Beetalk

General info and news about bees
December 2016

Hello and welcome.

Beetalk is a compilation of news from across the bee keeping world.

Its not affiliated to any beekeeping group so you wont get things like the next meeting and what we are doing and such like.

I hope that the articles provided will be useful to anyone interested in the a rewarding hobby and in some way we also hope that you may gain some pleasure in reading some of the article that are included.

Also I intend to include articles that may be helpful to anyone new to the hobby.

Being based in Lancashire it would be great for any contributions from Beekeepers from the county. But as stated above, please nothing about your association or group.

Hope you enjoy.

Michael Birt

Editor

If you have any articles that you think may be useful to have included in Beetalk.

Please e-mail them to the editor:

Michael

at

birt_192@hotmail.co.uk

PLEASE SUPPORT THE FOLLOWING.

NORTHERN BEE BOOKS

OVER THE PAST TWENTY YEARS OR SO WE BEEKEEPERS HAVE HAD TREMENDOUS SUPPORT FROM NORTHERN BEE BOOKS. WE WOULD LIKE TO THANK THEM BY PUBLICISING THEIR WEBSITE WWW.BEEDATA.COM

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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" is required.

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.

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

Artificial Swarming.

Swarming is the honeybees' way of ensuring the species survives, especially for feral colonies before catastrophes such as forest fires, by splitting the colony into at least two parts. Unlike the human race, where we hope our offspring will set up their own home, the honeybee colony tells mother to leave with half the colony (up to ten thousand honeybees) at a time when the first queen cell is sealed. For the beekeeper wishing to keep colonies at maximum foraging strength in order to obtain a good crop of honey this can result in a much lower surplus of honey. The first swarm (known as the prime swarm) will leave as soon as the first queen cell is sealed and weather permits.

A number of options are available to the beekeeper to control swarming, and one of these is to artificially swarm. A complete empty hive and empty brood frames should be to hand.

When open (as opposed to sealed) queen cells are found at the time of the regular inspection it is time to find the frame with the queen on it and to put that frame in a holding box. The queenless brood chamber (bc) is now moved 75 cm to one side (Call this bc B) and replaced by an empty brood chamber. (Call this bc A).

Both bc entrances should face in the same direction. The empty brood chamber, A, is now given the frame of brood with the queen on it and preferably ten empty drawn frames (frames of foundation can be used if drawn combs are unavailable). Remove any queen cells on the frame with the queen. The supers that were removed at the start of the inspection should be replaced with the queen excluder on hive A.

Brood chamber B is now examined for a good unsealed queen cell and the other queen cells, open or sealed, are destroyed. The good queen cell should have a well-fed larva visible and to be ready for capping. More than one open queen cell can be left subject to the move described in the next paragraph being carried out on time. Close the frames, and dummy board, together and replace the crown board and roof. Ensure both colonies have sufficient food. Hive A will most likely have sufficient in the supers and hive B can be fed with a rapid feeder.

The outcome of this series of manipulations is that as foraging bees emerge from hive B they will return to hive A in the ensuing week and boost its population and at the same time further depleting hive B of foraging bees. An essential part of these manipulations is that hive B must be moved to the opposed side of hive A in 7 days' time; the result is that foraging bees will return to the old B position and from there to Hive A to further boost its number of flying bees. At this time examine hive A to verify the old queen is laying and that there are no queen cells.

At the next inspection of hive B, and at least 14 days after the commencement of these manipulations, you will be able to look for the new queen and/or eggs.

Once she has mated you have the choice of whether to retain the extra colony or combine (unite) it with hive A.

Cant sleep:: Try this

You can’t sleep? So you wake up every morning tired and sleepy? Well, don’t worry, because we have the right answer for you. If you suffer from insomnia, then you should definitely try this homemade mixture of milk and honey. This is the most effective ancient sleep remedy. All you have to do is drink just one cup of this remedy before you go to sleep and you will fall asleep in less than 10 minutes.

Sleep remedy

People used honey and milk for centuries, to make remedies for insomnia. Even if you consume them separately, they are both extremely effective ingredients. But their effects are multiplied by couple of times if they are combined and consumed together. We can also mention that honey is one of the sugary ingredients that cause a controlled increase in the amount of insulin being secreted, which also promotes tryptophan to be released into the brain.

So, this compound – tryptophan is being converted into serotonin, which promotes a feeling of relaxation. And the serotonins is usually converted to melatonin – a well know sleep aid. So, if you understand this chemical pathway – then you can see why honey and milk are used to improve your sleep and to reduce insomnia.

Honey and Milk Magic Sleep Remedy – RECIPE:

Ingredients:

6 oz milk
1 drop vanilla extract
1 tsp honey
Directions:

Pour the milk in a small saucepan and put it on heat. Wait until it’s warm, but not boiling. Then, remove it from heat and pour it into glass. Then, you need to add the vanilla and the honey. Stir well and drink it slowly before you got o sleep.

Note:

For people who are lactose intolerant, follow the same recipe, but replace the milk with a lactose free substitute, just like soy, rice or almond milk

PROPOLIS.

Propolis is the soft, pliable and very sticky orange substance that gums all the hive parts together and stains your clothes during summer hive inspections.
It is also the hard and brittle orange sealant that has to be cracked open in order to enter the hive during winter or early spring. No wonder it goes by the name “bee glue”!
Historically, it has been unpopular with beekeepers, who have tended to selectively breed the Propolising trait out of their stock.
Derived from the Greek, propolis means something like “before the city” and it is used by honey bees to cover almost every surface within the colony.
In the established tree nest of a feral colony, the rough bark immediately surrounding the entrance is bitten away and a smooth layer of propolis is laid down. If the entrance itself is too large then the bees reduce its size using propolis.
Within the nest cavity, after removal of all weak and rotten wood, any holes or crevices within the walls are filled and smoothed out with propolis. Indeed, one of the first steps in transforming the cavity into a home is the coating of the entire inner surface of the nest area with a 0.3-0.5mm propolis film known as a propolis envelope. Thicker ridges of propolis are then laid down at the attachment points of comb to the walls.
On comb itself, a thin propolis film is found upon the outer rim of every cell.
Workers even embed propolis inside cleaned and polished cells. Any cells containing contaminated pollen become entombed in propolis as, upon their death, do any colony invaders that are too large for the bees to physically remove. It is obvious that propolis is highly valued by the bees.

What is its purpose?

Propolis is a crucial architectural fabric within a honey bee colony. It serves as a caulk for blocking drafts and limiting the influx of water from tree sap or the immediate external environment. It can also be used as a simple physical defence against a range of pests.
For example:
At the entrance, a sticky layer of propolis can deter small nest invaders such as grubs and ants.
Within the nest proper, it is used to eliminate any cracks and crevices that would otherwise provide ideal egg-laying sites for wax moth also within the nest, it can be used to trap small hive beetles in “propolis prisons”, thereby breaking the reproduction cycle.
However, all these important physical defence functions are almost trivial compared to what is arguably its primary role, namely the provision of colony-level defence against microbial infection. Any warm and humid cavity containing large stores of carbohydrate and protein, open brood and highly social trophallactic insects should be an obvious target for microbial infection.
However, containing over 300 plant-derived chemicals with antibacterial, antiviral and antifungal properties, the propolis envelope provides “social immunity” for the colony. Being present on every conceivable nest surface, it literally serves as a bioactive doormat that is constantly decontaminating the inhabitants of many potential pathogens.
Whilst much of the antimicrobial effect is probably dependent upon direct physical contact with propolis, some might be due to volatile components that diffuse through the air.
Examples of how propolis alters the microbial landscape and/or the metabolism of certain pests are summarised below:

Mitigation of the virus threat posed by Varroa destructor mites.

There is 100% Varroa mortality when the mites are exposed to a high concentration of the volatiles from alcohol -soluble propolis, whilst weaker concentrations significantly impair mite metabolism. The varroa mite serves as a devastating viral transmission route against which honey bees currently have no effective natural defence.

Protection against Paenibacillus larvae (American Foul Brood)

Propolis protects larvae against AFB spores, but it cannot eradicate established disease. It has also been shown to reduce the AFB spore load in honey.

Improved honey bee survival in Aspergillus flavus (Stonebrood)-contaminated nests

Propolis inhibits in vitro fungal growth. It also induces honey bee P450 isoenzymes that metabolise mycotoxins into non-toxic products, thereby allowing bees to live longer in their presence. In contrast, P450 inhibitors shorten honey bee lifespan in the presence of mycotoxins

Disruption of the reproductive activities of Galleria mellonella (Greater Wax moth)

Propolis can impair the metabolism and increase the mortality of the greater wax moth

Protection against scavengers of dead flesh

Propolis is used to encapsulate the dead bodies of any hive invaders too large for honey bees to expel from the nest This minimizes carcass attractiveness to diverse scavenging arthropods at various stages in their life cycle. It also minimizes nest contamination by a wide range of bacterial and fungal decomposers

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BAZZ THE DOG SUITS UP FOR A DAY IN THE HIVES

Working dogs have always been a revered part of life in rural Australia. Australia's 'winery dogs' have several volumes of books documenting their role in the vineyards.
But to date, little has been said for the apiary dog. More than likely, that's because dogs can't get near a hive of bees without being aggressively chased away. This was the problem beekeeper Josh Kennett encountered when he began training a black Labrador named Bazz to sniff out the nasty bee disease American foulbrood.

The beekeeper, from Tintinara in South Australia's south-east, says that while there are dogs doing similar work in the United States, the cold temperatures there negate the need for protection.

"Their winters are far colder than ours, with snow over the top of beehives. We don't have that situation here in South Australia. "So I've tried to develop a suit the dog can wear and hopefully avoid being stung."

Mr Kennett says after a long process of trial and error, he's finally got a working prototype.
The process of training his dog and developing the suit has been an attempt to find a better way of controlling American foulbrood. The disease devastates beehives, and to date there's no cure for it, so good control and quarantine are essential in apiaries across Australia.

After a lengthy training regime, and with a suit ready to go, Mr Kennett's dog is ready for action. "We've now proven the concept, he can find the infected hives. "The only challenge now is getting the dog comfortable with the suit. It's hard to change a dog's habits overnight. "To fully cover a dog up and expect it to do the same thing, it takes time to change how he behaves and to get used to that suit."

Bazz the Labrador, all suited up

Tips for photographing insects.

The photographic classes in the honey show actually ask for photos pertaining to beekeeping, which is a wide field, but there is always a temptation to get that close up of a bee on your biggest hollyhock. Here are some tips.

The first basic rule of close-up photography is to get close to the subject. Insect photography requires a macro lens that will allow you to focus very close to the subject. A Macro lens lets you photograph your subjects at near life size.

Most non SLR digital cameras have a close up (macro) setting denoted by a flower symbol. Mobile phone cameras are capable of taking reasonably detailed close up photos these days. See the next page, but don't over enlarge the image. Ideally you should use a tripod to steady the camera, especially when you're using a telephoto lens or long shutter speed. When shooting with your camera on a tripod, using a cable release to trip the shutter is the ideal shooting method. Some photographers will go the added step of locking up the mirror on their D-SLR prior to tripping the shutter. This further reduces the possibility of movement. If you don't have a cable release, you can use the camera's self-timer instead

Depending on how close you can get, you will be able to fill the frame with the insect's entire body, or a portion of its body such as its head and antennae. Be cautious so you don't get stung.

Most insects gathering nectar don't seem to mind a camera (and photographer) coming close to them. The exception is butterflies. While shooting insects with a macro lens might seem intimidating, start out with creatures that can't sting you. The shorter the focal length of the macro lens, the closer you will have to be to your subject, so keep that in mind when choosing which lens to use. Insects have fascinating bodies, and one of the goals of close-up nature photography is to bring out all the colour and detail of insect life. Good macro photography puts the camera's focus on the eyes, legs and bodies of these insects, and their tiny world. For example, taking a photograph of a spider in its web tells a more interesting story. Background colour plays an important role in composition. For example, if the subject is dark coloured, as many insects are a lighter, out-of-focus background will make the creature stand out from its surroundings and focus the viewers' attention on it. The technique for getting an insect to stand out from the background is to use a shallow depth of field. Depth of field is defined as the area in front of, and behind the subject, that is in focus. Depth of field is determined by the aperture setting. Low f/stops, like f/2.8 will give you a shallow depth of field, which pinpoints the focus on your subject, while the background goes out of focus.

Another technique that nature photographers use is to position their camera so that a brightly lit subject is photographed against a dark background. Exposing for a well-lit subject, under full daylight for example, or with a fill-flash, will cause a dark background to underexpose and approach black. This effect creates a dark, even background, making the subject stand out. But if the subject and background are both brightly lit, the insect may be difficult to separate from its surroundings. Placing a household item like a piece of cloth or paper behind the subject can work as a portable studio backdrop, isolating the insect against a plain background and setting it apart from its surroundings. Photo editing programs will allow you to crop your image, and adjust the brightness and contrast.

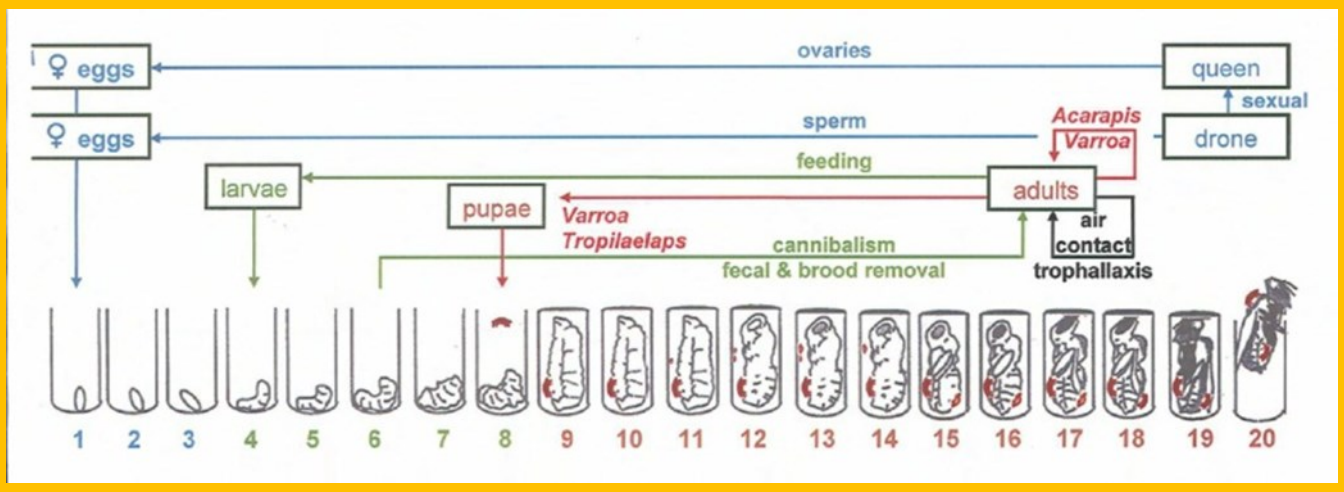
Most cameras will allow you to crop the image and afford some adjustment to brightness and contrast. Insects are more mobile in warm weather, so photograph them in the early morning or evening when it is cooler, and they will be moving slower. The available light at those times of day will also be more flattering too. Placing an insect in a container in the refrigerator or freezer for a short while before taking your photo will slow down its metabolism and make it torpid. Leaving it too long in the freezer however, will make it dead.

Viruses in Bees

Bees, like all living things, have a wide range of viral diseases. Most have been known since the 1970's and were, at that time, relatively harmless. Epidemics were transient and rarely at the expense of the colonies. This peaceful coexistence has been disturbed during the past thirty years, mainly due to *Varroa*, but also due to changes in farming and beekeeping practices. This article explains the relationship between bees and their viruses, the impact they cause, and how risks can be reduced.

Viruses can only survive through transfer to new hosts. This does not necessarily have to cause disease. Illness or death of the host without transfer is, from the virus' perspective, effectively suicide. Disease only benefits a virus if it enhances the chance of transmission (such as sneezing with colds).

The figure below describes the various transmission routes available for bee viruses. These can be broadly divided into:
• Oral faecal (through food and faeces, green)
• Sexual (blue)
• Contact (black)
♦ Through a parasite vector (red).



The diagram outlines the major transmission routes for honey bee viruses in relation to honey bee development stages.

Virus Transmission

Faecal, oral and contact transmission is relatively inefficient: high virus concentrations are required to cause infection. Transmission via mites by contrast is very efficient and generates very high virus titres in the affected bees. Such bees then become also much more infectious through the other transmission routes. This mutual reinforcement of different transmission routes increases the likelihood of an epidemic. Since adult bees are central to most transmission routes, due to their many interactions and mobility, their health is essential to reduce the impact of such epidemic transmission loops.

Virus disease management

The main source of infection is the bees themselves. Through the worldwide trade in bees and bee products, most bee pathogens now have a worldwide distribution. However, the prevalence of disease can vary sharply between countries, due to different beekeeping or farming practices, as well as geographic and climatic differences. There are two components to (virus) disease management:
♦ minimising the risk of transmission
♦ • reducing the virus load in colonies

Reduce the risk of transmission

This focuses largely on separating infected material from non-infected material. This applies mostly to the bees themselves (queens, sperm, packages, colonies, apiaries) and to lesser degree to equipment (hives, frames, hive tools, extraction equipment, etc.).

Apiary management

Minimising the exchange of bees and material between apiaries is important.

Know your enemies
Routine inspections and thorough knowledge of disease symptoms are essential for identifying problems early. Colonies that develop slower than expected in the spring or fail to accumulate honey in the summer are suspect, as are frames with 'spotty' brood, which can arise from bees removing diseased brood. Diseased colonies should be quarantined and protected with entrance reducers to prevent robbing by healthy colonies.

Reduce the disease load
This focuses on general colony health and disrupting the key transmission routes.

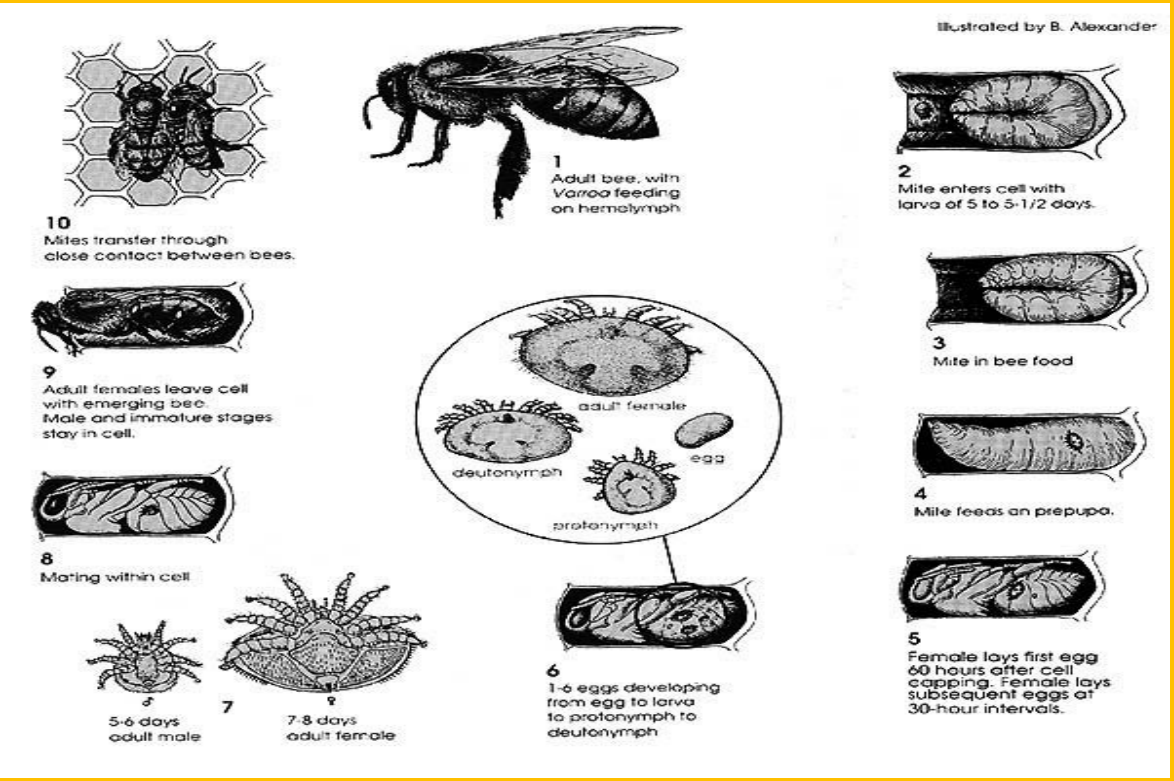
Preventive management
Since viruses are opportunists that flourish during times of stress, the first remedy is to keep your bees happy, healthy and stress free. This boils down to the usual Good Beekeeping advice such as abundant season-long foraging, minimal disturbance, and protection from the elements, a productive queen, adequate ventilation and room for growth. Since honey bees thrive in a diverse (floral) environment, the intensification of farming landscapes and practices has put greater pressure on our bees.

Disrupting transmission
It is important to know the preferred transmission routes of the different viruses. For example, chronic bee paralysis virus is primarily transmitted through close contact. It is therefore often associated with overcrowding and aggression, for example due to over expansion, inclement weather or insufficient forage. Resolving the causes of overcrowding disrupts the transmission and slows or reverses the epidemic.
Sacbrood virus is a larval disease of spring and rapid colony expansion, when there is much brood for the adult bees to attend and infected larvae may escape detection and removal. It usually clears up by itself when the adult population catches up, but it can look disconcertingly like American foulbrood (AFB).
Black queen cell virus (BQCV) is associated with *Nosema apis*, a disease of adult bees that normally peaks in late Spring. It can be a problem in commercial queen rearing operations where breeder colonies are kept broodless for extended periods. The nurse bees tend to be older in such colonies, and therefore more likely to be infected with *Nosema*, and thus also BQCV, which is transmitted to the queen larvae through the royal jelly.

Critical treatment timing
Deformed wing virus, acute bee paralysis virus and slow bee paralysis virus are actively transmitted by *Varroa* and most likely also by *Tropilaelaps* mites. Controlling the mite population is the key to managing these virus diseases. The most damaging mite mediated virus transmission is to developing pupae when the mite is reproducing. Such pupae produce damaged, non-functional and short lived bees that accelerate dwindling and winter collapse.
Autumn *Varroa* treatment should therefore be at least six weeks (one bee generation) before brood rearing has finished. One week to remove the mites on adult bees, two weeks to clear the mites from the brood and three weeks to purge, from the adult population, those bees derived from mite infested pupae with high virus titres and reduced survival.

Hive Frames.
Although traces of viruses can be found in hive boxes and combs, especially in stored pollen, it is unclear how contagious is this material, given the inefficient oral transmission of most viruses. Frames covered in faeces or diseased brood represent a much more serious risk and should obviously be replaced. Regular comb replacement also helps avoid the accumulation of bacterial pathogens and pesticides. Advances in anti-viral medicines, probiotics, and genetics also offer promise, but follow the basics of good beekeeping still remains the best advice to keep your bees healthy.

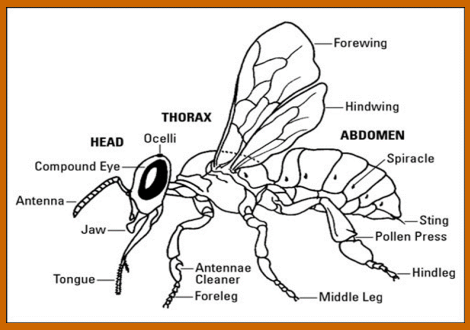
Varroa Life Cycle



We have Bazz the Lab: What next
Boneco, the bee-keeping donkey

How to Identify the Basic Body Parts of Honey Bees

Everyone knows about at least one part of the honey bee's anatomy: its stinger. But you'll get more out of beekeeping if you understand a little bit about the other various body parts that make up the honey bee.



Honey bee's skeleton

Like all insects, the honey bee's "skeleton" is on the outside. This arrangement is called an *exoskeleton.* Nearly the entire bee is covered with *branched hairs* (like the needles on the branch of a spruce tree). A bee can "feel" with these hairs, and the hairs serve the bee well when it comes to pollination, because pollen sticks well to the branched hairs.

Head of a honey bee

The honey bee's head is flat and somewhat triangular in shape. Here's where you'll find the bee's brain and primary sensory organs (sight, feel, taste, and smell). The head is also where you'll find important glands that produce royal jelly and various chemical pheromones used for communication. (*Royal jelly* is a substance secreted from glands in a worker bee's head and used as a food to feed brood.)

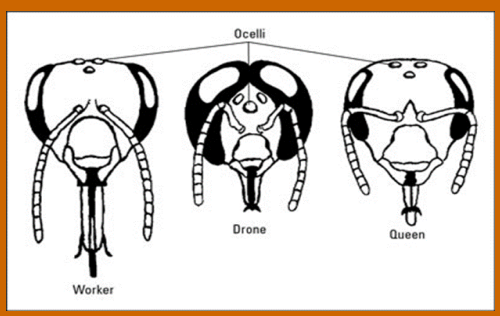
The important parts of the bee's head are its:

Eyes: The honey bee's head includes two large compound eyes that are used for general-distance sight and three small simple eyes, called ocelli, which are used in the poor light conditions within the hive. Notice the three simple eyes (ocellus) on the members of all three castes, while the huge wrap-around compound eyes of the drone make him easy to identify. The queen's eyes, however, are slightly smaller than the worker bee.

Antennae: The honey bee has two antennae in front (attached to its forehead). Each antenna has thousands of tiny sensors that detect smell (like a nose does). The bee uses this sense of smell to identify flowers, water, the colony, and maybe even you! They also, like the branched hairs mentioned earlier, detect feel.

Mouth parts: The bees' mandibles (jaws) are used for feeding larvae, collecting pollen, manipulating wax, and carrying things.

Proboscis: Everyone's familiar with those noisemakers that show up at birthday and New Year's Eve parties. You know, the ones that unroll when you toot them! The bee's proboscis is much like those party favors only without the "toot." When the bee is at rest, this organ in retracted. But when the bee is feeding or drinking, it unfolds to form a long tube that the bee uses like a straw.



Honey bee's thorax

The thorax composes the middle part of the bee. It is the segment between the head and the abdomen where the two pairs of wings and six legs are anchored. **Wings:** How many wings does a honey bee have? The answer is four. Two pairs are attached fore and aft to the bee's thorax. The wings are hooked together in flight and separate when the bee is at rest. **Legs:** The bee's three pairs of legs are all different. Each leg has six segments that make them quite flexible. The bees also have taste receptors on the tips of their legs. The bee uses its forward-most legs to clean its antennae.

The middle legs help with walking and are used to pack loads of pollen (and sometimes propolis) onto the *pollen baskets* that are part of the hind legs. (*Propolis* is the sticky resinous substance that the bees collect from the buds of trees and use to seal up cracks in the hive.)

The hind legs are specialized on the worker bee. They contain special combs and a pollen press, which are used by the worker bee to brush, collect, pack, and carry pollen and propolis back to the hive.

Spiracles: These tiny holes along the sides of a bee's thorax and abdomen are the means by which a bee breathes. The bee's trachea (breathing tubes) are attached to these spiracles. It is through the first hole in the thorax that tracheal mites gain access to the trachea.

Abdomen on a honey bee

The abdomen is the part of the bee's body that contains its digestive organs, reproductive organs, wax and scent glands (workers only), and, of course, the infamous stinger (workers and queen only).

Intelligence, Sleep And Memory – *Beelogistics.*

Intelligence

Research has provided insight into some stunning cognitive capabilities for such a tiny brain, as well as some especially fascinating anecdotes that liken bees to humans. For example, just like the human capacity to recognize faces, honeybees show the ability to discriminate between two different human faces. A major feature of this trait in humans is that it breaks down when the face is inverted 180o. This same feature was observed in honeybees. Further, bees can count up to four objects when they are encountered sequentially during flight. It appears that bees can navigate to food sources by maintaining a running count of prominent landmarks that are passed en route, provided this number does not exceed four.

Sleep

Children often ask what bees do at night, wondering if they are always busy doing something, or if they too idle sometimes in front of the TV. We know from ancient times that the sleep of the labourer is sweetest. Accordingly, honeybee foragers are among the first invertebrates for which sleep behaviour has been described. Foragers have strong circadian rhythms; they are active during the day and sleep during the night moving through three sleep stages. However, young bees exhibit sleep behaviour consisting of the same stages as observed in foragers yet pass more frequently between the three and stay longer in the lightest sleep stage. These differences in sleep architecture represent evidence for plasticity in sleep behaviour in insects. The harder they work - the sounder they sleep!

Memory

During evolution, honeybees have developed sophisticated sensory systems and learning and memorizing capacities, essential mechanisms that do not differ drastically from those of vertebrates. To forage successfully, a bee has to learn and remember not only the colour and shape of flowers that contain nectar and pollen, but also how to get to them. Since the species of flowers that are in bloom in the morning are likely to be replaced by a different species at a different location in the afternoon, the bee has evolved an impressive ability to learn and memorize local features and routes, as well as the time of blooming, quickly and accurately. Thus, having found a nectar-bearing flower at a particular time on a particular day, a forager can remember the task and the time at which it was completed, and visit the flower at the same place and time on the following day. The time sense of the honeybee can modulate their response to a local stimulus according to the time of day. Honeybees can learn scents or colours in a time-linked process and remember them in a 24-hour cycle. Circadian systems permit organisms to measure time for adaptively significant purposes. Bees synchronize their behaviour with daily floral rhythms, foraging only when nectar and pollen are at their highest levels. At other times, they remain in the hive, conserving energy that otherwise would be exhausted on non-productive foraging flights.

The processes of learning and remembering are undoubtedly more sophisticated in primates and mammals than in insects, but there seems to be a continuum in these capacities across the animal kingdom. The abilities of an animal seem to be governed largely by what it needs in order to pursue its lifestyle, rather than whether or not it possesses a backbone. The properties of learning and memory in insects have been shown to be well suited to the requirements of the tasks that they have to perform. Honeybees can plan their activities in time and space, and use context to determine which action to perform and when.

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'THE IGLOO'

SMALL FAN IN HAT KEEPS HEAD COOL WHILE REFRIGERANT FLUID CYCLES THRU PROTECTIVE SUIT!

HANDY WRIST CLIMATE CONTROL DIAL

KEEP COOL WHEN THINGS HEAT UP!

WANT YOUR PET WITH YOU IN THE BEE YARD, BUT DON'T WANT THEM TO SUFFER FROM STINGS?

THEN CHECK OUT OUR NEW 'APETIARY' LINE OF PROTECTIVE SUITS FOR DOGS AND CATS!

VELCRO FLAP FOR EASY POOP RELEASE!

'BOWSER TROUSERS'

'KITTY SACK'

KEEP FLUFFY FROM GETTING UNDER-FOOT!

GOOD FOR HOME USE, TOO!

FOR OUR COMPLETE CATALOG, CALL 1-555-BEE-SUIT TODAY!

LAD ©'09

Holidays

Tired with the noise and pollution and the same old Costa Holiday?????Then why not try a different Costa Holiday.
Come to Costa Geminiano
An Italian Rustic Farmhouse in the mountains of Emulia Romagna Province of Parma
The property is situated at 650 metres above sea level on the edge of a small quiet village amid beautiful unspoilt Countryside. The nearest town Bardi is 12km away.
Accommodation comprises of 3 double bedrooms and 1 single bedroom. Self catering with meals can be arranged if requested. Guaranteed no Internet, no TV, no en suite bedrooms, no discos and frilly duvets- just the sounds of birds, cockerel alarm call and bees. Bring your own veil and walking boots for exploring the countryside.
Price per week 650 euros. Short stay B & B @ 30 euro per night
Interested, need to know more ring Jenny on 0039052576169

Respect your Neighbours

There are some sound reasons to be aware of and be respectful to your apiary neighbours. The first is disease; we all have a responsibility to avoid the spread of diseases. It cuts both ways, you don't want theirs and they don't want yours. Make sure your bees are healthy. Know about the location of neighbouring apiaries and try to be aware of the health of their bees. Treat swarms with great care; isolate them for a time until you are sure they are fit and well. The second reason is forage availability; with a doubling in our membership in two years there is an increased possibility of overcrowding of hives in an area. Again this cuts both ways, overcrowding disadvantages all parties. The only realistic way to find out about neighbours is through contact in your division and with neighbouring divisions. Please use the network of contacts that exists in our association when you are setting up a new apiary and be particularly mindful of disease if you take swarms collected by another beekeeper