The Essex Beekeeper

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Furthering the Craft of Beekeeping in Essex
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The sustainable apiary for small scale beekeepers

By Kevin Thorne

Introduction

Part of my winter listening was to a zoom presentation by Mike Palmer on his method of sustainable beekeeping in Vermont USA. I had previously seen this as a YouTube video on the National Honey show website (still available with many other videos from key speakers). Mike produces all his own queens and over winters 300 nucs to replace his winter losses. This, given his position geographically which often has 6' of snow covering the hives, is quite an achievement. Most of the fellow beekeepers on the call, arranged by Cambridge BKA, were small beekeepers and it made me wonder how might even the smallest beekeepers manage a sustainable apiary using the most simple methods? Many may only currently have 1 hive and little experience other than attendance on a beginners course. With this in mind, I have developed a model which I'm confident will work, and I want to demonstrate this to show others how this can be done over the coming seasons.

The aim

A demonstration of a simple method of keeping a sustainable population of bees in a small apiary, raising queens for own use, over a period of time. Using simple methods that every beekeeper who has completed a beginners course should be able to follow.

Starting with a single hive, the aim will be to produce an above average honey crop and 1 - 3 additional colonies to overwinter. The long term aim will be to have 2 full colonies and 1 or 2 nuclei to overwinter. Any excess bees can be sold or used to expand further. In this case any surplus nuclei will be taken away and considered sold. I will also aim to demonstrate that we can produce surplus honey and bees which will produce a surplus of a few hundred pounds per hive per year.

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Calling all budding editors! Can you help?

We are looking for an editor of the Essex Beekeeper as I am now stepping down after two years. Please contact me for more information via email, robert.silver@outlook.com

Articles appearing in The Essex Beekeeper are not necessarily the views either of the Editor or the Essex Beekeepers' Association

To ensure inclusion within the diary of county-wide events would divisions provide the editor with details of local meetings by the 4th of the previous month.

Robert Silver – robert.silver@outlook.com

In the UK many hobby beekeepers keep 1 or 2 colonies for interest and a small amount of honey. If, however something goes wrong, they may not have the resources to recover the situation. The main risks are a colony attempts to swarm and the new queen does not mate or the colony does not survive the winter. Colonies can also develop disease issues in the Summer and perish. We will produce additional colonies, using the simplest of methods, to produce additional colonies as insurance ahead of any problems.

I will look to demonstrate that it's not necessary to buy queens, these can be produced easily by all beekeepers with little cost. This will make your beekeeping more rewarding from a personal satisfaction point of view and a financial one (if that's important).

A modest amount of equipment will be needed:

- 2 hives with frames and feeders. Mine are standard national cedar but the hive type isn't important
- 3 Nuclei – mine are Masiemore poly.
- A spare brood box with frames.
- 2 double stands 6' in length.

The basic process will be to allow the bees to build up and produce a crop of spring honey and create splits either when the colony wants to swarm or if it doesn't, in June, create splits by:

- Removing the queen and making up nucs;
- Allowing the colony to make queen cells
- Make up 2 splits with queen cells and a third queen cell in the original hive

- Wait for the 3 new queens to mate
- See whether, 1, 2 or 3 are successful and build up the successful ones for the winter. There should be a 99% chance of one and a 50% chance of 3.
- Depending on size of resultant colonies over winter in full colonies or nucleus
- In the spring remove (sell) the surplus colonies and repeat.

We will cover all the manipulations in video and will cover all aspects of inspections including Hoopers 5 questions (plus one I've added).

While this all sounds simple we need to remember we are dealing with nature and there are a significant number of variables. Lots could go wrong – the new queens might not mate and the existing queen fail. The aim of the project is to look at what actually happens and to see what can be learned from this. The balance of probability tells me this will most probably work most of the time. We are working with the smallest number of colonies that I think this is likely to work with. There may be the need to borrow resources (a frame of eggs and larvae) from outside what is intended to be a closed sustainable system, but we shall see and record that if it happens.

Another consideration will be the temper of the bees. This sustainable apiary is in a suburban garden near to other houses so only calm bees will be acceptable. Any poor tempered queens will need to be removed and replaced ideally from within the apiary but if suitable stock isn't available then from outside.

In reality the more colonies you use the more flexibility you will

Meetings in April 2021

Members are more than welcome to attend another Division's Zoom meeting. Just contact the Division and talk to the relevant co-ordinator.

Please note that all of these meetings are subject to Government COVID-19 rules that may be in place. Please check with the Division, too, to ensure that the event is running.

April 2021

07 **19:30 - 20:30 - Reading your bees, by Robert Pickford, Saffron Walden Division**

Zoom meeting

20 **19:30 - 21:00 - Comb Changing - The full Monty, Chelmsford Division**

Zoom meeting

24 **BBKA Module Exams online**

28 **19:30 – 21:30 - tbc, Southend Division**

Address: tba

May 2021

06 **219:30 - 20:30 - Really getting to grips with swarm control, Bob Smith NDB, Saffrond Walden Division**

Zoom meeting

06 **20:00 - tba, Harlow Division**

Address: tbc

06 **20:00 - 22:00 - Reading the Colony Buckfast Speakers, Romford Division**

Zoom meeting

18 **19:30 - 21:00 - Equipment suppliers, good and bad, Chelmsford Division**

Zoom meeting

26 **19:30 - 21:30 - tba, Southend Division**

Address: tbc

hives in close succession, can be very unreliable. It is also useful to record any actions taken so that you can assess the outcomes at a future inspection. So, what actions might be needed?

- It is rarely necessary to actually see the queen. If there are eggs present, you know that the queen has been there within the last three days and that she is probably hiding.
- Some strains of honey bees are extremely prolific and your queen may need more space to lay. This is unlikely to be the case with darker strains of bee or those kept in long hives.
- Occasionally, as was the case last Spring, the nectar flow may be so good that your hive becomes honey bound leaving no space for the queen to lay. The remedy here was to take off some, but not all, of the honey. However, if stores are sparse, you might consider feeding.
- Spotting diseases can be very difficult, especially in their early stages, but you should always look carefully. If anything appears different or odd, ask a more experienced beekeeper or even the Regional Bee Inspector to take a look.
- Queen cells, depending on whether they are occupied, sealed or opened, tell you that your colony is intending to swarm or has already done so!

The final step is to carry out the inspection and any resulting actions, as smoothly, calmly and as quickly as possible without rushing! At first, this may seem to be a contradiction in terms, but with practice this becomes easier

have. If you don't want a lot of colonies this can be achieved by working with other beekeepers and or your local association using the calmest bees available locally.

I will make it clear if I need to take resources from outside the apiary. This will be the equivalent of an individual beekeeper replacing stock or borrowing a frame of eggs from a beekeeper friend.

The starting colony is a strong colony with last years queen at its head. I'll update regularly through the season.

White chocolate honey

from Somerton BKA, via eBees

The cacao tree *theobroma cacao* is a native of Mexico, and was first domesticated in tropical South America some 5300 years ago, but is now grown in tropical climates around the World. The southern part of Mexico is largely tropical forest and wild cacao (cocoa) trees still grow here, although not harvested, in the normal way, by the indigenous people, the reason for which will become obvious.

Meliponula ferruginea anahuaca

The Mexican stingless bee *Meliponula ferruginea anahuaca* makes its home in hollows of the cacao tree and are famed for collecting particles from the ripened cocoa beans on the tree of their choice. Cocoa beans are made up of cocoa solids and cocoa butter and normal processing of the harvested beans is done by drying and fermenting. These dried beans which turn brown during the drying and fermenting stages, are exported for processing into chocolate, which is done by re-introducing the previously separated cocoa fats and sugars.

It is a well known fact that chocolate and cocoa powders are naturally bitter in flavour, but our friendly stingless bee has a trick up its sleeve. The dried cocoa powder is collected in exactly the same way as the better known European honeybees collect pollen, in the corbiculae or pollen baskets on the hind legs of the workers. Ingesting it would prove extremely unpalatable because of its bitterness. On reaching the nest, the worker bees pack the almost white (unfermented) particles in cells which already have some honey content.

White chocolate honey

The resultant deposits in the cells are a sweetened mixture of honey and cocoa and the native indigenous Mayo-Chinchipe people who have been cultivating these bees for centuries, harvest this sweetened cocoa delight, warm it to reduce the moisture content and use the resultant semi solid product as a primitive form of the chocolate that we know and consume by the ton at this time of year.

Spring inspections

from Lune Vallue Community Beekeepers, via eBees

The purpose of any hive inspection is to find out how your bees are getting on. Seeing directly inside the colony is an exciting part of beekeeping for the beekeeper, but for the bees, it is a disruptive experience. To ensure that the disruption is kept to a minimum, there are a number of steps you can take. The first is to only go in when the weather is warm and dry. The rule of thumb was always that if it is not warm enough to stand around outside with bare arms, then it is not warm enough to open up your hive. More scientifically the outside ambient temperature should be at least 50F and preferably 60F+ (10C-16C). The second step is to have a plan. Typically, the plan will be to see if:

- the queen is present and laying
- the colony has enough room
- there are sufficient stores of pollen and honey
- the colony appears to be healthy
- there any queen cells.

It is helpful to go through the five points in your mind before you start the inspection and you may find it useful to make a note of the answers to these five points on the hive record card so that you can compare the state of the hive to the last time you did an inspection. Relying on your memory, especially if you are inspecting several