The Auricle

Moray Beekeepers Association Newsletter

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EXAM SUCCESS IN MORAY

From left to right, back row – Ian MacAndie, Andy Watson, Tony Harris, Anne Black.
Front row – John Baillie, Donna Clark, Barbara Westie, Dianna Baillie

Certificates were awarded to the successful MBA members in the Scottish Beekeepers Association education programme at our AGM and pride of place went to Barbara Westie who was awarded the Scottish Expert Beemaster certificate. Well done Barabara!

Basic Beemaster Certificates, with distinctions were awarded to Anne Black, Bob Malcolm, Joy Malcom, Ian MacAndie, Helen Webster and Paul Webster

The next step after taking the Basic Assessment is to sit some of the modular exams and congratulations to Dianna Bailie, John Bailie, Donna Clark, Ron Clark, Joy Malcolm, Ian MacAndie and Andy Watson who were successful in Module 1 'Honeybee Management' .

Tony Harris added the Honey Judge qualification to his collection.

There are 7 modules in all and after passing them a candidate is awarded the Advanced Certificate

Barbara Westie passed the Aparian Certificate in 2013 and having previously been awarded the Advanced Certificate she was presented with the Expert Beemasters Certificate, the highest beekeeping qualification available in Scotland.

We now have three MBA members qualified to the Expert Beemaster level.

Quite a few members sat exams in March and congratulations are also due to Donna & Ron Clark, Tony Harris and Barbara Westie who all passed Module 9, Microscopy, with distinctions awarded all round!

And hot off the press, Dianna & John Baillie and Andy Watson have just been informed that they have passed Module 2, Honey Products and Forage.

If you are interested in acquiring some beekeeping qualifications, in the form of written exams or practical assessments, please contact MBA Training team leader, Tony Harris.

MARKING & CLIPPING QUEENS

Approximately 30 members attended Birnie Training Apiary for the first meeting of the season in April and it was mild enough for the hive inspections to take place. Three groups were formed led by Andy Watson, Tony Harris and Martin Bridges and 6 queens were found, marked and clipped in double quick time

Queens are usually marked early in the season when the colony is small and easy to handle, making queens easier to find. Also, there are usually no drones in the hives in early spring so the bees should think twice before trying to replace her by supersedure. Any new queen would struggle to mate adequately in a cold spring with very few drones around so if you are going to clip your queens, do it in the spring time!

The main reason we mark queens is the obvious one – to make it easier to find her.

WHERE'S THE QUEEN?

This is important because practically all methods of swarm control require the beekeeper to find the queen and a well marked queen makes the task so much easier. Also if a colony becomes bad tempered and the queen has to be changed it can be done quickly and efficiently if she is marked.

PRESS IN CAGE

Another reason for marking a queen is to be able to know how old she is.

There is an internationally recognised colour code for marking queens as shown below.

COLOUR	YEAR
White	1 or 6
Yellow	2 or 7
Red	3 or 8
Green	4 or 9
Blue	5 or 0

Marking the queen will also let you know if she has been superseded (replaced) by the bees when you next enter the hive. This is a common occurrence and usually takes place in late summer or autumn after you have finished your inspections. You may be surprised to see a totally different Queen in the hive and all will be well if she managed to mate properly before winter set in. If she failed to mate she will be a drone laying queen (DLQ) and you will have to take action to replace her or unite the colony with another after removing the DLQ

The correct type of marker, which can be purchased from equipment suppliers, should be used, as use of some marking material, eg. Amyl acetate can prove fatal.

Make sure you don't apply too much paint as you may inadvertently glue the queen's wings together so she won't be able to fly at all and you will make her unattractive to the workers! There is then a chance that the bees will kill her and raise a new one!

Also, when releasing the queen from the cage always place her onto a frame containing brood where the bees would expect to find her. I also blow some smoke from the smoker over her to mask the scent of the paint.

Ian Craig gives some good advice on marking and clipping queens in his online publication, 'My Beekeeping Year' which can be found on the Scottish Beekeepers Association website and I reproduce below in italics.

'I do not mark and clip queens during the summer in which they were born because there is a danger that the bees will detect your odour or that of the paint and supersede your new queen. Whereas if the marking is done in April, before the drones are flying and fertile, the bees know that she cannot be replaced and there is little likelihood that she will be killed. As a further safeguard, I never handle a queen.

When found, I use a 'press-on' type queen cage to first clip and then mark her. Only about a quarter of one pair of wings need be clipped.

MARKING THE QUEEN

When marking, ensure that you allow the paint to reach the hard surface of the queen's thorax. If you only paint the thorax hairs, the paint will very soon wear off. I keep queens for no more than two full seasons, therefore I only use yellow or white marking paint, which are more easily seen in a populous colony.

A MARKED QUEEN IS EASY TO SPOT!

Once marked, I ease the pressure of the cage on the queen and keep her in the cage until the paint has dried. When looking for a queen, concentrate solely on that task. When found, clipped and marked, she should remain in the cage until you have carried out other tasks, so that you know her whereabouts'. Thanks Ian!

Some beekeepers also glue a small number on the thorax of a queen so that they can identify her. This is useful if you are engaged in a queen rearing programme with many queens and wish to breed for a particular trait.

A NUMBERED DISC GLUED TO THE QUEEN'S THORAX

Other beekeepers simply pick the queen up, hold her between thumb and fingers and clip the wing.

CLIPPING A QUEEN BY PICKING HER UP!

Clipping a queen is a swarm control technique that allows more time between inspections, 10 days rather than 7 with an unclipped queen (see page 4 for more information)

If you have never clipped a queen before you can always practice on a few drones, or just do it. When using the press in cage, be patient! She invariably sticks a wing up through the cage and it is then easy to snip with a pair of sharp scissors.

And there is an easy way to remember the correct colour marker for a particular year – Check the colour of your membership card!!

‘BOTANY FOR BEEKEEPERS‘

By Tony Harris

Botany is the scientific study of plants. "Plants," however include a wide range of living organisms from the tiniest bacteria to the largest living things - the giant sequoia trees, also known as the Giant Redwood. These gigantean trees, naturally found in California, can grow to over 300 feet high with a 35 feet base diameter and some are amazingly estimated to be 3,500 years old.

giant sequoia tree, a non flowering plant

Plants can be divided into non-flowering types such as algae, fungi, lichen, mosses, ferns and conifers, known as ‘Gymnosperms’ and flowering types known as ‘Angiosperms’ and it is to these that our bees are intrinsically linked.

Now you may not want to scientifically study plants but your beekeeping experience will be greatly enhanced if you have an understanding of how bees and flowering plants interact and as your knowledge increases you can start creating your own bee friendly garden

Flowering plants - Angiosperms

CLASSIFICATION & NAMING OF PLANTS

Plants have common names such as bluebell or snowdrop but there are many different common names used in different parts of the world. For example ‘naked lady’ and ‘meadow saffron’, also known as the autumn crocus refers to the same plant so botanists use the Latin names of plants to enable correct identification.

They are placed into a Family group, then into Genus of similar plants and finally into individual Species which are unique. Families include Asteraceae (Daisy), Fabaceae (pea), and Brassicaceae (crucifers) and there are many more. To give you an example of plant classification we will look at a plant that should be known by most of you.

Oilseed rape, *Brassica napus*

Oilseed rape (OSR) is an excellent plant for all types of bees producing nectar and pollen in abundance and autumn sown OSR can provide an excellent spring honey crop. It is member of the Brassicaceae family, of the genus, Brassica and the species *is Brassica napus* (note the correct way of writing the Latin names!)

Other members of the genus Brassica include cabbages and mustards, identifiable as they all have 4 sepals (the outer parts of the flower, often green and leaf-like that enclose a developing bud) and 4 petals but there is only one species of *B. napus.*

WHAT’S IN A NAME?

When it comes to species we find that there is a list of names that all have a particular meaning and these give a clue to where it grows or some other characteristic, e.g. *officianalis* – of use to man, from the apothecary, (i.e. medicinal use); *repens* – creeping; *vulgaris* – common; *fruiticosa* – fruity; *odararatus* – smelling; *pratensis* – of the meadow; and *angustifolium* – narrow leaved.

To illustrate this, if you are unfortunate to have Creeping Buttercup in your garden like I have you will know that it ‘creeps’ at an alarming pace and can soon take over your herbaceous border. Its Latin name is *Ranunculus repens*, the ‘*repens*’ referring to its creeping characteristic. Incidentally, although not visited by honeybees, some species of Mason and Mining bees collect pollen exclusively from buttercups and this shows that what I consider a weed in my garden is still a valuable part of the local ecosystem.

Rosebay Willowherb, Chamerion angustifolium

Remember that ‘if a plant includes the name ‘*angustifolium*’ it means ‘narrow leaved’!

Rosebay willowherb, *Chamerion angustifolium* is a striking wild plant with tall spires of large pink flowers and narrow leaves that grow like a staircase around the stem, flowering from the bottom up. It is an excellent plant for many kinds of bee flowering throughout the summer.

Honey is very pale in colour, sometimes water white and of good density but without any very distinctive flavour. It is valuable for blending with dark and strong flavoured honeys. Granulation takes place with a very fine grain. The pollen is a distinctive bluey/green colour

PLANT OF THE MONTH

Dandelion, *Taraxacum officinale*

My bee plant of the month is the humble Dandelion, Taraxacum Officinale, a member of the Asteraceae family. Considered by gardeners to be an annoying and virtually indestructable weed due to its deep tap root, to beekeepers it is an excellent bee plant providing nectar and pollen all year around especially early in the season when the brood nest is expanding. Your bees will readily forage on dandelion and as well as seeing golden yellow or deep orange pollen going into the hive in the bees’ pollen baskets you will notice that the comb built when the bees are working it is a distinct light yellow colour. The honey is quite strongly flavoured and crystallises quickly with a coarse crystal.

There are between 100 and 200 individual flowers in a single dandelion head called ray florets and they close at night or in the rain to protect the pollen and nectar. Each ray floret makes one seed forming the delightful puff ball parachute heads we can all remember blowing when we were children and which enables wind-aided dispersal over long distances.

The name, ‘officinale’ tells us that Dandelion has a medicinal use and it is said to be effective in aiding the kidneys, digestive organs, and as a diuretic. It can be eaten as a spring green in salads, served steamed or sautéed with butter and garlic, cooked into soups and stews.

In future articles I intend to look at some of the extraordinary ways that plants attract insects and also offer some advice on how you can attract bees and other pollinators into your garden with a simple planting scheme.

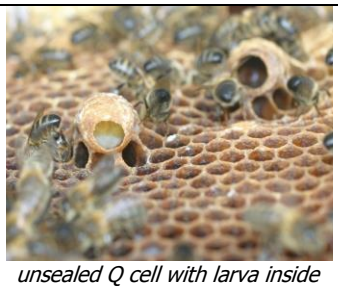
(Reference: ‘Plants For Bees’ W.D.J. Kirk & F.N. Howes)

THE SWARMING SEASON IS UPON US!

Swarming is the honeybees' natural process of ensuring the survival of the species but there are certain factors that bring the swarming process on quicker than normal and if you have an understanding of this you can stay one step ahead of your bees. The main reason a colony swarms is due to a reduction in the amount of 'queen substance' (Q.S.) being passed around the hive. This can be due to an aging queen who will be producing less Q.S. or due to overcrowding in the hive. Q.S. is a pheromone produced by the queen and it is passed around the hive to each worker by reciprocal feeding, known as trophallaxis. Q.S. prevents the development of the workers' ovaries and inhibits the building of queen cells in the colony. Any congestion (overcrowding) in the hive interrupts this process of food transfer and thus acts as a barrier in the distribution of Q.S.

A minimum threshold amount of Q.S. is required by each worker bee to prevent the building of queen cells. When the supply of Q.S. is below the threshold required for colony cohesion, the queen's egg laying rate will rapidly decrease because the workers feed her less. Those eggs that have been laid in the queen cups, which are part of every normal colony, will not be removed but will be allowed to hatch out into larvae. Queen cells will result and the colony will be on its way to swarming.

queen or play cups



unsealed Q cell with larva inside

I sealed on left & 1 unsealed Q cell

good size Q cell on right

Q emerging from cell

marked queen

marked & clipped queen

nucleus box

Relieving congestion in a hive minimises swarming so it is important to give your bees plenty of space both in the brood chamber and by adding supers in good time. The key is to give the queen room to lay and the bees room to spread out while also providing them with comb space to hang nectar in while the water is being evaporated off. When the bees are covering three quarters of the frames in the brood box, add a super of drawn comb if you have one. When the bees are occupying two thirds of the first super a second super should be added. The second super can be of foundation and if it is it should be placed below the first super, so the bees have to pass through it to reach the top super they have been working in, while it will also benefit from the heat in the brood chamber. If you don't have any drawn comb you can add supers of foundation from the start but bear in mind that the bees will only draw it out if there is a honey flow on – if there isn't you will have to feed sugar syrup. Also, use fresh foundation from a sealed pack. If it has been fitted to frames from last season you can warm it with a hair dryer or place it in a greenhouse or even the car to raise its aroma and make it more acceptable to the bees.

The other thing worth noting is that the amount of Q.S. produced by a queen decreases as she gets older so it is important to maintain young queens if you can, ideally no older than two full seasons.

The two management techniques to control swarming are firstly, clipping the queen's wings early in the season and secondly, rigorously timed inspections to ensure the beekeeper does not miss queen cells, once built up.

If you have a clipped queen and your bees are not making queen cells you can safely carry out inspections every 10 days. If your queen is not clipped then you should carry out 7 day inspections. The reasoning is that a queen cell is sealed 8 days after the egg is laid and an unclipped queen will usually emerge with a swarm on day 8. A clipped queen however will usually emerge with a swarm when the first virgin is about to emerge and that will be on about day 16. The clipped queen, being unable to fly, will usually be lost on the ground and the swarm will return to the hive, awaiting the emergence of the first virgin queen when they are likely to leave with her. This gives the beekeeper an extra week to take action and although the queen is lost, the bees are not (and it is they that gather the honey) until the first virgin queen is on the wing.

Despite your best efforts a time will come when you will find queen cells in your hive and some method of swarm control must then be used or the honey yield will be dramatically reduced. Don't confuse what are called 'queen cups' (see photo above) with queen cells. Queen cups are built by the bees all the time but unless you see one of these actually with a larva in it you can ignore it as far as swarm control is concerned. It is best to have a plan now! In simplest terms you will need a nucleus box or a spare hive for each colony of bees you own. The idea is to separate the queen, along with some brood, bees and stores, from the queen cells, brood and remaining bees. If all goes well with your chosen swarm control technique you will have doubled your number of colonies or if you don't want to make increase you can unite the two colonies later after removing the oldest queen.

If you do not have a clipped queen and you find queen cells in your hive which you destroy, don't fall into the trap of thinking you can leave the next inspection for 7 days (as it takes 8 days for a queen cell to be sealed after the egg is laid, right? WRONG!) If the bees are set on swarming they can take a 3 (or even 4) day old larva and feed it royal jelly so it becomes a queen. This means that a queen and swarm may issue from your hive as early as 2 days after your inspection. This is because the egg hatches after 3 days, and if the bees then select say a 3 day old larva, it will be sealed 2 days later on day 8, and the swarm will be gone before you know it. The same principle applies if you have clipped queens although you will have more time, about 9 days before the first virgin leaves with the swarm.

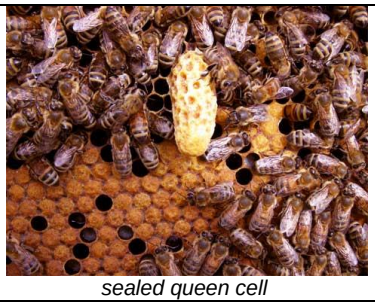
'NUCLEUS METHOD' OF SWARM CONTROL by Andrew Tassell

Equipment needed: Nucleus hive, (a complete empty hive can be used instead of a nuc hive), dummy board, hive stand.

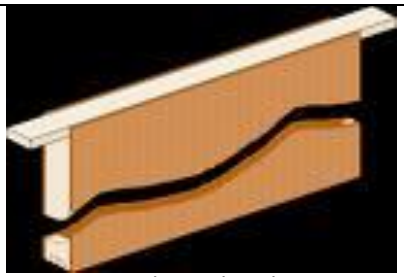
1st Inspection: If you see queen cups with eggs or young larvae inside cut them out. This might be enough to dissuade the bees from swarming (if helped by a change in the weather for example). It also gives you a week's grace to get equipment ready.

unsealed queen cell showing larva inside – time for swarm control

swarm cells



sealed queen cell



dummy board

Inspection a week later: If there are queen cells with well developed larvae in them you will need to make up the queen right nucleus. Find the queen (this is why it pays to mark her earlier in the season). Place her and the frame she's on in the nuc hive, cutting out any queen cells on the frame.

Back in the hive select a queen cell to raise a queen in. It should be a good size, nice shape and have a well-developed larva in it. Don't pick a sealed queen cell, as it might be empty. Use a bee brush to brush the bees off the frame and destroy any other queen cells. Mark this frame with a drawing pin on the top of the frame.

In the nuc hive place a frame of brood and one of stores making sure there are no queen cells. Shake in bees from a fourth frame and put the dummy board in and close up the nuc hive. Place it on the hive stand 3 to 4 feet from the parent hive and block the entrance lightly with grass.

In the parent colony, without disturbing the marked frame with the queen cell, shake the bees off the remaining frames and destroy anything that looks like a queen cell. Close up the hive.

***A* week later**: In the parent hive go through and destroy any queen cells apart from the one on the marked frame that will now be sealed. Use a brush to remove bees from this frame when checking it so as not to disturb your chosen queen cell. The timing is important – it must be a week later, i.e. 7 days!

Two weeks later: The new queen should have emerged and should be starting to lay. If there are no signs of eggs, leave it for another week. If there are still no eggs, you can place a test frame with eggs from the nuc hive in it; if the bees raise queen cells your hive is queenless, if they do nothing your queen is there and hasn't started to lay yet.

MAKE UP A BAIT HIVE TO CATCH A SWARM

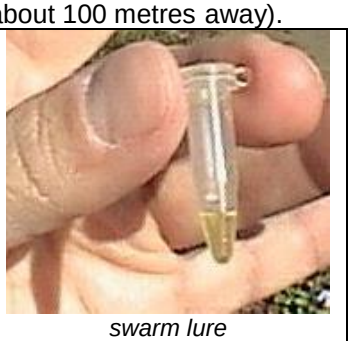
With bees and swarms at a premium in recent seasons you can increase your chances of getting hold of some bees by making up a bait hive to see if you can entice a passing swarm to set up home in it.

A bait hive can be almost anything – a nuc box, a spare hive, a roughly made up box or even a skep or wicker type basket. You will increase your chances of attracting a swarm if you fill it with frames of wax foundation or even better, frames of drawn comb, and, you place the hive off the ground and in the vicinity of a feral colony of bees (about 100 metres away).

bait hive up a tree

A swarm moving in!

basket bait hive entices swarm



swarm lure

In the days prior to swarming, scout bees will be busy searching for a new nest site. Ideally they are looking for a cavity of between 20 and 80 litres, with a relatively small entrance of less than 70cm square at the bottom of the cavity. They prefer the cavity and the entrance to be a few metres above the ground and if the cavity has comb in it, built by a previous colony; it is particularly attractive to the bees as they can use it immediately to store nectar and pollen.

So make your bait box as attractive to the bees as you can and you may be rewarded with a new colony of bees!

A final tip is to use 'Swarm Lure', a mixture of pheromones, which can be bought from suppliers and pinned inside the hive or box. It is said to attract swarms into the hive and so maybe increase your chances further.

THE SCOTTISH BEEKEEPERS ASSOCIATION

AUTUMN CONVENTION
Saturday 27th September 2014
8.45am to 5.10pm
in SRUC Barony Campus,
Parkgate, Dumfries,
DG1 3NE

Ian Molyneaux – Regional Bee Inspector, North of England

Long Range Beekeeping – Managemnet of my bees in Ireland
The development of the Manchester BKA's centre of beekeeping excellence

Simon Rees – FIBKA, Dublin

How Bees Fly
Langstroth and His Breakthrough
(The development of the moveable frame hive)

Alan Riach SBA

Polymerase Chain reaction in the SBA

Tickets £30 inc coffee, lunch and tea (students half price)

TRADE STANDS
BeeCraft, Bee Books New and Old, SBA, Brunel information, Solway Bee Supplies, Scottish Govt Bee Inspectorate, Abelo, British Bee Feeds, Beehivemaker

Bookings for Convention to Mike Thornley
Glenarn, Glenarn Road, Rhu, Helensburgh, G84 8LL
Tel. 01436 820493 Email: masthome@dsl.pipex.com

There will also be two 90 minute Brunel Microscopy Workshops on 'Set up and Camera work' at a cost of £5.(numbers are limited)
To book contact: Peter Mathews on 01461 205525

MORAY BEEKEEPERS QUEEN REARING AND NUCLEUS CREATION COURSE

Following on from the successful course in 2013 MBA will be running the above course

on Saturday 7th June 2014 from 10am to 4pm at Birnie Training Apiary near Elgin

This full day course will cover queen rearing in a queenright colony, hands on grafting practice, nucleus creation and the use of Apidea mini mating hives.

The £30 course fee includes lunch, tea, and coffee and a detailed hand-out of the techniques employed.

To book your place or for more information
Contact: Tony Harris on 07884 496246
Email: tony@moraybeekeepers.co.uk

Please note that numbers are limited so book early to avoid disappointment

ASSOCIATION HONEY EXTRACTORS

If you don't have your own honey extractor you can borrow one of the Associations. The one on the left is a heather honey press and the one on the right is a manual radial extractor for liquid honey.

You can borrow them for free by contacting

Anne Black, Tel. 01343 810899, or
Andy Watson, 07786247327

SCOTTISH BEEKEEPERS ASSOCIATION (SBA)

Moray Beekeepers Association is affiliated to the SBA and you are encouraged to join. Membership of £30 a year will give you a monthly magazine, £2 million Public and Product liability insurance, a compensation scheme if you lose your bees and access to beekeepers throughout Scotland,
Contact membership convener: Mr. Phil McAnespie, 12 Monument Road, Ayr, KA7 2RL
SBA web site: www.scottishbeekeepers.org.uk

BEESUITS/GLOVES /SMOCKS

Quality bee suits and clothing from BB Wear, for MBA members who receive a 15% discount (please order via the MBA Secretary)
BB1 Full suit £84.00
www.bbwear.co.uk/

'QUEEN REARING PROGRAMME 2014'

This year's queen rearing project will commence in mid-May and to get involved please contact Tony Harris on Tel. 07884496246,

The Association website is packed with lots of useful information on beekeeping and bees and has an interesting blog that you are encouraged to contribute to. It is well worth a visit – the address is

www.moraybeekeepers.co.uk

Items for inclusion in the Newsletter to be sent to the Editor: Tony Harris, Cowiemuir, Fochabers, Moray, IV32 7PS or you can e mail: tonyharris316@btinternet.com or phone 07884 496246

PLEASE REMEMBER TO PAY YOUR SUBS FOR 2014, £12 ADULT, £7 OVER 65YRS AND 12-16YRS!