

Taking the Basic Assessment – Part 3

This will be the last article about taking the BASIC Assessment. My advice to anyone contemplating the Assessment this year would be to have a practice run with a friend or colleague who is an Assessor or is well qualified. There is nothing better than having a dummy run and being encouraged to improve your bee husbandry. Up to now we have dealt with the basics and the health of your bees. We will now deal with how the honey bee collects stores and how honey is produced. But, before that, let us consider the bees. They are perfectly adapted to their environment and if you understand the organisation in the hive it makes it easier to work with the bees to mutual benefit.

Do not forget that there are many local beekeepers with a lot of experience who are always happy to answer questions and help you prepare for your Basic Assessment. The best way to prepare is to get a group of interested beekeepers together and help each other. It is fun and very effective.

I hope these notes help and encourage you to take the Basic Assessment this year and you find that your beekeeping becomes better and more informed and that your bees are healthier.

Passing the Basic – Part 3 Bees and Beekeeping

Brood

- The queen lays eggs in empty and cleaned cells in the brood nest.
- The rate of laying is determined by the workers (they feed her more and she lays more eggs)
 - Egg laying falls to nearly 0 in winter and can be as much as 1500 per day in summer
- An egg takes three days to hatch into a larva
 - Worker larva take five days to develop and then pupate for a further twelve days (21 days from egg to adult)
 - Queen larvae start from a worker egg but are fed vast quantities of food that is high in sugar. This causes rapid growth and development of a queen (physically different from a worker). Queens will pupate five days after hatching and take a further eight days as a pupa before hatching (16 days from egg to adult).

Queen cells hang downwards and are much larger than worker cells.

- Drones (male bees) develop from an unfertilised egg and take about six days to develop to a pupa. They then take a further 15 days to hatch as an adult (24 days from egg to adult)

- Eggs are about 1.5 mm long and in the bottom of a brood cell

- Larvae are light creamy and glisten. They should be curled around in the cell

- Pupae develop in sealed cells. The cappings are biscuit coloured and slightly domed

Adult bees

- Adult bees spend the first three weeks in the hive with a variety of jobs as they grow older

- As they age their jobs develop from cleaning cells through looking after the queen and larvae, to cell building and then to guard duties once their stings develop.

- Adult bees spend the remaining time of their life (~ 3 weeks in the summer) collecting stores for the colony.

- Adult bees usually die away from the hive

Division of labour

- All work is done by the workers

- The queen is fed and lays eggs

- Drones learn to beg food from workers and can move from colony to colony. The main role is to mate with a new queen

- Workers spend the first three days in the hive building their energy and cleaning the hive

- They then progress to feeding the brood and the queen

- After about two weeks they start to produce wax and build/repair the nest

- Soon after their stings develop and they take on guard duties

- After three weeks in the hive and the workers start foraging

Winter

- No drones

- Winter workers

- Large fat bodies

- Live for 6 months

- Cluster in hive to retain warmth

- Vibrate wing muscles to generate heat

- Queen remains with colony

- 10,000 – 20,000 workers over winter to regenerate the colony in spring

Forage

- Bees collect nectar, pollen, propolis and water

- Learn your local forage and try to identify the colours of the major pollen collected by your bees

- The Assessor will ask about the local nectar and pollen plants and expect you to know the approximate times when they flower

- Nectar is used to provide energy to the bees. It is stored for the winter as honey. We only take surplus honey from the bees; the majority is used by them

- Pollen is the only source of protein to the bees. It is used to build the bodies of the larvae and to maintain the health of the adult bees

- Water is used in the winter to 'dilute' honey to make it usable as a food source. In the summer water is used to keep the hive cool in hot weather

- Propolis is the sticky coating from buds. It is antiseptic and the bees use it to line the brood cells before a queen lays a new egg. It is also used to fill odd gaps in the hive.

That is about it. After keeping bees for a year you will have learnt all this from experience and will have no trouble in passing your Basic Assessment. Be proud of your beekeeping and show others that you are qualified to keep bees. Best of luck and I hope to see some of you at the Spring Convention in April. There will be an opportunity to prepare for the Basic Assessment on Sunday morning at the convention. Why not come along and brush up your understanding.

In my last article on how to pass the basic I suggested that you should use a dissecting microscope with x40 magnification to look at the trachea of a honey bee to detect Acarine. One of our readers has responded that a x10 microscope is sufficient. Depending on the books you read and the quality of your eyes you can use anything from x 10 to x 40. Yates (beekeeping Study Notes) advises x10 or x 20 whereas Morse & Flottum (Honey bee pests predators and diseases) advise x 40. It may be my age or my microscope but I find it easier with the higher powered setting on my microscope.

Ivor Davis

British Beekeepers' Association

Spring Lecture Convention & Exhibition

Stoneleigh Park,
Warwickshire
CV8 2LG

Members' Day One,
Friday

18 April 2008

Advance Ticket Holders Only

Nine lectures. Speakers:

Sam Baird; Norman

Carreck; Dr Rose

Cooper; Clive de Bruyn;

Dr Peter Neumann;

Murray Reid;

Norman Walsh; Andrew

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Saturday

19 April 2008

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28 Hours of Lectures

Sunday

20 April 2008

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Day: Workshops All Day

Some places left on most Workshops

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17s free with adult.