetic!.

By the time I'd finished, it was after 6pm, everything was ship-shape and spare equipment tidy and bee-tight. I'd just taken off my bee suit, with relief as it was over 30 degrees yesterday – and started a cuppa when John said he had to turn off the pump to the well. I said I'd do it as the bees were still a bit disturbed and he gets a bad reaction to stings.

I went outside – to see bees everywhere. It had to be a swarm arriving and not leaving as I had been through all my bees and none were in swarm mode (young queens, plenty of space etc.) so where were they going

I realised they were looking for the gap in the supers, which no longer existed because I'd tidied it all up an hour before!!

Bet that flummoxed the scouts. Can you imagine the bee conversations?

""I tell you it was just here when I looked this morning"…. "You never were any good at navigating"…."That Ethel can't read a map for toffee"

So I hauled on my sweaty bee suit and opened a gap in the supers, and in they all went. Then it was necessary to make up some new brood frames as I'd just used up my spares.

This morning at crack of dawn, not wanting more colonies near the house, I put in an entrance block and moved the swarm before any of the bees had time to orientate to the new site. This had to be done sharpish – I tried with an earlier swarm and it was too late after just a couple of hours. It's a good idea to put a crown board under a roof over spares. I couldn't get my arms around a floor, 2 supers and a roof so I took off the roof. No crown board. Lots of bees in the roof! Quickly I slammed on a crown board and left the roof off upside down on the ground, and when I came back for it, they hadn't moved so I was able to put it in front of the hive in its new spot and they all fanned themselves in through the entrance.

I shall leave them alone now, except for inserting a Bayvarol strip for 24 hours, and then find, clip and mark the queen and investigate the temper. Voila!

I brought 1 nuc with me last October, and I now have 7 colonies – 5 of them prime swarms which liked my boxes!!!!

There is a huge field of sunflowers in full bloom across the road, which the bees are working heavily, and it is producing a startling yellow wax. I'm looking forward to tasting my first French honey.

Best wishes to all,

Bridget

APIS MELLIFERA MELLIFERA

Over thousands of years the native bee of these islands has been shaped by the environment to survive in our conditions. Elsewhere in Europe other sub-species were also shaped by similar forces and so we have the Italian bee Apis mellifera ligustica, the Carniolan bee Apis mellifera carnica, and the Caucasian bee, Apis mellifera caucasia.

These distinct subspecies do well in the conditions of their origin and obviously will do well in other parts of the world ***where similar conditions obtain.***

LONE FURROW

A lot of breeding work has been done to improve the Italian bee and the Carniolan bee, whereas no wide scale breeding work has been done on our native bee here in Britain, although some dedicated beekeepers have ploughed a lone furrow doing sterling work in the selection and breeding of the native bee.

Selective breeding of Apis m.m. has also been carried out to a limited extent in other parts of Northern Europe on the subspecies, for our bee is also the native bee of Northern Europe north of the Pyrenees and the Alps right across to the Urals.

THE PROBLEM WITH HYBRIDS

One could argue that it makes sense to capitalise on the breeding work of the Italian and Carniolan bees and import these here. The problem with this thinking is that to do so creates hybrids, that is crosses between sub-species, and this often results in a deterioration in temper, hence the well protected beekeepers we see today compared to yesteryear.

BREEDING

Those of us that have settled on the native bee have found it has much to offer, but there are many obstacles in the way of breeding pure native bees here in Britain. The greatest difficulty is getting queens mated ***within*** strain, in other words mating with drones of the same sub-species.

CONTROL

All the work on selection can be in vain unless some degree of control is exercised over the drone population in the area. One way of achieving this is to use an isolated or semi isolated mating site, and it is more likely that this can be done by a group of beekeepers rather than a single individual.

The biggest stumbling blocks to making progress in such projects are beekeepers, for it requires cooperation and agreement to work for set goals.

EXTREMELY VICIOUS

There is a diversity of opinion among beekeepers as to the type of sub-species of bee they want to use. Some just want a ready made docile bee and go for the Carniolan bee, renowned for its docility, ignoring the consequences of doing so, for the cross between the Carniolan and the native bee can be extremely vicious in the second and third generation.

We live in a democratic society where, choosing the bee we want to use is a beekeeper's own decision. But surely there is some sort of obligation to the general public to avoid producing vicious bees, and also to conserve a native subspecies that can serve us well if we are prepared to give it a chance?

THE WAY FORWARD

Assuming it is intended to carry out a breeding programme for the native bee of Great Briton what is the best way forward?

The formation of breeding groups of two or more beekeepers who would select suitable breeding colonies, raise queens from these and get them mated at suitable mating sites. Nowadays there are many aids to assist bee breeders, these include computer programs for morphometry, record keeping, and breeding selection. Bee breeding can be very satisfying, results are quickly seen when suitable mating sites are used. Try it and see!

Adapted from an article in BIBBA publication Summer 2006 by Albert Knight.

MAY TIME

Spring really sprang with a few terrific thunder storms. One right over -head in the early hours of May 12th, it brought a cloud burst which flooded out just about

every one locally. I had to rush for buckets and bowls as water powered through the bedroom ceiling, having made its way down the chimney first. Ugh!

TIDAL WAVE

Not good when it's right above the wardrobe! And the lights had gone out of course as the meters switch off when there's a surge of electricity, needless to say I hastened to disconnect every thing. Fortunately I had only to replace a few light bulbs, do some moping up and wash some extra clothes, where as a near neighbour who uses a pipe to a nearby stream for the washroom, opened the door in the morning to let out a small tidal wave.

HORSE SENSE

This very unsettled weather affected the bees of course and resulted in swarms coming out and going back again for a few days. Hard to keep track when they are like that and I know I lost two swarms for sure. The first was circling round the house about 10 am in the morning as I came back from wood clearing.

I then realised what the horse "Lcaro" had been on about (I don't speak Bardigiano yet). He had rushed up to the gate on seeing me and proceeded to prance and dance and swishing his tail, shaking his head and pointing his nose in the air.

A really good mime if I hadn't been so stupid as to think he'd just gone daft. Of course I should have realised that a swarm had probably landed in the old apple tree under which "Lcaro" has his snoozes . Next time I'll take more notice of his antics. Anyway said swarm made off at a rate of Knots in the direction of the river Darbora. I followed it for a while but knew it was senseless once they had set off like that. In the end I managed to hive eleven swarms and so far this year I haven't united any, mainly because they were all fairly large swarms and I also wanted to make the numbers up after the losses last Winter. The storms and swarms continued throughout May.

JUNE

found me still sorting out the debris from the Winter. I still had a lot of brood frames full of honey to sort out. It had previously been to cold to extract them, but by placing them in the uncapping bin which I had put in a sunny corner I was able to warm them up enough to extract. All the frames that had just brood in I burnt to be on the safe side and eliminate any risk of disease. The bees by this time seemed to have settled down and were fetching back plenty of nectar from meadow flowers.

Having lots of spare supers I put extra ones on most hives, even on the swarms, as you never know, plus it gives them more air space as the temperature goes up.

MAKING HAY

Good weather for hay-making but not so

good for the bees, when all the meadows are cut. This year the white clover and millelot (yellow type mainly) seem to have been great favourites with the bees. As the month went on the temperatures soared into the high 80ºf with no rain to speak of, so every thing began to suffer. The bees started to complain at night hanging off the entrances like beards.

JULY

the temperature continues to go up! and still no rain. Not good for anything, a lot of trees and fields turning brown and yellow. The alfalfa (herb medica) that comes after the first cut of hay is rather thin and sparse and not producing a lot of nectar for the bees. Some years the bees get a good crop from this. The last week in July I decided to take some supers off as August is a good month for selling honey. There are the holiday makers and the second home owners about.

YELLOW HONEY

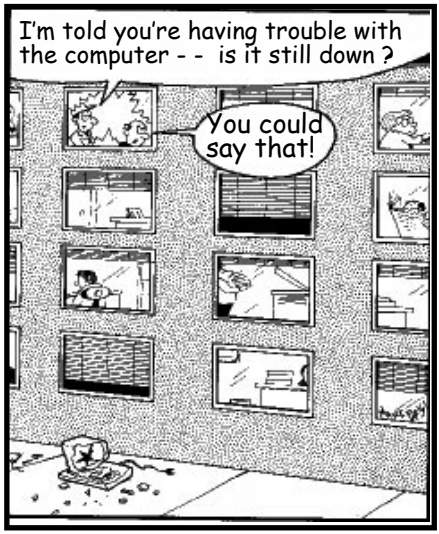
The honey this year is a deep yellow. Very different from last year. The weather has become unsettled again with storms in the afternoons but at last some very welcome rain. One of the most pleasing happenings so far this summer has been the hatching out of five young swallows in the stalla. First time for many years. They say “one swallow does not a Summer make” But five young swallows has certainly made my Summer!

Hoping you are all having a good season with the bees. Best wishes
tante Salute. Jeni.

HOW DO THEY DO THAT?

Just in case anybody might be interested, we thought we’d give you an idea of how BeeTalk is produced.

Bill tends to find the serious articles whilst Arthur fills in with the much more simple bits. We both have Apple Mac computers and bits and pieces are assembled on both machines but usually the final copy is produced on Arthur’s machine.



When the articles are assembled it’s time to fit in the illustrations, cartoons and headings. This is the most time consuming part of the process - trying to make sure that the layout is as interesting as possible with the slabs of text broken up with the afore mentioned pictures and headings.

In order to keep things tidy and to use the available space effectively, we have to do a fair amount of editing of the articles. We just hope that our contributors aren’t offended when they find lumps of their beautiful prose missing..

Considering we are couple of irascible old blighters, we don’t fall out - - - - well not more than five or six times each issue. It’s usually when Arthur changes his computer; or the software; or the printer or even just his mind!

By the way, we really do appreciate your feedback - - good or bad!

BEE - NOTICES

SCHEDULE OF VISITS TO HOLDEN CLOUGH DURING 2006

There are no more visits in 2006 but watch this space for plans for next year

PLEASE RING ONE OF THE APIARY MANAGERS IF YOU WOULD LIKE TO KNOW MORE ABOUT HOLDEN CLOUGH. IT IS AN EXCITING AND WORTH WHILE PROJECT

APIARY MANAGERS

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MEMBERS SERVICES

Bayvoral £3. per pack of 4 strips
Thymol crystals £2.20 per100g
Apiguard £3,50 Per Treatment

Beekeepers quarterly Annual subscription from the publisher is £24 - from our treasurer only £16.00 with a slight profit to our society.
Talk to Ken Gaiger phone. 01282 778887.
Library. There is an extensive range of bee books etc. that may be borrowed.
Our librarian, Brian Jackson brings some with him to our meetings. Contact him on 01535 634503 for special requests.

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 & NorthWest Beekeepers Association' nor of our local Branch of this association 'The Blackburn & East Lancashire Branch'

NEW SUBSCRIPTION RATES

Subscriptions for the 2007 season are due in November. The new full membership rate will be £15 and £2 for each additional family member. Associate membership is £5.00.
Prompt payment would be a big help and reduce the number of reminders.
The rates for Bee Disease Insurance (B.D.I.) Are:-
First 3 hives are covered by subscription

up to 5 hives	£2,00 extra
up to 10 hives	£5.25 extra
up to 15 hives	£7 75 extra
up to 20 hives	£9.50 extra
up to 25 hives	£11.10 extra
Above 25 hives	See Treasurer

Please forward your subscriptions whilst its fresh in your mind, it will save me a lot of trouble. Also early renewal is necessary to assure you have the public liability (third party) insurance which is included in your subscription
Annual subscriptions to THE BEEKEEPER'S QUARTERLY are due so payment of £16 would be appreciated. CHEQUES SHOULD BE MADE PAYABLE TO L. & N.W.B.K.A. AND SENT TO KEN GAIGER, 2 HIGHAM ROAD, PADIHAM, BURNLEY BB12 9AP
Telephone 01282 778887

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BEE - NOTICES

INFORMATION ABOUT 'BEETALK'
Planned Publication Dates: March 2006, June 2006, September 2006, December 2006
LATEST TIME FOR COPY - 2 WEEKS BEFORE THE MONTH OF PUBLICATION.
Please contact Bill Ainsworth, 296 Scotland Road Nelson BB9 7YS Telephone 01282 614015 .
Good, crisp photographs or line drawings are always welcome

NEXT THREE MEETINGS

SUN 17TH SEPTEMBER 2 30 PM ANNUAL BARBECUE

At Mr. & Mrs. R Moyle, Twiston, Clitheroe It's always "a right good do" shame it is not better attended I know it is a bit difficult to find but it is well worth it. If you get lost Angela Moyle's phone number Is 01200 445398 We are again asking for raffle prizes!!

"Please can you ask people to contact me for the BBQ so that I can get the grub for the correct number. Thanks, John Zamorski Phone 01200 427661"

SUN 8TH OCTOBER 2PM HONEY SHOW

(EXHIBITS CAN BE ENTERED FROM 1PM)

At Castle Cement, Clitheroe. Caroline Coughline is Show Scecretary. Her phone number is 07702824920 and she will be happy to answer any questions you may have. John Zamorski is helping and he can be contacted on 01200 427661. YOU CAN MAKE THE SHOW A SUCCESS BY ENTERING. OK, YOU MAY NOT WIN BUT YOUR ENTRY ADDS TO THE PRESTIGE OF THE WHOLE SHOW

WED 8TH NOVEMBER 7PM

The Annual General Meeting. At Ken Gaiger's (2, Higham Road, Padiham 01282 778887) It is important that you try to attend the AGM. With your active participation we can continue to have a busy and effective branch but we do need your help and involvement. The members who do have jobs within the branch really do need help - it isn't onerous but takes time and a bit of job sharing would be a big help

LETTER FROM THE HON TREASURER.

As an alternative to Bayvorol/Apistan I have purchased some Apiguard to treat for varroa. The cost per treatment for one hive will be £3.50

Apigaurd is a thymol based product. The treatment consists of two foil trays filled with a thymol impregnated gel. Each try contains 50g of gel which is equivalent to 12.5g of thymol.

Apiguard is best applied in late Summer after the supers have been removed. (Similar timing as Apistan /Bayvorol. However it can be used in Spring time, provided that the temperature is above 15ºc. note a maximum of only two treatments per year should be applied.

To apply, pull back the foil lid on the first tray and place it on top of the brood frames over the brood nest, gel side uppermost. Ensure a minimum clearance of a bee space exists above the tray, use an eke or empty super. After two weeks, replace with the second tray and leave for a further two weeks. When you have removed the second tray the treatment is complete. ***Ken Gaiger.***

MICHAEL COSTELLO *IN ITALY*

Everything about our move over here has worked out far better than we expected or should I say feared. We lived in our caravan for almost a year while we renovated the old house that we had bought.

Our aim is to be as self sufficient and environmentally friendly as possible. So we grow as much fruit and veg. as possible and keep hens and ducks for eggs and rabbits for meat (apologies to all vegetarian readers) The surrounding hillsides are woodlands full of seasonal fruit, mushrooms and nuts.

The neighbours have been brilliant although many of them think we are mad to come to this out of the way place. They have helped us in all sorts of ways from getting supplies in for us when we were snowed in, ploughing our land and supplying us with tons of manure for the veg. plot.

Our house is quite large with a couple of spare bedrooms and a bathroom, so we have put them to use as accommodation to help with the expenses.

What with that and lots of relatives coming to see us, I didn't get round to any beekeeping last year. Jeni had a bad year so I couldn't get any swarms from her, and it wasn't until May this year that I finally got a couple of nucs and having found a couple of swarms I now have four hives on the go.

In my opinion, beekeeping here is not at all like in U.K. as it seems to be more centred on the commercial side of it than the hobbyist. If you want to sell bees or their products, you have to subject yourself to some pretty strict regulations and controls. You can't just stick a sign up at your garden gate and sell your honey. Consequently the 'hobbyist' beekeepers keep only a few hives sufficient for their own needs.

I joined the local association and to date have been quite disappointed because of the lack of communication within it. It definitely needs a Beetalk. However they do have a good anti-varroa programme organized using Apilife-var after the summer harvest and oxalic acid in late autumn with specific dates for everyone to do it all at the same time.

My hives are in a fairly open situation and it has been quite hot since mid June, averaging about 30 deg. during the day in the shade. Consequently the bees were overheating and were hanging out of the hives to cool down.

One lunchtime they took off and went into a nearby apple tree forming two distinct groups. I was fairly confident that they were not really swarming as I had been doing regular checks. There was a new queen and they had loads of space and foundation to go at.

So I decided to go into the hive to see what had happened, but before doing that lunch was ready. Now lunch (pranzo) in this part of Italy is a sacred ritual and is always taken between 12.00 and 12.30. with a good hour or two rest afterwards. I couldn't go against the years of tradition and open a beehive during the sacred hours which could have resulted in a neighbour being rudely awakened from his siesta by a bee sting so I joined the rest and had lunch.

Just as I was finishing pranzo there was a mighty roar from the apple tree and a black cloud took off and re-entered the hive which saved me the job of going into the hive. That only left me to keep them cool which I did with the aid of a hose pipe and then had a lie down in the hammock to keep an eye on them. Eee bah gum it's 'ard life 'ere!!!!

Mike and Linda.

A MOMENT IN SCIENCE

WHAT'S HAPLOID-DIPLOID !?

Investigates how male honeybees can be without fathers. The reason lies in what's called a haploid-diploid system of sex determination. Approximately one-fifth of the animal kingdom, including ants and wasps, use this system. What it boils down to is that males are the result of unfertilised eggs whereas females are born from fertilized eggs.

ADDED COMPLICATIONS

But in bees there is an added complication since there is a gene that determines whether a bee will be male or female. It's all in the numbers. Here's how it works. A scientist isolated a gene called CSD, or Complimentary Sex Determiner.

There are 19 different versions of this particular gene. It doesn't matter which one of these 19 versions a male inherits from his mother; he's going to be male because of the fact that he has only one of these CSD genes. Accordingly, a female becomes a female because she has two CSD genes, except for one catch. And that catch is a bee in the bonnet of bee breeders.

INBREEDING

Honeybee breeders often inbreed their bees in order to ensure desired traits. However, when bees are inbred it's possible for fertilized eggs to end up with two copies of the same version of the CSD gene. The result is that the fertilized eggs that would normally develop into workers or a new queen develop into sterilized males.

KILLERS

Worker bees sense these sterile males when they're still larvae, and they kill them. Before you know it your hive is riddled with pepper-pot brood. The good news is that now that scientists understand more about how sex is determined among honeybees they may discover solutions to this problem.

DEATH OF A DRONE

This short article is dedicated to all those brave males who literally gave their lives to the female of their species during (or shortly after) copulation (i.e. sexual intercourse).

BETTER TO HAVE LOVED . .

From an evolutionary perspective, the old adage, "It is better to have loved and lost than never to have loved at all," should now say "It is better to have loved and died than never to have loved at all."

Several years ago, while walking across a parking lot on the Palomar College campus, I noticed a dead honey bee lying on its back.

The bee was clearly larger than a typical worker bee, and had an elongate, cylindrical organ mass projecting from the tip of its abdomen. A botany student (and part time apiarist) suspected that the bee was a male honey bee (called a drone) because of its larger body size, lack of pollen-collecting baskets on its legs, and

THE DEAD DRONE

the phallus-like cylindrical projection from its rear end (which lacked the painful, needle-like stinger of typical worker bees that we have all experienced all too often).

OUCH !

Later we discovered that this unfortunate individual was indeed a male honey bee and the cylindrical projection was his penis apparatus (technically referred to as an endophallus), undoubtedly extended during his fatal mis-mating flight with a queen and normally left in the Queen's body.

PHEROMONES

by Janet Dowling FRES

The beehive is a world in which communication by chemical messaging is most important. (Pheromones rule.)

Pheromones operate over a range of time scales; some are long lasting, for example the queen pheromones used to keep the colony together, while others, such as the alarm pheromone, have an almost immediate but short acting effect. The chemicals are detected by the bees either by taste or by smell, or by a combination of both. The bees exchange food or lick each other to transmit some pheromones, and the bee antennae are vital for the detection of smells. The transmission of pheromones around inside the hive is surprisingly quick; a time period of half an hour is typically the time for full transmission around a colony- for example if the queen is removed.

Pheromones also differ in their persistence. Nasanov pheromones used to announce the location of a colony, or the alarm pheromone are typical short-lived chemicals that rapidly disappear once immediate production is stopped. Other pheromones, notably queen substance and brood pheromones are more long lived, since these are required for on-going activities in the colony.

Turning to specific pheromones, the trail marking or footprint pheromone is important to a colony. This is used to mark where bees have been - for example on water sources and syrup feeders. These are generally colony specific, but if they are picked up by robbers then they can be used against the colony by giving the robber an easy entry into a colony. Trail marking pheromones are probably the reason why non active clearer boards such as the Canadian clearers can become ineffective if left on too long. The bees leave a trail of footprint back up into the supers for other bees to follow.

The Nasanov pheromone appears to be a general, not colony specific scent, made up of seven or eight different substances, of which Citrol, Nerol and Geraniol are the more important, and these are used as the basis of 'Swarm Lure'. The reason for the success of this is that the Nasanov scent is used to generate 'come and join us' or 'here is the queen' messages. Scout bees rub their abdomens on the alighting board of a prospective new home for a swarm to create a homing beacon for the swarm to detect when it comes close to the new home. Old skep keepers used to rub lemon balm on the insides of their skeps to encourage swarms to move in. It is now realised that lemon balm contains citrol, and so acts as an artificial swarm lure. The old skep beekeepers did not know this, but they knew what worked! The main alarm pheromone is based on isopentyl acetate, and Icosol and 2heptanone are also used as alarm signals. On a muggy day beekeepers with a keen nose can detect the smell of isopentyl acetate (a banana-like smell) and use it as a cue to desist. Isopentyl acetate is produced in the worker bee sting chamber, and alerted guard bees can sometimes be seen with their stings partly protruding with a drop of alarm pheromone evaporating from the end. If no smoke is used the smell can drift into the colony. This rouses more bees to come on guard duty, and it also inhibits foraging bees from leaving the colony, thereby maintaining a larger fighting force for defence if required. This is a good reason for using smoke at the entrance as it makes the bees afraid, and the fear overcomes their aggressiveness, thereby demonstrating the advantages of getting your retaliation in first.

Heptanone is produced if there is a prolonged disturbance in the colony, and it is believed that this may be a factor in encouraging bees that 'follow' after a colony has been opened. It is also believed to be used on drones when they are due to be ejected from the colony- making them literally marked men. It may also be applied to larvae that have just been fed, inhibiting further feeding for a period while the chemical evaporates. Some alarm pheromone can also be produced by the queen bee if she is frightened, for example by strange workers. Not much is known about the chemicals involved but their effects are well recorded. Their effects can arouse the queen to fight an intruder- another queen for example. It will also provoke workers to attack a queen that is a stranger in the colony. Virgin queens do not appear to generate this alarm, which

may be why the direct introduction of 1 day old virgin queens into a queenless colony is possible. The presence of this queen alarm pheromone is one reason why direct introduction of mated queens is more difficult. If she is introduced in a cage alone then her hunger can overcome her fear, leading to more successful introduction. The queen also produces a chemical that can inhibit worker aggression, but the production of this declines as the queen ages. The existence of this substance may explain why aggressive colonies sometimes become calm immediately that they have a new queen, without having to wait for the aggressive workers to die off.

A very major pheromone is the group of chemicals known collectively as 'queen substance'. This has thirty or more individual constituents that fulfil many roles. The control of the development of worker bee ovaries, the production of new queens, brood rearing of workers and drones and the control of the collection rate of pollen. It also acts as a drone attractant on mating flights. Some of the chemicals are more volatile than others; the drone attractant is one of the more volatile.

A major source of the queen substance is the queen's mandibular glands, but the dorsal part of the abdomen is also a source of some constituents. 9-oxo 2 decanoic acid and 9 hydroxy 2 decanoic acids are two well understood components of queen substance. These together inhibit the construction of queen cells. However if there is not enough being received by workers either because of over crowding or excessive population then queen cell construction can commence followed by swarming. In principle these two chemicals should be the basis of a swarm inhibitor, but no practical product has ever been produced. These two substances are also produced by unsealed brood to some extent; this is the basis of re queening a colony with laying workers by the prior introduction of unsealed brood, after which a queen can be accepted. These two acids also attract workers to a queen in a swarm, and result in a stable cluster, which results in a loss of the bee memory of their former location. An unstable cluster does not remove this memory.

Bees cannot count eggs, so they cannot use this method of assessing the queen's performance. Instead they judge the queen by her production of queen substance and act accordingly. If they start to produce queen cells they usually construct them over a period of several days. How do they know when they have enough? Easy!- The queen pupae also produce queen substance, so the bees are inhibited from producing more as the level of queen substance starts to rise. When the queens are nearly ready to hatch in a colony that has swarmed, it is believed that the drive to thin the cell tip is that this increases the amount of queen substance being produced into the hive. If there is a sudden drop in queen substance caused by the loss of the queen, then the bee response is to produce emergency queen cells. If the drop off is more gradual as the queen ages, then fewer supercedure cells may be produced.

Queen substance may explain a number of other common phenomena. Why do swarms work so hard? One possible explanation may be that after the reduction in queen substance endured by the bees leading up to the swarm, they are now receiving a full dose, and this is why they work so well. Similarly this may also explain why small nucleus colonies work so well, with the smaller number of bees each receiving a fuller dose of queen substance.

There are also queen pheromones produced that affect drone production, because queen substance has an inhibitory effect. Early in the season when colonies are small, this prevents building of drone comb and rearing of drones. As the colony becomes more populous, the inhibitory effect is less because the workers get a smaller dose and drones are produced. When queens are failing they do not produce enough inhibitory pheromone. This explains why a queenless colony or one with a failing queen, retains its drones- both as brood and adults- at times when other colonies have thrown them out.

Drones themselves also produce pheromones, but virtually nothing is known about them.

DECISIONS, DECISIONS

One of the most fascinating traits of honeybees is the performance of the colony group as a seemingly single entity. An excellent example of this group decision-making is a swarm of honeybees locating a new home.

BEE PREPARED

Early studies by Lindauer in the 1950's showed that scout bees performing the waggle dance communicated the location of a possible new nest site. He also observed that initially scouts dance for different sites but shortly before lift-off, the scouts attain unanimity in their dances.

MARKING 1000 BEES !

Thomas Seeley at Cornell University revisited this decision-making process in 1999 by utilizing video recording techniques to construct a complete record of each scout bee's dance. With artificial swarms composed of 1,000 individually marked bees, he confirmed Lindauer's observations and extended them to show that only a small minority of dancers ever dance for more than one site. He further observed that dancers for non-chosen sites cease dancing, and this was the mechanism for consensus building among dancers. Finally, he made the discovery that almost half of the bees dancing for the chosen site cease dancing before completion of the decision-making process.

SMELLING OR DANCING

This is in contrast to the increase in waggle dances performed by nectar foragers. A puzzling question left unanswered was how does the swarm find its new home when the majority of bees in the swarm are uninformed of its whereabouts? In the January 2006 issue of Animal Behaviour, Seeley describes experiments that test if the uneducated bees follow their nose to the new home. It was hypothesized that pheromones released from the Nasanov glands of scout bees flying in front of the swarm point the way.

Two types of swarms were prepared: large ones (11,500 bees) for observing swarms in flight, and small ones (4,000 bees) to test the "smell" hypothesis. All of the bees in the small swarms (5 experimental swarms) had their Nasanov glands sealed with paint. The control swarm had paint applied to the thorax, leaving the Nasanov glands clear.

BLINDFOLD

Seeley also studied if the swarm merely follows the scouts visually, the vision hypothesis. They filmed the flights of normal swarms and those that had their Nasanov glands sealed. All swarms successfully reached their destination, ruling out the olfaction hypothesis. What they did photographically identify was fast flying bees or "streakers", most likely scout bees, that perhaps visually guided the uneducated bees to a new home. As Seeley points out, however, he will need to design "mini blindfolds" to test definitively the visual signal theory..

FIVE SPECIES

The honeybee, one of man's oldest insect friends, gives us honey, beeswax and most important of all, the fertilization of many of our crop bearing plants. The honeybee is a social insect living in large colonies of from 20,000 to 80,000 individuals. There are five species of honeybees known:

Apis mellifera (common honeybee);

Apis dorsata (giant honeybee);

Apis laboriosa (giant honeybee);

Apis cerana (Indian honeybee)

Apis florea (dwarf honeybee).

THE WAGGLE DANCE

GROWING UP

The tasks performed by worker bees change as they age. Upon emergence as an adult worker, her first job is that of a maid, cleaning the cells in which the queen lays eggs and where food is stored. As the worker ages, she spends less time cleaning and begins caring for young larvae. After several more days, as her wax secreting glands mature, she enters the construction business, building the cells on the comb.

JOINING THE GUARDS

Two weeks or more into her adult life the worker serves as a guard for a short period, protecting the entrance of the hive from would-be intruders such as mice, ants, and marauding bees.

OUT INTO THE WORLD

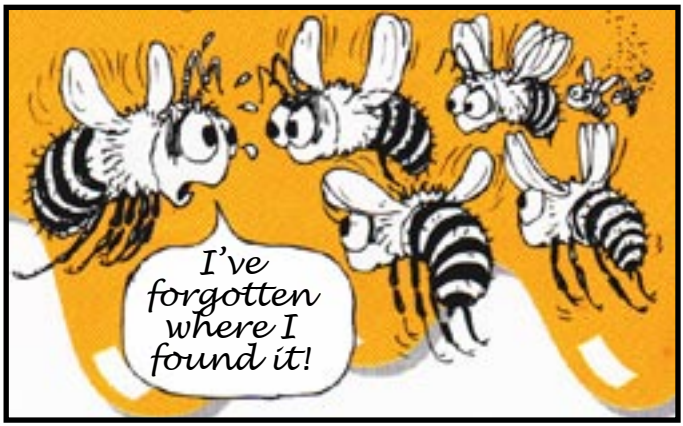
The last, and most hazardous job in the short life of the worker is that of a forager: a collector of nectar (from which they make honey, their source of energy) and pollen (their source of protein) from flowering plants. How a worker communicates the location of a pollen and nectar source to other workers in the hive may be the most incredible and complex form of social behaviour existing outside of the human race.

Fig 1. The Waggle Dance

LET'S DANCE

Upon her return to the hive with pollen and nectar, the worker bee performs an elaborate dance on the vertical surface of a comb. If the source is relatively distant from the hive (as it generally is), the dance takes the form of figure-eight. The forager waggles her body from side to side as she moves forward in a straight line, then circles to the right, back to her starting point, waggles ahead again, and then circles to the left (Fig. 1).

This dance pattern is repeated a number of times. The angle of the straight run, or "waggle," from vertical is equal to the angle from the hive between the sun and the nectar/pollen source. If the flowers are located 45 degrees to the right of the sun, the dance will be oriented 45 degrees to right of vertical. The distance of the straight waggle run is proportional to the distance from the hive to the source. *(From the web)*



FOOD FIT FOR A QUEEN

There is a point in early spring when temperatures climb just enough to wake honeybees that have survived the winter, but not quite enough to arouse the flowers that sustain them. Environmental pressures, such as pesticide use and urban sprawl, can deplete flower population, making those food sources scarcer. But a new Canadian made pollen substitute may help beekeepers cheat nature by establishing stronger hives early in the season.

'BURGER' POLLEN

Pollen substitutes have long been used by apiarists but have paled in comparison to the real thing. In developing them, searchers have focused on using proteins that are cheap and plentiful, such as soy, rather than addressing the bees' nutrient requirements and taste preferences.

But environmental biologist Abdolreza Saffari, discovered that soy not only impedes the absorption of the proteins needed to maximize honey production but also shortens the bees' life span. "It's like stopping at the first fast-food restaurant you see," he says. "That burger is easy to get, but [eventually,] it's going to kill. You have to look at what's good for you."

FIELD TRIALS

So Saffari developed a substitute made with ingredients that, to a bee, are nutritious and tasty. In 2002, as a graduate student, he teamed up with pollen expert Peter Kevan and animal nutritionist James Atkinson to hone the recipe. And by 2003, they were beginning field trials.

"My bees just ate it up," says beekeeper Les Simonffy of Hamilton, Ont., who fed his bees a powder that contained the proprietary pollen recipe. "I had very strong hives early on."

The honeybee relies on energy-rich nectar and protein-rich pollen for its sustenance. Before flowers bloom, apiarists feed their bees pollen substitutes to kick-start healthy hives.

FEEDBEE

The substitute, called Feedbee, was tested in 100 hives of the European honeybee (Apis mellifera) over three years, and the result was a doubling of bee population and honey production compared with typical soy-based substitutes. It equalled the results for natural pollen feed.

This year, Feedbee is being mass produced by a Toronto-based company, Grain Process Enterprises Ltd., and beekeepers in Canada, Spain, Australia and the United States are starting to place orders.

"If you care about your bees," says Saffari, "you can't sacrifice quality." After all, even the smallest creatures deserve a good meal.

Cynthia Reynolds Canadian Geographic ,August 2006

ANSWERS

to the Coffee Break Quiz

1. There are 7 dances. Round, alarm, cleaning, DVAV, massage, whir, and finally washboard. (DVAV = Dorsal-Ventral-Abdominal-Vibration) Round & Wagtail are considered as one.
2. The enzyme is called Ivertase.
3. The process is called Parthenogenesis.
4. The queens are from the race Apis Mellifera Capensis.
5. The organism is a Virus.
6. The affected part is the Thoracic Trachea.
7. Trophallaxis is food exchange between bees.
8. The food is Pollen.
9. The part of the year is March/April.
10. Colour would be Green.

Scrapings

HAY FEVER CURE

With the UK having around 13 million hay fever sufferers, it may come as heartening news to many that there is relief at hand and the medicine is not bitter. (Not for most that is).

Scientists have discovered kissing could be the perfect cure for the condition. They found a 30 minute kiss could dampen the body's allergic reaction to pollen. Test showed it relaxed the body and reduced production of histamine - a chemical cell given out in response to allergens.

Dr. Hajime Kimata, of the research team in Japan, said: "The results indicate for the first time that kissing may alleviate allergic

responses." Some 24 men and women with hay fever were told to spend half an hour kissing their partners. Blood samples were taken before and after to test levels of immunoglobulin E (IgE), which prompts the release of histamine into the blood, triggering symptoms of hay fever and asthma.

Most sufferers rely on antihistamines to relieve their symptoms. However scientists have known for years that stress can make responses to common allergens worse. The results of the research showed a significant drop in IgE after the session .Dr. Kimata added: "It is tempting to speculate that relaxation by kissing may decrease IgE production

IF SUMMER COMES . . .

After an abnormally prolonged winter and wet May, we now (early June) seem to be heading for a heat wave. The conditions have certainly allowed natural selection to operate as weak colonies and poor queens have in many cases been eliminated, and the survivors will hopefully do well this summer. While parts of the beekeeping world are in panic because of heavy losses, ascribed to all sorts of causes, the early BIBBA pioneers took a longer-term view, seeing winter and spring losses especially, as all part of the bees' adaptation to the environment.

As Beo Cooper used to say, "If they can't winter in a single BS broodbox with minimal feeding", I don't want 'em.

I'll go along with that Ed.

THE ASSOCIATIONS HONEY EXTRACTOR

The extractor is available for hire at £5.

It must be returned in the condition it was received - - clean and tidy and all in one piece

All breakages must be paid for by the hirer

Michael Birt is in charge of the extractor

Ring him at 01706 222849

A HONEY EXTRACTOR