

# Queen Introduction



## Timing problems continued.

If you have just removed queen cells from a problem hive and you have a ripe queen cell in a well behaved colony preparing to swarm you could introduce this instead of a laying queen. Such queen cells should be protected using a spring type queen cell protector which can be spiked into a comb in the problem hive. Once again we are replacing like with like.



QUEEN CELL PROTECTOR

Colonies that have developed laying workers present a greater problem. The simplest thing is to unite with a swarm or another colony.

2. If re-queening has to be undertaken in the **middle of the year** it is much safer to establish the new queen in a small nucleus colony first.

Make up the nucleus from a healthy colony which could be the one to be re-queened. At least two combs should contain plenty of brood preferably sealed and be well covered with bees but no queen. Put in another two frames of food and shake in more bees from a frame from the parent hive, again making sure the queen is not on the frame selected. Place the nucleus next to the hive to be re-queened but facing in the opposite direction. Twelve to 24 hrs later introduce the new queen in an introduction cage (as in Introduction on page 3). Feed with sugar syrup from a contact feeder but do not disturb for at least a week. When the queen is established and there is a good patch of unsealed brood the old queen that is to be replaced should be removed and the new colony in the nucleus united using the newspaper method.

## IMPORTANT REMINDERS

Transferring bees or frames from one colony to another can spread disease. All beekeepers should be aware of what healthy brood looks like and the signs of disease.

In order to protect the health of the UK bee population, **import and export** of any honey or bumble bees (including queens) into the UK is controlled by a variety of EU and UK regulations. These apply equally to commercial organisations and individuals.

For current advice, contact your RBI or the Defra Bee Health Unit (or visit their website).

**Most importantly though, have consideration for your fellow bee-keepers.** A single infected bee has the potential to create a significant and possibly permanent problem. Be responsible - don't be tempted to import (or export) bees by evading the legislation

**Other ways of introducing queens** can be obtained from the more comprehensive books on practical bee-keeping. The B.B.K.A. Slide Library has available sets of slides on queen introduction which may be borrowed.

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## Why introduce a new queen?

Re-queening is the recommended solution to many beekeeping problems such as:

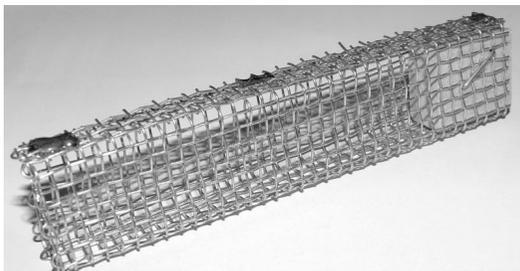
- Aggressive bees, followers, and other behavioural problems.
- Diseases such as chalk brood, acarine, stone brood
- Poor hygienic behaviour
- Poor productivity.
- Swarming; a colony headed by a young queen is less likely to swarm

But, many beekeepers are reticent about taking such a drastic step so this leaflet has been designed to advise beekeepers, who have little or no experience of introducing queens, on the basic principles involved, and to recommend a workable procedure.

## Basic principles

- Replace like with like; a laying queen is replaced with a laying queen.
- If another queen is placed in a colony of bees she will be attacked not only by the resident queen but also by the workers who recognise the alien by her scent.
- The colony should be in a receptive state; it must be queenless. The existing queen should be found and removed first.
- The new queen should then be placed in a sealed introduction cage which is put in the brood rearing area of the hive so the bees can familiarise themselves with her before she is released into the colony.
- Care should be taken not to stress the new queen. If she has come in a travelling cage, keep her there with her attendants until just before you transfer her to the introduction cage ready for insertion into the colony.
- If it is not possible to introduce the new queen within an hour of the hive being made queenless, further manipulations are needed before proceeding. ( See "Timing problems" 1)

## The Butler queen introduction cage



BUTLER QUEEN INTRODUCTION CAGE

This is one such cage specifically designed for the purpose. It is made of 3 mm. wire mesh, formed into a rectangular sectioned tube approximately 90 mm. long and 20 mm by 13 mm. in cross section. One end is permanently plugged with a small wood block. Such cages can be home made or purchased from the appliance

dealers. Similar plastic cages can also be obtained. The size of the mesh is important as the holes should be big enough for the bees to make contact with their antennae but small enough to prevent the workers getting to the queen and damaging her.

### On arrival

It is best to introduce a queen to the new colony soon after she arrives but if this is not possible the travelling cage should be unpacked to allow ventilation through the mesh and two or three small drops of water placed on the mesh for the bees to drink. The cage can then be left in a cool ventilated cupboard for a day or two.

The travelling cage is unsuitable for introduction as it will be soiled with bee excreta and could transfer disease. Furthermore the attendants would antagonise the new colony. If the queen has been imported from abroad, the workers, cage and all packaging should be sent to the NBU for examination. (see note on page 4)

### Transfer of travelled queen to introduction cage

Young queens not in lay are liable to fly! The safest place to open the travelling cage is therefore in a closed room with the windows shut. The queen can be picked up and put into the introduction cage, or gently coaxed into it while holding the cage against a window. Great care should be taken when handling a queen. She should only be picked up gently by the thorax or wings, and never grasped by her abdomen.

An alternative method is to open the travelling cage with the exit hole towards the light near a closed window and allow the bees to come out, placing the introduction cage over the exit hole when the queen is seen to enter the tunnel. She may be reluctant to oblige and patience is required.

In the field the transfer can be done inside a transparent plastic bag which can hold the travelling cage of bees, an introduction cage and the beekeepers hands. Many beekeepers do it inside a car with the windows closed. but make sure to block up ventilation slots below windscreen to prevent her dropping down inside!. The queen can be kept in the cage using a wooden plug that fits the cage opening.

## Introduction

Before introduction a plug of very stiff candy should be prepared by mixing a little honey with icing sugar. The honey must be disease free, do not use imported honey.

The queen-less recipient colony should be opened with as little disturbance as possible. The wooden plug on the queen introduction cage is replaced with a plug made of candy and the cage is supported horizontally between two brood combs in the centre of the brood nest amongst young brood. The queen will only be able to escape when the bees have chewed through the candy during which time they will have become accustomed to her scent. After introducing the queen in her cage the hive should be carefully re-assembled and not disturbed for nine days. At the next inspection remove the empty introduction cage and examine the brood combs carefully for eggs. It is not necessary to find the queen.

In conclusion, it must be noted that even in the most experienced hands Queen introduction can fail. There is no method that is 100% effective.

### Some factors which may affect acceptance.

- Genetic differences like replacement of a lighter Italian queen with a dark N. European bee
- Colony stress due to lack of food, bad weather, robbing etc
- Time of year; it is easier at the beginning of the season in April or early May when colonies are not in their prime, or during September when colony activity is diminishing. In mid-summer when colonies are large and swarming may be imminent, direct introduction of a new queen often fails. See "timing problems 2.."

### Timing problems

1. When the colony becomes queenless and the replacement is not offered within an hour the workers may start to construct queen cells which will jeopardise acceptance of the new queen. Acceptance may still be achieved if the queen is first introduced in a cage sealed with a wooden plug into a super that is largely worked by young bees as they are not aggressive. It can be left for 1 or 2 days giving more time for the scents of the queen and colony to mingle. The cage can be taken from the super, the seal exchanged for a plug of candy and the queen in her introduction cage placed in the brood chamber.

However if the colony is left queenless for 7-9 days emergency queen cells will be evident. If these are all removed the colony will be hopelessly queenless and may well accept the new queen directly from the cage. But, if left longer than this there could be one or more virgins present which are difficult to catch and have to be removed. So be warned!