CANTERBURY BEEKEEPERS

A branch of Kent Beekeepers Association

EDITOR'S NOTES

First order of business is to thank David Cockburn and Jenny Cotterill for organizing our Christmas meal at the Veg Box Café on Wednesday. A good time was had by all, and the food was very popular.

This is the time of year where there can be little active beekeeping, but you shouldn't forget to treat your hives for varroa. The local mentor groups are all gearing up to do this in late December or January, so read the article on p2 to get involved.

Whilst you might be focusing on your Christmas list, remember that the various suppliers have sales, usually just after Christmas, so save a few pennies! There are a variety of devices to help you assess the state of your colony and on pp 7-8, I record observations based on a full year of hive weights. You might also be considering how you can improve your garden for bees – whether solitary, bumble or honey. Folks at the University of Sussex have been trying to put some academic rigour to the recommendations that can be found in many beekeeping books. Steve Alton described much of this at a recent DDBKA meeting, and I have reproduced some of the research paper that describes their work.

Your newly elected committee is working to finalise the winter programme of talks, and we've penciled in all the winter talks, subject to availability of various speakers. As has become customary, we won't be meeting in January. However, we will be planning for the active season at a January committee meeting so please use the discussion forum to share your ideas.

Adrian

Next Meeting

BEE - FARMING

Whitefriars conference room, Canterbury

Wed 5th February

7.30-9.30pm

Joining instructions – see page 2

CBKA OFFICERS

Chairman: Julian Audsley
Briar House
Waldershare Road
Ashley, Dover CT15 5JA
0776 183 9119

Treasurer: Joan McAllister
42 Canterbury Road
Lydden, Dover CT15 7ER
07824 668042

Secretary & Newsletter Editor: Adrian Davis
24 The Grove
Deal CT14 9TL
07816 975286

Membership Secretary
Jenny Cotterill
94 Old Dover Road
Canterbury CT1 3PF
01227 768 470

Committee Members
Sue Clapson
Michael Roberts
David Cockburn
Chris Bailes
Maggie McKenzie

The easiest way to contact us is via the website, but you can also e-mail **cantbees@gmail.com**

Contact Newsletter editor to contribute articles

DECEMBER 2013

DATES FOR DIARY

11 January 2014	54th Annual Delegates' Meeting, BBKA, The Chesford Grange, Chesford Bridge, Kenilworth CV8 2LD
3 February 2014	Last day to send off BBKA exams application to Angela Merritt
5th February 2014	Branch meeting, 7.30pm, Whitefriars management suite. Talk by a bee farmer, to be confirmed
5th March 2014	Branch meeting, 7.30pm, Whitefriars management suite. Talk by a bee scientist, to be confirmed
22nd March 2014	BBKA examinations, Lynsted Junior School
2nd April 2014	Branch meeting, 7.30pm, Whitefriars management suite. Julian Audsley, Joan McAllister, Adrian Davis Basics of queen rearing

OXALIC ACID SAFARIS

Mentor Group Support

We encourage all members to practice integrated pest management for the control of varroa in your hives. Late December or early January is the ideal time to use the "OA trickle method", as there is little or no brood in the hive, so all varroa will be phoretic, and vulnerable to oxalic acid. If you have participated in a mentor group this year, look out for an email from your group leader, as we thought it would be a good opportunity for the groups to meet and perform OA treatment together. Whilst the hives each will be only open for a couple of minutes, we can also review our year and talk about plans for 2014.

If you are not yet participating in the mentor groups or perhaps are a beginner and would like to have an early opportunity to see inside a beehive , here's a list of the areas covered, and the group leaders. Email cantbees@gmail.com to be put in contact:

Canterbury/Faversham	Chris Bailes/Dave Cockburn
Deal	Adrian Davis
Herne	Michael Roberts
Folkestone/Ashford	Dougal Hendry
Womenswold	Julian Audsley/Joan McAllister

One aspect of trickle treatment is the preparation of the solution. You can buy pre-prepared solutions, but we plan to get crystals of oxalic acid, and subdivide into appropriate amounts to be dissolved in sugar solution. Let your group leader know if you need to source OA, so that we can organize this ahead of time.

Dave Cockburn

MEMBERSHIP RENEWAL

Last chance!

Subscriptions were due on 1st October. I will need to complete a return for BBKA by end of December – if you haven't renewed by then, you won't be included, and membership benefits, including emails, newsletters and other correspondence will be suspended.

The renewal forms are available from our website here – and if it is convenient for you, the transaction can be completely electronic, as we can accept BACS transfers into our bank account. Don't forget to GiftAid your membership – it costs you nothing, and enhances the value of your membership subscription to CBKA/KBKA by 20%.

Jenny Cotterill

STUDY GROUPS

Preparation for BBKA modules

We have a small group of folks who are working towards the next examination sitting in March. Whilst the objective should be learning, rather than simply passing an exam, Adrian and Julian will be happy to review your model answers to see if they can be improved. If you are interested to know more, or perhaps are thinking of studying for a module, please contact Julian or Adrian. The areas of study are:

Module 1 - Honey bee Management
Module 2 - Honey bee Products and Forage
Module 3 - Honey bee Pests, Diseases and Poisoning
Module 5 - Honey bee Biology
Module 6 - Honey bee Behaviour
Module 7 - Selection & Breeding of Honey bees
Module 8 - Honey bee Management, Health and History
More details of the syllabus for each paper can be found at this link.

Adrian

KBKA BUSINESS

Michael Roberts and David Cockburn are our newly elected representatives at the council, and Michael was able to attend the recent council meeting on 23rd November. Here's a very brief summary of the discussion topics:

- Voted against new BBKA subscription increase proposal – this will be Kent's position at the Annual Delegates Meeting of BBKA in January 2014.
- Revised membership form endorsed
- Education committee looking for new members
- Discussion of (a return to) intermediate certificate, rather than modules
- Maintain BeeCraft at 48 pages
- NHS will be at Weybridge
- Some desire to rework KBKA website
- Alan Byham will be retiring as regional bee inspector

WHAT'S THE BEST PLANT FOR BEES?

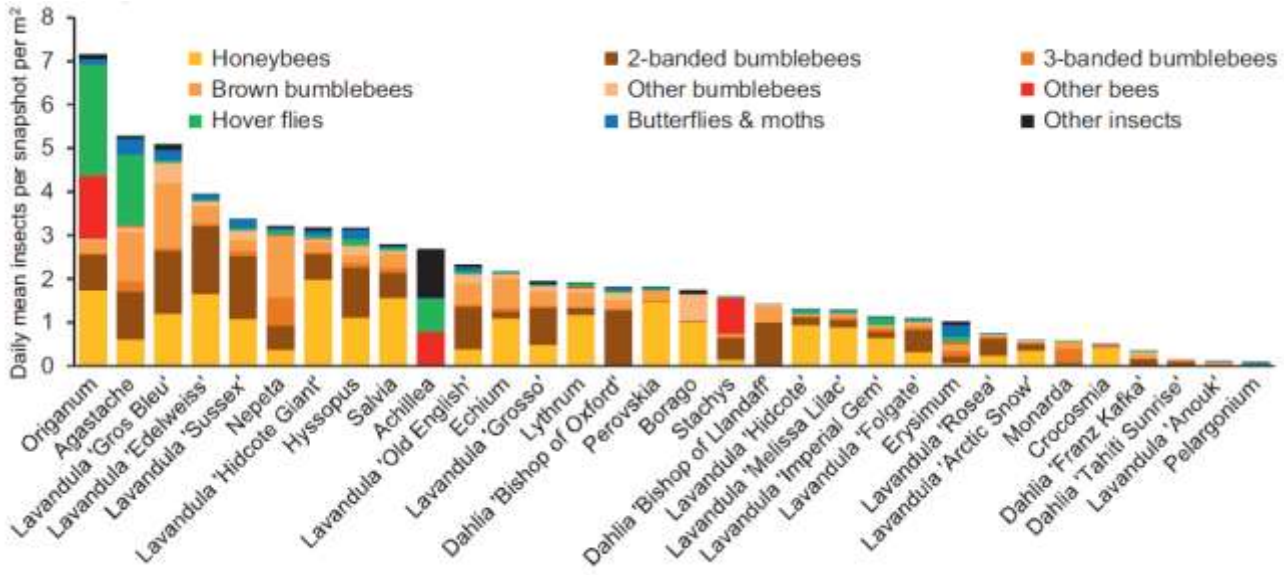
Garden Flower study by Garbuzov and Ratnieks

You may have seen a short article in December 2013's Beecraft about some of the work going on at University of Sussex's Laboratory of Social Insects (LASI). Unfortunately, the primary article is only available to folks with a subscription to the journal "*Functional Ecology*" – or access to a university library! This article summarizes (mostly in the authors' own words) the information that will be of most use to gardening beekeepers.

Bees and other pollinating insects are declining in many countries. Many people are concerned and want to help reverse this decline, but do not know how. One way that the general public can help is via their gardens, by growing ornamental plants that are also attractive to flower-visiting insects. Although individual gardens are relatively small, collectively they comprise a substantial area. City parks also contain ornamental flower beds.

Which plant varieties are attractive to flower visiting insects? Given the great public interest, many lists of recommended plants have recently been produced. For example, in 2011, the UK's Royal Horticultural Society produced a "Perfect for Pollinators" list and logo. Many plants now sold in UK garden centres now bear this logo. But where did this information come from? On a closer look, it appears that these lists are based largely on personal experiences, opinions and anecdotes. This study is an attempt to put these recommendations on a firmer scientific footing.

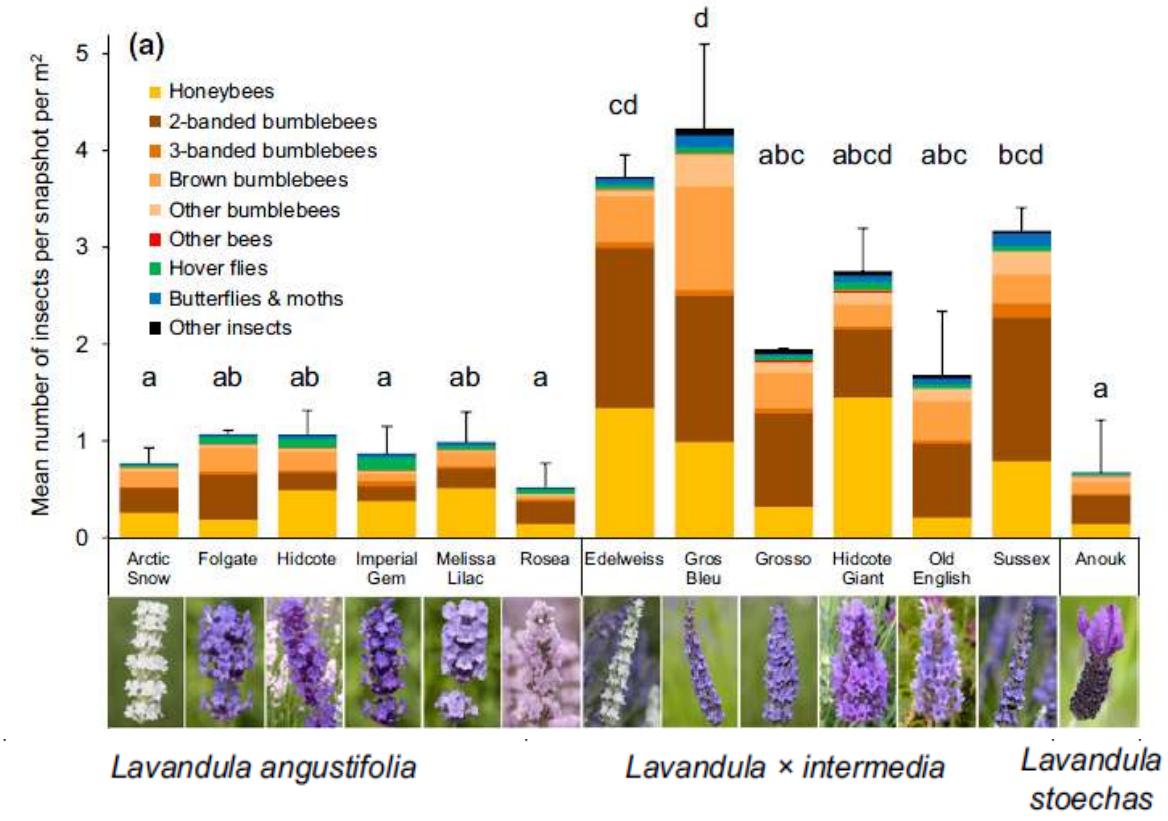
We planted an experimental garden of summer flowering garden plants on the University of Sussex campus. Thirty-two varieties were compared, each in two patches of 1×1m, in 2011 and 2012. Throughout both summers we made repeated counts of the numbers of insects on each patch. The number of insect flower-visitors on each patch was quantified using 'snapshot' counts, in which the number of foraging insects was determined near instantaneously (<10 s) by eye. As they were counted the insects were also identified into nine categories (honey bee, 4 sub-categories of bumblebees, other bees, hoverflies, butterflies & moths, other insects). A snapshot was taken once a hour between 0930 and 1630 on 12 favourable days between June and September.



The most simple and striking result was that garden plants vary enormously, approximately100-fold, in their attractiveness to insect flower visitors. The most numerous insects by far were bees which comprised over 84% of all insects seen. Bumblebees 47-62% and honey bees 26-32% were the most numerous, with all other bees only 3-5%. After the bees, the next most abundant were hoverflies, 7-10%. Butterflies and moths were only 1-3%.

Our results also compared different varieties of the same plant type. In the case of Dahlia, varieties with open flowers were much more attractive than those with "cactus" or "pompom" flowers, in which the pollen and nectar producing areas were reduced and inaccessible. In the case of lavenders, the traditional blue colour was not better than white or pink. However, the hybrid *Lavandula* × *intermedia* varieties attracted more insects than the species *L. angustifolia and L. stoechas*, possibly because they were larger and had more blooms.

Among other notable results is the pattern seen on *Borago officinalis* (borage), where the vast majority of its visitors were honeybees (mean 81.3% per data set). The highest proportions of butterflies and moths were recorded on *Erysimum linifolium* (wallflower). Some plants may be more attractive than others by virtue of their longer flowering period. For example, *Nepeta faassenii* 'Six Hills Giant' (catmint) and *Erysimum linifolium* 'Bowles Mauve', which are sterile hybrids unable to set seed, had flowering periods extending far beyond our c. 3-month observation periods. Indeed, *E. linifolium* flowers for approximately 9 months per year in Sussex. The attractiveness of such varieties is, therefore, underestimated in our data. In the case of lamb's ear (*Stachys byzantina*), its attractiveness to wool-carder bees (*Anthidium manicatum*) is probably due to the abundant leaf trichomes (pubescence) and possibly trichome secretions, which are collected by females as nest lining material.



Flowers attractive to bees and other insects are attractive from a human perspective and are no harder to grow or more expensive. Therefore, choosing insect-attractive varieties over less attractive varieties is a zero cost option, and is a practical and simple way of helping bees and other flower-visiting insects in gardens and parks.

Reproduced from Garbuzov, M. & Ratnieks, F. L. W. "Quantifying variation among garden plants in attractiveness to bees and other flower-visiting insects." *Funct. Ecol.* (2013). doi:10.1111/1365-2435.12178

The British Beekeepers Association

BBKA BUSINESS

Annual Delegates Meeting

You can now see the papers associated with this meeting in January on the BBKA website – follow this link (you'll need your BBKA membership details).

There are some interesting statistics about the extent of education in the beekeeping community. The Basic Certificate engages most beekeepers – 941 in 2013 were assessed and 920 passed. For our local area the numbers are as follows:

Name	Results	Members	%
KENT	28	928	3
MEDWAY	4	92	4
DOVER & DISTRICT	14	81	17

Modules 1,2,3,5 and 7 were held on November 9 with 241 candidates taking 264 examinations at 43 centres. BBKA members continue to appreciate two opportunities in the year to take modules and the numbers have remained stable. Consequently the Examinations Board has decided to respond to demand and offer all modules at both sessions, in 2014.

The fuller analysis of all assessments is as follows:

Module Number or Certificate Name		**Pass**	**Credit**	**Distinction**	**Fail**	**Pass rate**
1 November 2012	94	33	30	3	28	70%
3 November 2012	109	25	22	28	34	69%
6 November 2012	67	27	21	7	12	82%
8 November 2012	17	7	7	2	1	94%
1 March 2013	119	43	23	11	42	65%
2 March 2013	80	33	16	5	26	68%
3 March 2013	54	25	12	7	10	81%
6 March 2013	84	33	14	5	32	62%
8 March 2013	28	13	5	4	6	79%
Basic Certificate 2013	941	920			21	98%
General Husbandry 2013	25	19			6	76%
Advanced Husbandry 2013	20	11			9	55%
Microscopy 2013	28					
totals	**1666**	**1189**	**150**	**72**	**227**	**86%**

RECORD KEEPING

Hive Weights 2012-3

Record keeping is an important part of beekeeping –whether to keep track of your integrated pest management controls, to judge honey yields, the temperament of your bees, or to assess the quality of your stock management. One aspect that I've been paying particular attention to this season is the weight of a hive. I've been using the ApiScales product from http://www.beehive-scales.co.uk/, but you can heft a hive using a luggage scale, and get similar results (though perhaps at a lower level of reproducibility). Having done this for a year, it's interesting to look back at the results, and see what happened.

My setup going into November 2012 was two National hives, overwintered with 1 super above, no queen excluders, and with only modest insulation in the roof (a couple of layers of bubble wrap). I tried to record weights weekly throughout the year for the two hives, which are 2m apart in my garden. The graph on the next page shows how the hive weights changed over the course of the last year.

The results in the winter are much simpler to understand, as the only interventions I made were oxalic acid treatment (on the 1st January), and provision of 2.5kg fondant on 26th January. I swapped the supers under the broodbox in early April, to clear any brood from them.

Colony G (shown in red on the graph) clearly used stores more rapidly in February and March – 6kg against 3.3 kg. G then gained small amounts of weight through April and May, unlike Colony W (shown in blue in the graph), which continued to lose weight, through May, such that I fed it syrup on 27th May. These differences indicate that no two colonies are exactly alike, but both colonies were small at the beginning of May, and as a result unable to make full use of the honey flows from top fruit and OSR. You might argue that colony W is better adapted, being more frugal with its winter stores. But then, I haven't adjusted for colony size, so it might just have contained fewer bees.

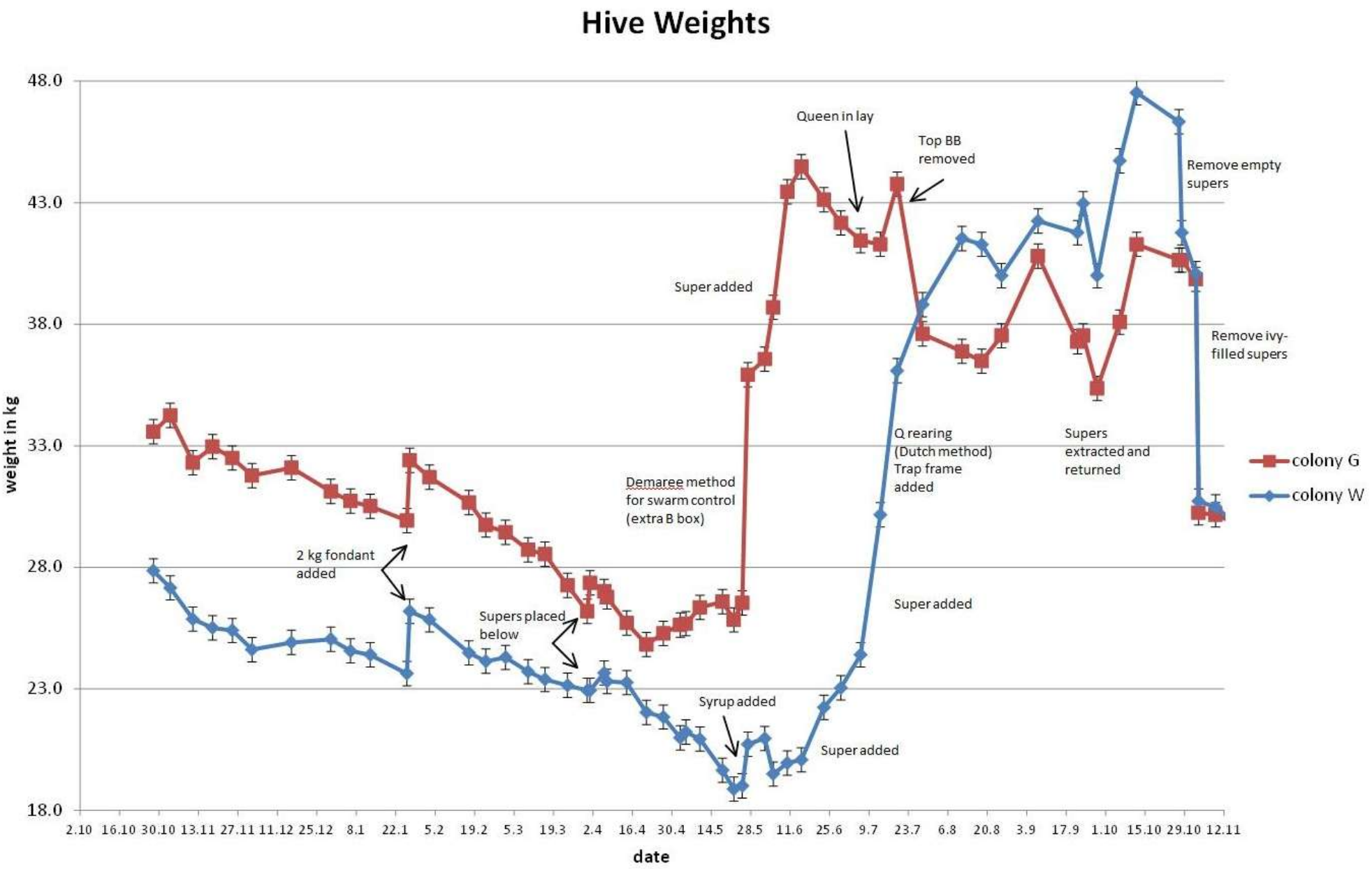
The summer weight changes are harder to read, given the increased numbers of interventions I made, both to add supers, as well as two different methods for swarm control/queen rearing that I was trying out on the two colonies. You can see that colony G was starting to pull in nectar at a decent rate in June, but this petered out. The Demaree method didn't work as I'd expected, as the parent colony was not preparing to swarm, but rather was superceding its queen. My manipulations had the effect of splitting the colony into two small nests – not exceeding 5 frames throughout June rather than the 9-10 frames that it eventually got to at end of July

On the other hand, colony W, whilst slow to start, really got going around the summer solstice, and took 2 supers as well as being strong enough to raise 8 queens using the Dutch queen trapping method. Its weight continued to increase until mid August. As the text books teach, I could have extracted honey at that point, but left it until 23 September, when the ivy was beginning to flower. Interestingly, the ivy honey flow is very obvious through the first 2 weeks of October – both colonies taking on at least 5kg, up to the point where I decided that I really needed to get the colonies ready for winter, by removing excess supers, and providing them with insulation.

I was disappointed with my actual honey yields this summer – but then, I jerked my bees around a lot practicing queen rearing techniques. Next year, perhaps I will confine the messing around to one hive, so that I have one hive that is a good sentinel for the honey flows.

In hindsight, regular weighing is a good way to keep track of colonies in the winter months, and now I have a baseline value to compare the weight losses I see this winter. Hopefully we have a dry, cold winter, followed by a Spring that starts in early April, not early May as we had in 2013.

Adrian


Hive Weights
48.0
43.0
38.0
33.0
28.0
23.0
18.0
weight in kg
2.10 16.10 30.10 13.11 27.11 11.12 25.12 8.1 22.1 5.2 19.2 5.3 19.3 2.4 16.4 30.4 14.5 28.5 11.6 25.6 9.7 23.7 6.8 20.8 3.9 17.9 1.10 15.10 29.10 12.11
date
Queen in lay
Top BB removed
Remove empty supers
Super added
Remove ivy-filled supers
Q rearing (Dutch method) Trap frame added
Supers extracted and returned
Demaree method for swarm control (extra B box)
2 kg fondant added
Supers placed below
Super added
Syrup added
Super added
colony G
colony W