

28th May 2022

We will start with 20min – 1/2 hour chat to explain what the exercise is all about.

You will be divided into groups and allocated a hive to study. Appoint a scribe.

Follow the **Task Sheet** questions and make notes as you go. We will be around to help answer questions and point things out if you get stuck.

After the Practical session you will write up the sheet with all the details you think are relevant. We will all discuss what you found.

Back to Bee Shed for tea, cakes and discussion!

**Task Sheet (left hand column) and some possible observations or deductions (right hand column)**

Before opening hive	Observations / Deductions?
Consult the hive record sheet, and consider recent weather conditions. What can you predict from this information?	Two possible scenarios: Record says low on stores, weather poor – MAY NEED TO FEED  Record says good stores, weather fine – MAY NEED TO ADD SUPER(S)
What is flowering now, and what will be flowering in next 7 days? Implications?	Two possible scenarios: Oil seed rape out now, will cease soon – BAD TEMPER!  Not much out at the moment, but nectar flow may start soon – watch SPACE in supers and ADD boxes in plenty of time.
Hive entrance activity? Air temperature? Pollen loads? Nectar loads? Drones? Orientation flights?  Robber bees?	10°C minimum for bees to emerge. Pollen loads easy to spot. Nectar loads, honey stomach full, legs hanging down. Drones, indicator of swarm possibility. Check in brood box. Orientation flights, young bees first emergence. Characteristic flight pattern. Don't confuse with swarm emergence. Robber bees enter hive empty (legs up), and leave full (legs down).
Examine varroa mesh floor. Distribution of debris? Mites? Significance of dark cappings and/or white cappings in debris? Count different coloured pollen loads.	Distribution/pattern shows where cluster is and what it is doing. Important to know when winter feeding. Count mites and give average daily mite drop. Dark cappings are from brood comb. Bees emerging. White cappings are from honey stores. Actively using stores. How many different colours? 6 or more should give adequate nutritional diversity.
Other activities: Antenna cleaning action at entrance.  Fanning for ventilation (Nazanov gland closed). Fanning after disturbance of hive (Nazanov gland open).	See if you can spot these.

After opening hive	Deductions
First impression. Crowded or uncrowded? Space for queen to lay?	Does activity equate with what you saw at the entrance?  Space for queen to lay: pollen blocking or solid stores?
Supers. Do bees have enough space to process and store nectar / honey?  Are extra supers needed?	Space for workers to process nectar is 2-3 times space required to store honey.  Add under existing super or above? Discuss.
In brood chamber examine frames and note: Brood in all stages (MUST see eggs) Queen present? How many drones? (a few, fair number, lots) Queen cells or cups? What is your assessment?	<b>Everyone should see eggs!</b> Recognise emerging bees.  Drone numbers may indicate likelihood of swarming. Dry cups or cells are nothing to worry about at present. Only need to take action if cells are charged with royal jelly/larvae.
Shake bees off a frame and examine for disease. Look for perforated cappings, sunken cappings, larvae that 'don't look right', chalk brood, deformed wings, bald brood, sac brood.	If you need a demo, ask the experienced beekeepers. Check for queen before shaking.  <b>I would like all participants to make sure they can do this.</b>
Is the brood chamber filled with brace and burr comb or even drone brood stuck everywhere? If so, what is going on?	Bees desperate for space will build drone comb anywhere. Ideally, provide somewhere for them to lay drones from April onwards. Discuss alternatives, half frame, drone foundation.  Maybe the bee space is wrong.
Inspect the brood laying pattern and interpret what is happening.	Irregular pattern: New queen still learning. Old queen fading. Disease or old comb. (Diploid drones)
Ratio of eggs : open brood : sealed brood. Comment on findings.	Ideally, should be in ratio 1 : 2 : 4, but will vary with season, weather, forage, etc.  If no eggs, could be swarm preparations, dearth of forage, poor weather (or need new glasses!).
Possible ideas for discussion: Difference in bee space between brood boxes and supers.  Spacing for new foundation.	Brood frames usually have two bee spaces for bees to work back-to-back.  Bees usually leave one bee space in super frames (more honey!)  Do not space new foundation too wide, otherwise bees will put their comb wherever they want it.