



Beetalk December 2023

General info and news about bees

Hello and welcome.

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

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

We hope that the articles provided will be useful to anyone interested in this 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 we 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.

Editor

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

Please e-mail them to the editor

at

birt_192@hotmail.co.uk

POLY BEEHIVES ---- THE FUTURE?

Imagine a hive that requires minimal maintenance, out-performs traditional materials and doesn't rot. Imagine also that it is cheaper than its timber equivalent... Poly hives have been around for a long time now, certainly 15+ years, perhaps considerably longer on the continent and in the USA. In the past, they needed to be produced in huge numbers for efficiency and British National sizes were unavailable for many years due to a lack of demand/volume. There are now several manufacturers and stockists of our more common sizes. The early ones got bad press because they were made from a lightweight polystyrene. I have had mine now for three or four seasons, two nucleus boxes and a Langstroth Jumbo hive. If you have not handled them, you may be surprised by the density of the polystyrene - it is not the small beaded packaging type. I have not tried this but you can test its strength by standing on the hive. It is recommended to paint poly hives to protect them from UV light and to extend their life. Any water-based paint can be used - I didn't have any suitable dregs at home, so bought a tin of masonry paint so that everything could match. A small tray and roller made short work of it. Don't paint the insides, just the externals. A 5L tin goes a LONG way! The other significant advantage of painting them is that it camouflages the hives which, in bright white, would otherwise stand out in the corner of a field. etc. When looking at buying poly hives, ensure that there are no location lugs between the brood boxes and supers. They look like a good idea but are a pain, and prevent you sliding the super into its final place. I have had several seasons with my poly hive, so I can offer the following insights:

1. Spring build up compared with a wooden hive is noticeably quicker.
2. The hives therefore become larger quicker and do show signs of wanting to swarm a little sooner. This is an advantage if you want to make splits or using the colony for queen rearing.
3. Bees in poly hive uses less winter-feed than wooden equivalents.
4. My bees have been treated with oxalic acid over winter with no noticeable effect on the hives.
5. Weak colonies have survived over winter in poly where they would have had no chance in wood. It is probably bad beekeeping practice to have not united with another colony but sometimes life gets in the way.
6. They are ideal if you are moving hives from location to location- put a couple of straps around them and off you go - mine has a couple of recesses for straps to go.
7. I have never known a roof to blow off. I do put a block pavior/brick on top to add a bit of weight, just in case.
8. National poly hives are compatible with the wooden parts, so if you want to use poly brood and wooden supers, you can. It also allows you to utilise your existing kit. Other sizes would need checking because you come across variants in hive sizes - Jumbo Langstroth that take Dadant sized frames but less of them.
9. Price - a poly hive comprising a brood box, floor, roof and two supers is £90. The "standard quality" wooden equivalent is £101. There are greater bargains still to be had if you go away from BS sizes and onto Langstroth.
10. If they need any assembly (some manufacturers hives do, some are one piece boxes) then this can be done by even a small child and requires no tools. It can be done in the living room whilst not interrupting the sleeping baby - imagine doing so with a wooden hive...!
11. Lifespan of poly is in excess of 15 years. Timber hives, if treated and stored correctly may be nearer to 50 years. But I can live with 15 - £90 over 15 years is less than a couple of pounds of honey a year.
12. I may buy or make more wooden supers, but any other kit that I now buy will be poly. 13. Poly can be left out in all conditions, so there is no need to find dry storage for them. They do not rot, and do not soak up water like wood. They can be stored on the ground if necessary.

Obviously with poly hives it is not possible to sterilise them with a blowlamp. They can be sterilised easily by scrubbing using a suitable disinfectant - I have used 'Virkon S', but others will be available. Some care does need to be taken when using poly hives. If you leverage frame ends against the polystyrene, it will damage it. Dropping a box from height onto a corner will risk cracking or damaging the boxes (can be repaired with a suitable glue). In three or four years, my boxes look as good as when they were received. I have a couple of the 4-in-1 nuc boxes, which I find handy for all of the benefits above, and because they will take both frame sizes that I use. They can be used without modification, but would be far better with the ply divider replacing with a thinner one to avoid the side bar of a National frame going tight against it. I have never quite got around to changing it though. In these, whilst it may not be good practice to do so, I have over-wintered a small nucleus colony. I believe that it would not be possible to do in a wooden nuc box.

If you are looking for another hive, I urge you to give the poly kit a try.

HANG ON A MINUTE!

As gardeners get busy filling tubs and borders with colourful bedding plants, scientists at the Universities of Cambridge and Bristol have discovered more about what makes flowers attractive to bees rather than humans. Published in May 2012 in the British Ecological Society's journal "Functional Ecology", their research reveals that Velcro-like cells on plant petals play a crucial role in helping bees grip flowers – especially when the wind gets up. The study focuses on special cells found on the surface of petals, whose stunning structure is best seen under an electron microscope. According to lead author, Dr. Beverley Glover: "Many of our common garden flowers have beautiful conical cells if you look closely – roses have rounded conical petal cells while petunias have really long cells, giving petunia flowers an almost velvety appearance, particularly visible in the dark-coloured varieties." Glover's group previously discovered that when offered snapdragons with conical cells and a mutant variety without these cells, bees prefer the former because the conical cells help them grip the flower. "It's a bit like Velcro, with the bee claws locking into the gaps between the cells," she explains. Compared with many garden flowers, however, snapdragons have very complicated flowers; bees have to land on a vertical face and pull open a heavy lip to reach the nectar so Glover was not surprised that grip helps. But she wanted to discover how conical cells help bees visiting much simpler flowers. "Many of our garden flowers like petunias, roses and poppies are very simple saucers with nectar in the bottom, so we wanted to find out why having conical cells to provide grip would be useful for bees landing on these flowers. We hypothesized that maybe the grip helped when the flowers blow in the wind." Using two types of petunia, one with conical cells and a mutant line with flat cells, Glover let a group of bumblebees that had never seen petunias before forage in a large box containing both types of flower, and discovered they too preferred the conical-celled flowers. They then devised a way of mimicking the way flowers move in the wind. "We used a lab shaking platform that we normally use to mix liquids, and put the flowers on that. As we increased the speed of shaking, mimicking increased wind speed, the bees increased their preference for the conical-celled flowers," she says. The results, Glover says, give ecologists a deeper insight into the extraordinarily subtle interaction between plant and pollinator. "Nobody knew what these cells were for, and now we have a good answer that works for pretty much all flowers," she concludes. "It's too easy to look at flowers from a human perspective, but when you put yourself into the bee's shoes (sic) you find the hidden features of flowers can be crucial to foraging success."

PLAY CELLS

Ask yourself if you have ever seen an unhatched egg in a partially built queen size cell. No, but you have found eggs in play cells from time to time. Actually we see this pretty well daily, sometimes dozens of times daily, from early May through to our cessation of swarm control in the early part of July. Pup cells (never heard them called play cells except on this kind of medium) are certainly not made for fun. They DO use them when ready to do so. They are too wide in the mouth when freshly constructed and/or being held in reserve. You can see this relatively easily and your eye learns to spot ones which are still safe and pick out those which are started on. There IS a subtle difference between unused ones and those with eggs in them. It is in the mouth of the cell that it shows. Yes, they narrow the mouth down to worker size with fresh wax, and although this is normally by doing a tapered extension (not however the same as the lengthening of the developing cell) it can even be almost like a flat thin membrane of wax across the end. The crucial factor is that the aperture is now worker size rather than pup cell size. You DO learn to spot it almost without looking for it. Having said that, unless we are pushing for increase at the time we do sometimes tend to ignore 'pups with eggs' as even at that stage there is no guarantee they will proceed to raise queen cells. In any event our next visit is due before anything raised from an egg will be mature and thus we still have time to deal with the swarming if the intent is serious. Once the eggs hatch and 'milk' is being placed in the cell for the grub the shape of the cell changes. The temporary extensions get rolled back and extension of the cell from its wider parts begins. Relatively slowly and unobtrusively for the first 24 hours, then increasingly rapidly. We reckon you can prevent/reverse swarming at a stage up to the cells being two thirds long, but after that the action required becomes increasingly radical, and if they are sealed the only proper way to restore stability is to split the colony, either for increase or to raise a young queen for requeening (not necessarily for this colony

though). If you cannot tell if they are in use just roll the edge back with the end of the hive tool and see if there is anything inside. Even some of my relatively experienced helpers get (minor) grief from me for taking ages examining pup cells which I can tell at the most cursory glance to be harmless and empty, so it can take a while to get the knack. The following bit is with due apology to those who already know it. I am NOT trying to teach my granny to suck eggs':

- Inside dull and empty, then nothing
- Inside polished, considering laying in the cell soon.
- Egg inside, a warning that swarm preparations are in their earliest stages.
- Tiny larva and royal jelly, then swarming is likely in 9 or 10 days (It is frequent, however, that there will be successional cells raised and if conditions are not right when the first cells are ready to hatch they will be torn down and the swarm will depart at a time of its choosing from a cell raised later than the first wave).
- Cells already extending and with larvae and royal jelly, take preventative action now.
- Sealed cells, or nearly sealed cells, take radical action now. The old fashioned way of 'cutting out the cells' is futile and just prolongs, sometimes for weeks, the period of colony instability during which the old queen does not function properly, thus lays less eggs (if any) per day, and you suffer in the later flows from lack of bee power. Splitting and reuniting when the young queen lays is far more beneficial.

TEN COMMANDMENTS OF BEEKEEPING.

- I. Thou shalt use only standard beekeeping equipment.** Only The Langstroth hive is the best arrangement of hive body and frames that we have today. It permits unprecedented access to the bees and their brood, and allows for complete interchangeability of parts. The modern hive respects bee space and permits regular monitoring of the colony for diseases and parasites. Traditional straw skeps, log gums, and clay pots are not permitted by law because they do not allow this access.
- II. Thou shalt be considerate of non-----beekeeping neighbours..** Be careful where you place your hives. Though it is legal to keep bees in town in most areas, consideration of your neighbours who might have small children, who are afraid of bees, or who are allergic to beestings is paramount to successful and enjoyable beekeeping. Caution your neighbours if you plan to put a hive in your backyard, and avoid putting the hive in a place where bee flight paths cross sidewalks and play areas. Provide water for your bees so they don't bother others. Free honey can help sweeten an uncertain situation.
- III. Thou shalt requeen regularly.** Can go a long way toward maintaining productive colonies. Requeening can maximize both brood and honey production, and is helpful in suppressing swarming and certain diseases. It is generally considered best to requeen with stock produced by commercial suppliers of bees, as queens produced by your own colonies will rarely result in superior breeding.
- IV. Thou shalt control diseases and parasites.** Every beekeeper should get to know his bees and the diseases and parasites that can affect them. Certain bee diseases such as foulbrood can be spread easily from colony to colony which can have disastrous effects. Get to know the signs of the more common bee diseases: American and European foulbrood, chalkbrood, sacbrood, and Nosema. Be aware of the debilitating effects of parasites such as Varroa and tracheal mites. Get to know your medications and be aware of how one can use grease patties and menthol. Apply these medications according to instructions so that you won't kill bees, produce resistant diseases and pests, or contaminate honey intended for human consumption.
- V. Thou shalt maximize colony populations before the main nectar flows.** It can be an expensive mistake to build up the size of your bee colony on the main nectar flows rather than for the main nectar flows. Requeening, disease control, and feeding sugar syrup and pollen substitute can help achieve this objective. Control swarming by keeping young queens, reversing hive bodies during the spring, and supering appropriately. Don't tolerate marginal colonies. Requeen, medicate, and supply frames of brood to weak colonies, or merge them with other colonies. Remember, one large colony will produce more than twice as much as two half the size.
- VI. Thou shalt super colonies according to their needs.** Provide plenty of space for bees to store their nectar before the nectar flows start. This will help control swarming, and encourage foraging. Remove the supers in late summer so that the bees will be encouraged to pack the brood nest heavily with honey for winter.
- VII. Thou shalt take pride in honey and other hive products.** Keep your honey-handling equipment clean, and strain your extracted honey to remove particulate debris. Use standard honey jars, and resist the urge to sell or give away your honey in used canning or mayonnaise jars - such packing looks cheap and unprofessional, and can impact negatively how the consumer thinks about honey. Use an appealing label, and never let your jars get sticky. Market your product with pride, confidence, and creativity.
- VIII. Thou shalt protect thy beekeeping equipment..** Beekeeping equipment can last for years if properly prepared and cared for. Consider using wood preservatives, pilot holes for nails, and a good paint job. Keep your hives off the ground where they can be subject to rotting, and fall victim to pests such as carpenter ants and termites. . Store your beekeeping supplies under clean conditions. keeping supplies under clean conditions.
- IX. Thou shalt help thy bees through winter..** Treat colonies in the autumn for foulbrood, Nosema, and mites. Make certain that you use two brood chambers for wintering, and that the bees enter winter with a full honey supply. Reduce hive entrances for the winter, and provide an upper entrance to provide an alternative access and as a means for assisting with the discharge of excess water vapour. Pack your hives if you anticipate a harsh winter, and always protect them from the wind. Check your colonies for food supplies in midwinter by hefting the hive. If the bees are running short of supplies, be certain to feed them sugar syrup. If brood rearing is beginning to take place to a significant degree before pollen is available in the spring, provide your colonies with pollen substitutes.
- X. Thou shalt join and participate in a beekeeping association.** Join and participate in a beekeeping association. It join and participate in a beekeeping association. Beekeeping organizations can be exceedingly helpful in your efforts as a novice beekeeper. They are often filled with knowledgeable and experienced persons who are most willing to answer questions and lend a helping hand. These organizations frequently have, as a benefit of membership, association rates for publications. Most such organizations also publish newsletters. Most importantly, beekeeping associations help defend the interests of beekeeping and beekeepers. They deserve your support

RAMBLINGS OF AN ELDERLY BEEKEEPER

It is some time since I first had the audacity to consider myself sufficiently expert enough to actually teach beginners of the craft. Truth to tell I was foolish enough to volunteer when no-one else offered to do the job. Sadly there are still examples of people claiming to be too shy to push themselves forward in situations of this kind.

Unfortunately, the success of an association or group depends upon a goodly source of volunteers to fill the gaps which arise when trying to organise different events.

Being somewhat out of touch with these matters now, I cannot comment on the quality of present day teaching groups.

When I started beekeeping many years ago it was common to find that the hives generally suggested for beginners were the National and the WBC. Well before those days, the craze was for a multitude of different hive types and designs. Nowadays the other types beekeepers tend to use are the Smith, Commercial, Langstroth and Dadant – all very sensible in their different ways.

I have yet to be convinced that the present craze for the Warre design is worth considering or not. I have read reports that in some places (particularly parts of Africa) it is highly successful compared with the usual frame hive (Langstroth).

Over the years I have felt that not enough attention has been paid to introducing beginners to the different types mainly, of course, because it is difficult to find enough beekeepers using these hives such that students can visit, examine and discuss the “pros” and “cons” of each. I have always been a believer in trying most of the different new “inventions” and making judgement upon them by good old-fashioned “trial and error”. This does involve the more than occasional long term storage of unused gadgets which I feel did not come within my consideration of their usefulness to my style of beekeeping.

Bean tin method.



For this you need 2 empty tins that stack on top of each other, an old pair of tights and a warm oven. Select two empty tins that have had their lids cut off – take care if they have a sharp edge! One should have a tapered base so that it fit into the top of the other, (see photo)

Proceed as follows:

1. Into the tin with a tapered base, puncture a series of holes into its base. This can easily be done by placing the can on a block of wood (inside the can) and use a hammer and nail, or a drill to perforate the base.
- 2.
2. Wash & remove the label from both cans.
3. Dry the cans well.
4. Place you wax pieces into a doubled up length of tights and place it into the top can.
5. Place this can onto the top of the other empty can – no holes in this!
6. Stand them in a baking tray.
7. After cooking the Sunday roast switch off the oven and stand the tray in the still warm oven.
8. Leave the wax to melt.

If all goes well the wax will melt and run through the tights mesh leaving the dirt behind. This is a very effective and cheap method for processing small amounts of wax but you will need to experiment to find the best way to do it and may need to re-filter the wax through a fine mesh such a muslin or even an old piece(s) of netcurtain.

Gardening For The Bees!

Monarda.

When you hear the plant name Monarda, it doesn't instantly make you rush out and buy it for your bee-friendly garden. Even one of its common names of Bergamot is n't that encouraging. But if someone says they grow 'bee balm' then I bet your ears prick up?! Monarda is a genus of perennials that come from the prairies, scrub and woodland of mainly the eastern side of North America. They are aromatic plants with distinctive whorls of narrow- petalled, tufted, tubular flowers set above a ruff of purple bracts on stems reaching 45-75cm tall, depending on the variety. The flowers are produced from midsummer through to autumn and are irresistible to bees as they are a great source of pollen and nectar; hence the common name of bee balm. Monarda's other, more common, name bergamot is because the aroma of the leaves is reminiscent of oil of bergamot orange, the distinctive flavouring in Earl Grey tea. There are lots of varieties of bee balm out there and to be frank a lot are very similar to each other. Flower colours vary, with wild forms of the plant having crimson-red to red, pink and light purple hues. Monarda didyma has bright, carmine red blossoms; Monarda fistulosa - the 'true' wild bergamot, has smoky pink flowers. Monarda citriodora and Monarda pectinata have light lavender to lilac-coloured blooms and have slightly decreased flower quantities. 'Cambridge Scarlet' (see picture) is a popular, old variety that has bright red flowers surrounded by striking, brownish-red bracts from July to September and pointed, mid-green leaves.



Monarda looks wonderful planted en masse in the middle of a sunny, mixed or herbaceous border, where it will be smothered with bees (and butterflies!) during the flowering period. It associates particularly well with ornamental grasses, and the flowers make a lovely winter silhouette as they die. It does best in a soil that retains moisture over summer.

How to grow Monarda

Monarda is easily grown from seed. They can be sown indoors in late winter or outdoors where they are to flower in late spring, once the danger of frost has passed. Either of these options will give you flowers the same year. If you want earlier flowering then sow in late summer / early autumn, protect the plants from frost over winter and plant out the following spring.

Sowing Indoors:

Sow 1.5mm (1/16in) deep in pots or trays of good seed compost and just cover the seeds with sieved compost or vermiculite. Make sure the compost is kept moist, but not wet, and seal inside a polythene bag or place in a heated propagator until germination - which usually takes 10-24 days at around 20°C (68°F). Once seedlings are large enough to handle, transplant to 7cm (3in) pots. Hardenoff before planting into their final positions in early summer, 30cm (12in) apart.

Sowing Direct:

Sow in your border, where they are to flower, 3mm (1/8in) deep in a well-tilled soil. Germination takes 10 to 30 days. Thin out when large enough to handle, so that they are finally 30cm (12in) apart. Provide additional water if necessary until the plants reach 30cm (10in) high.

Monarda can be unpredictable and does not initially like soil that is either too damp or too dry, but they do adapt well. I have found a slightly moist soil in sun or light shade works fine. The plants are also susceptible to powdery mildew in very dry conditions and while this rarely causes long-term damage, it can look unsightly towards the end of the summer. You can help reduce this by applying a 5-7cm (2-3in) mulch of well-rotted organic matter around each plant. Cut back hard after flowering in summer to encourage more blooms but resist cutting your bee balm back in autumn, since the stiff, vertical stems look good all winter. Bee balm is a hardy perennial and spreads naturally by underground stems and can quickly colonize a large area. Regular dividing every 2 – 3 years will help control the plant's size, and also minimise powdery mildew disease by increasing the opportunity for air circulation. You can propagate new plants by division in autumn or spring.

Modern Mead recipe

Depending on how sweet or dry you like your mead use about 1.5kg of honey for a dry wine, or about 1.75kg for a sweet one.

Ingredients

1.5 – 1.75 kg honey

600ml cold tea

Camden tablets

1tsp citric acid

Wine yeast compound or special mead yeast and yeast nutrient.

Method

1. Dissolve the honey over a low heat. Add the tea and 1 Camden tablet dissolved in 142ml of boiling water. Place in a 1 gallon fermentation vessel. Top up to almost three quarters full with boiled water, and shake to mix thoroughly. Add the citric acid.
2. Prepare the yeast starter. When must (starter) has been fermenting for about 3-5 hours it should be added to the fermentation vessel. Ensure it is mixed well and top up with more cooled water. Fit an air lock and put in a warm place to ferment.
WATCH IT CAREFULLY.
3. If heavy sedimentation builds up, siphon the mead into a separate vessel, taking just a little of the sediment. When fermentation is complete (4-6weeks) siphon the mead into a clean, sterilised vessel ie. no sediment.
4. See Camden tablet instructions. Dissolve 1 or 2 tablets in a little hot water and add to the mead.
This will ensure fermentation ceases and that the mead clears.
5. Leave sealed under an airlock until the mead is cleared and sediment has formed. Bottle in sterilised bottles, cork, and label.

Store for at least 6 - 12 months - the longer the better.

Bait Hives

Many people swear by bait hives and if you have lost your bees, then you can only gain from this practice. It is generally considered that old hive parts attract bees and many people report swarms in stacks of old equipment. Thomas Seeley, the eminent writer on all things to do with bees, gives the following advice.

1. Place bait hive approximately 5 metres (16.4 feet) above ground
2. Hive should be well shaded, but highly visible.
3. Distance from parent colony not important
4. Total entrance size 1.5 - 2 square inches (10 - 15 sq. cm)
5. Entrance shape unimportant
6. Entrance position near floor of hive
7. Entrance should face south, but this is not paramount
8. Cavity volume should be 1.4 cu. Ft. (40 litres) = 1 brood box
9. Cavity shape unimportant
10. Should be dry and snug. Airtight at top.
11. Type of timber relatively unimportant, but bees may avoid new timber.
12. The odour of beeswax is attractive, but putting in old comb is not advised as this could attract wax moth and can harbour disease.

Swarm lures which smell like lemon grass are commercially available.

That is the advice, but most beekeepers do use old comb from a reliable and disease free source. There is varying advice regarding the height of the bait hive. I remember Ged Marshall (a commercial beekeeper) telling us that 4.5 metres height was advisable. The instructions on the swarm lure that I recently bought states 1.8 - 2 metres

**BBKA Press Release gives guidance on what the public can do to help
with swarms.**

Despite greater awareness by the public of the huge contribution honey bees make to our food supplies through pollination, not to mention the honey they produce, a swarm of bees still has the propensity to scare. The public should not be alarmed if they see or come across a swarm of honey bees. They are doing what honey bees do naturally and are not remotely interested in humans. In fact before leaving their hive the bees fill up their stomachs with honey and are rather mellow; their sole intention is to find anew home to build-up a new colony. As long as the swarm is not provoked it will not do any harm but it is important that the bees are collected by an experienced beekeeper. If left to their own devices they may choose to set up home in the nearest convenient spot which could be a chimney or other inaccessible place. The long winter and late cool spring this year may delay the start of the honey bee swarming season by around four weeks but as soon honey bee colonies are big enough to run out of space in their hives they are likely to swarm. The BBKA urges members of the public to learn how to spot a honey bee swarm and to know what to do when they see one. This is especially important this year when every swarm not collected by a beekeeper could mean the death of that colony in a year when winter losses are expected to be bigger than ever.



We need to gather all the swarms we can to build up bee colonies again. Jane Moseley, BBKA General Secretary, gives some advice: "Honey bees swarm as nature's way of increasing the number of colonies. With honey bee numbers under threat we can ill afford to lose swarms. As long as it is safe and practicable, beekeepers are keen to collect them and give them a new home. Swarms left uncollected are unlikely to survive, which means lost honey production but even more importantly, fewer of these hard working insects to pollinate crops, including our favourite fruits and vegetables. "However, people often mistake groups of other types of bees or wasps for honey bees. Three out of four calls to the British Beekeepers Association are actually about wasps' nests, bumblebee sightings, or other flying insects and not honey bees. The BBKA website has pictures and information to help people to determine if what they have seen is a swarm of honey bees or some other type of insect. Check here http://www.bbka.org.uk/help/do_you_have_a_swarm.php for more information. The public can help by contacting a beekeeper as soon as possible on sighting the swarm - details of the nearest volunteer swarm collector can be found on the BBKA website.

Collecting swarms.



Remember when collecting swarms that your BBKA public liability insurance does not cover you for damage to property, or for collecting them from dangerous locations. The cover is limited and you should be aware of that.

Please also be aware that you cannot charge for removing swarms.

If you do so, you cease to be a hobbyist beekeeper and become a professional.

Legitimate expenses are a different matter.

It is tempting on seeing a swarm to think that you are capable of collecting it.

Before you do, rethink and this time include 10,000 bees, a skep and a brush into the equation

MAKING SPLITS

It infuriates some people when someone gently suggests maybe there is a better way to do something. Other beekeepers will accept suggestions and advice from their peers, but climb the walls when some ignorant, mouthy hobbyist presumes to try to tell them how to keep bees. Oh brother, they sharpen their hive tools and are out, I hope only figuratively, for blood! This time, I, a hobbyist, am going to really put my foot in it. I may get in trouble when I say, "Many commercial beekeepers and most hobbyists don't know how to make splits." At the very least, I think this statement may bring some screaming and hollering. Some beekeepers examine a colony and when they find it has maybe eight or ten frames of brood, they take half the brood and half the bees and put them in another hive. Then, after seeing there are eggs in both hives, they let the bees raise their own queen in the hive that didn't have a queen. At a higher level of expertise, the person making a split would make sure each half of the split has about half the honey and half the pollen and usually he will move the splits to another yard. He also restricts the entrances for a while, so the splits, demoralized by being split and moved, don't get robbed out. Going further up in expertise, the person making the splits or supervising, will make the split quite late in the day and will immediately screen the entrance. He will move the splits so one side of the split doesn't end up with all of the field force and the other half none. He also may provide a breeder-raised queen to the queenless half to save honey production time. You may ask, "What's wrong with that? The book says to do it that way and that's the way people have been doing it for years." I will agree with you – that's what the books say and that's the way people have been doing it for years, but I believe it's dead wrong! An article in the ABJ mentioned that a colony of 10,000 bees had 2000 fliers; a colony of 20,000 bees had 5000 fliers; a colony of 30,000 bees had 10,000 fliers; etc. using those figures, you immediately can see why a 50-50 split is wrong. Say you had a hive of 40,000 bees and you split it. Instead of 20,000 fliers you now have two hives of 20,000 bees, each of which has only 5000 fliers. Each hive has barely enough fliers to sustain itself. So make your splits with one frame of eggs, one frame of just emerging brood and adhering bees, two pollen frames and about 75% of the honey. Then shake young nurse bees from an open larvae frame into the split too. Of course you would be advised to add a queen to the split also at this time to avoid lost production while a new queen is being reared. Let's look at what happens. The parent colony has not been hurt. It has all the field force, so in just a very few days it can bring in enough pollen and nectar to sustain itself. The split has the stores to make up for no field force and can survive until it develops one. Of course, it not only has no field force, but also may not have enough guards. So, for the first week, I'd completely plug the entrance and provide ventilation by putting a No. 16 box nail under the lid. In a week you add a frame of capped brood. Very soon you will have a colony of 20,000 bees. Adding another frame of capped brood a week later will put the split on the road to production. But, do be careful and feed the splits if they need it because there is no use in not capitalizing on all your good work. If this article has changed your thinking, go try a few splits made this way. Then, you can decide if you are sadder but wiser.

GLIMPSES FROM THE PAST.

ELECTRICITY AND THE BEES American Bee Journal, February 1880

In our last Journal we remarked that we had not heard of electricity being used to quiet the bees while taking the honey from them. Since that, we have received from Greiner Brothers, Naples, a long-account of experiments with electricity in hiving bees, made by Herr Freiwith, in Germany. His original idea was to stupify the bees by application of electricity, and experimental trials on single bees and clusters, resulted in his being able to shock the insects into a state of insensibility lasting for periods varying from minutes to hours, according to the strength of the current employed. Encouraged by his success, he applied the method to bees actually in the hive. With this aim, he inserted the ends of two conducting wires into a fully occupied honeycomb, and turned on the current for a moment. The bees soon strewed the floor of the hive and did not recover their activity till half an hour after. Herr Freiwith then constructed a small portable apparatus consisting of the battery and induction coil for generating the electricity, a key to turn it on or off, and wires attached to rods whereby it can be directed on a colony so as to shock the bees into a harmless insensibility.

BEES AND HORSES British Bee Journal, Sept 1898

Edwin Wide reports that he had a meadow mowed without having a horse stung, the night horse going within a yard of the entrances of 17 colonies. Prior to the horses being taken to work, he made a solution of carbolic acid and water, and, with a cloth dipped in the solution and then wrung out, carefully wiped the horses all over their bodies and limbs.

SWARMS LOSING WEIGHT IN TRANSIT British Bee Journal, Sept 1898

Trouble has been reported between sellers and buyers, the buyer complaining that the colony sent by rail was not up to the agreed weight. The trouble comes from the fact that the journey by rail, with its accompanying jolting and excitement, causes a loss in weight. Even without any journey there is a serious loss in weight. One man reports that a swarm hived at noon lost 5 ounces in 10 hours, and 14 ounces in the first 24 hours. Another swarm sent by rail lost 27 ounces from one day to the next

CALIBRATING REFRACTOMETERS.

It's been a nail-biting winter of wondering if our refractometers work the same way as Aladdin's lamp. Bob Logan finally revealed their secret. Due to the remarkably consistent properties of Extra-Virgin Olive Oil, one drop of it on the slide will always read between 71 and 72 on the "Brix" scale – the middle one in most refractometers. If you set the lock-nut to show any such Oil at 71.5, you will have correctly calibrated the neighbouring scale at the same time.

HONEYBEES TIME FORAGING TRIPS TO EXPLOIT DAILY BLOOMING CYCLES

Gardeners know that plants open and close their flowers at set times during the day. For example, the flowers of catmint open between 6:00 a.m. and 7:00 a.m.; orange hawkweed follows between 7:00 a.m. and 8:00 a.m.; field marigolds open at 9:00 a.m. But plants cannot release their scent in a timely manner simply in response to an environmental cue, like the lowering of the light levels. To coincide with the appearance of the nocturnal insects, the plant has to anticipate the sunset and produce the scent on a circadian schedule. Flowers of a given species all produce nectar at about the same time each day, as this increases the chances of cross-pollination. The trick works because pollinators, which in most cases means the honeybee, concentrate foraging on a particular species into a narrow time-window. In effect the honeybee has a daily diary that can include as many as nine appointments — say, 10:00 a.m., lilac; 11:30 a.m., peonies; and so on. The bees' time-keeping is accurate to about 20 minutes. The bee can do this because, like the plants and just about every living creature, it has a circadian clock that is reset daily to run in time with the solar cycle. The bee can effectively consult this clock and "check" off the given time and associate this with a particular event. They live by sets of instructions that are familiar to computer programmers as subroutines – do this until the stop code, then into the next subroutine, and so on. Bees have an innate ability to work out the location of a food source from its position in relation to the sun. They do this even on cloudy days by reading the pattern of the polarization of the light, and pass this information to other bees. In the dark of the hive, they transpose the location of a food source in the horizontal plane through the famous "waggle" dance into communication in the vertical plane of the hive. Honeybees can tell their sisters how far away the food is up to a distance of about 15 kilometres. For good measure, they can also allow for the fact that the sun moves relative to the hive by about 150 an hour and correct for this when they pass on the information. In other words, they have their own built-in global positioning system and a language that enables them to refer to objects and events that are distant in space or time.

German scientists in the early part of the last century called this ability of bees to learn the time of day when flowers start secreting nectar and visit the flowers at appropriate times *zeitgedächtnis*, or time sense. But the species of flowers in bloom, say, this week, is likely to be replaced by a different species at a different location next week or the week after. The bee needs a flexible, dynamic appointments system that it continually updates, and it has evolved an impressive ability to learn colours, odours, shapes and routes, within a time frame, quickly and accurately. While the initial dance by a returning scout bee informs her sisters of the location and distance of food plants and the quality of their nectar, bees that visit the food source learn to 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. Although most animals, including humans, cannot sustain long-lasting periods of activity without circadian rhythms, honeybees have developed a marked flexibility in their circadian rhythm that depends on the job they are doing. Whereas a particular circadian determined behaviour is usually fixed to a certain phase of the cycle, in honeybees the circadian rhythm is dependent on the job the bee is doing. Adult worker bees perform a number of tasks in the hive when they are young, like caring for eggs and larvae, and then shift to foraging for nectar and pollen as they age. However, if the hive has a shortage of foragers, some of the young nurse bees will switch jobs and become foragers. The job transition, whether triggered by age or social cues, involves changes in genes in the honeybee brain; some genes turn on, while others turn off. Young worker bees less than two weeks of age who typically nurse the brood around-the-clock display no circadian rhythms. Older workers (more than three weeks) typically perform foraging activities and have strong circadian rhythms that are needed for the time compensated sun-compass navigation and timing visits to flowers. Recent research in Israel has shown that when young worker bees are removed from caring for the brood and placed in individual cages, they rapidly show circadian rhythms in their behaviour. Newly emerged bees isolated in individual cages typically show circadian rhythms in locomotor activity when at 3-14 days old, ages at which most bees in the hive perform around-the-clock nursing activities as mentioned above. Older foragers who revert to nursing duties switch back to around-the-clock brood care activity similar to that of young nurses in typical colonies.

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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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The last of Apis cerana?

The Asian hive bee is suffering a precipitous decline and is threatened with extinction in its entire native habitat.

This has already happened in Japan where this native bee species has been completely replaced by the European honeybee.

Today in Japan only a few beekeepers and research institutes maintain Apis cerana colonies. In China, out of more than 8.5 million colonies of bees kept in modern hives, 70% are exotic Apis mellifera.

Similarly, in South Korea, only 16% of beekeeping is with native Apis cerana. In the Hindu Kush, Himalayan range, beekeeping with Apis cerana is being replaced by Apis mellifera at such a rate that the population of the native Apis cerana is declining to a level that is no longer viable. From Bee World Dec 11.