



1. Use of the Small Hive Beetle (SHB) floor trap

SHB floor traps should be checked at least every eight weeks, more regularly if possible. Checks can be carried out on one or more colonies in the apiary – if you require further SHB traps, contact the NBU office.

- Small hive beetle prefers dark small places and will hide in the flutes of the 4mm Correx plastic insert.
- Place the insert on the floor to one side of the entrance; it will work just as well on a solid or open mesh floor. Ensure that the insert does not block the entrance to the hive (especially when using an entrance block).
- If the insert is too long, it may be cut to fit the floor as necessary.
- Leave in position until the next colony inspection (min. 2-3 days), then withdraw the trap.
- To check – quickly remove the insert and place into a clear plastic bag.
- Examine thoroughly by holding the trap up to the light (or use a torch) to check for any insects in the flutes of the Correx.
- Tap the trap to dislodge any insects into the plastic bag – anything firmly lodged can be removed with the piece of garden wire supplied.
- If anything suspicious is found, transfer into a small sample tube labelled with the apiary details etc. **place in a freezer for at least 12 hours** and then take advice from an RBI or SBI before posting to the NBU laboratory. Remember to notify your Regional or Seasonal Bee Inspector **immediately**.



Figure 1 Inspecting debris from inside a SHB Correx trap

Ensure that monitoring inserts are quickly removed from the floor into a secure plastic bag for examination, which will allow the contents to be viewed, looking closely at the corrugations.

2. Monitoring using the Small Hive Beetle Frame Trap

Please check the frame trap during routine colony inspections.

- Many beekeepers in the USA use frame traps to help control SHB infestations in their colonies. The 'Better Beetle Blaster™' trap supplied is a relatively cheap and simple design available from some beekeeping equipment suppliers in the UK. It is essentially 'disposable', but when used as a monitoring trap should last a season if treated with care.
- The trap should be placed between the end two frames of the brood chamber (upper one if using multiple brood chambers). If using frames with wide 'DN5' top bars then the gap between the frames may be too narrow to accommodate the trap which may be placed between the end frame and a dummy board or between the end two frames in the first super instead.
- The clear plastic trough of the trap is filled to a maximum of half the depth with approximately 25ml of food grade vegetable oil. A little cider vinegar may be added as an attractant.

- Spillage of the oil in the hive should be avoided - the hive should be reasonably level and any oil remaining on top of the trap should be wiped away. A plastic syringe may aid filling the trap.
- The trap may be left in place throughout the season; SHB if present will tend to take refuge from the bees, passing through the 6x3mm apertures and drown in the oil.
- When removing the trap during colony inspections the frames should first be separated using the hive tool to prevent damage to the trap.
- If the trap apertures become blocked with propolis or wax they should be carefully cleared with a small screwdriver or suitable tool.
- If the trap is found to contain anything suspicious then remove it, seal in a plastic bag and **place in a freezer for at least 12 hours**. Label the bag with the apiary details etc. and take advice from an RBI or SBI before posting to the NBU laboratory.
- Remember to notify your Regional or Seasonal Bee Inspector **immediately**.



Figure 2 Beetle Blaster oil trap placed between end two frames

3. Inspecting a colony for Small Hive Beetle and *Tropilaelaps* spp.

Please carry out a more thorough examination of the colony at least twice during the active season. All beekeepers are encouraged to examine their colonies for exotic pests – particularly Small hive beetle.

- Use the minimum amount of smoke necessary to carry out the examination.
- Try to avoid excessive vibration to the hive.
- Start with the weakest colony in the apiary as indicated by flight activity.
- Remove the hive roof and place upside-down on the ground next to the hive. Remove the crown board or quilt and examine carefully for the presence of Beetles, either on or under it. Pay particular attention to the corners where crown board frames are jointed.
- Remove the upper-most super and place it in the roof.
- Remove the two frames from the outer edges of this super box first – DO NOT SHAKE THEM TO REMOVE BEES. Check the walls and corners of the super box for beetles as you remove the frames.
- Examine the frames carefully for signs of beetles and then stand them alongside the removed super.
- Wait 2 minutes and then gently lift the super from the lid and look for beetles running away from the light.
- If none are seen remove the remainder of the supers and place with the other one.
- Remove the 2 outside frames from the brood box and check walls and corners of the brood box for beetles as you remove them, using a torch if necessary.
- Examine the 2 removed frames carefully for signs of beetles, larvae or damage consistent with their presence. DO NOT SHAKE THE BEES FROM THE COMBS.
- If the floorboard is loose – remove the brood box.
- Check the rear corners of the floor for beetles.
- If the floorboard is fixed then remove sufficient frames to allow vision of the rear corners of the floorboard.
- In apiaries where tree cover is dense and floors are fixed, it may be necessary to use a torch to aid vision of the floorboard. Remember that in colder weather beetles are more likely to stay within the combs.
- Replace the brood box on the floor and check the remaining combs for signs of beetles. Replace the 2 removed combs.
- If appropriate, use the uncapping fork provided to remove some drone brood and examine for the presence of *Tropilaelaps* mites.
- Frames can be gently tapped sideways on a stable object to dislodge any beetles which may be hiding within cells, or exposed horizontally to sunlight – beetles, if present, will 'surf' the comb looking for places to hide from the light.
- Reassemble the hive in the normal manner.

If any suspect beetles or unusual mites are found, place them in a small sample tube labelled with the apiary details etc., and contact your Regional or Seasonal Bee Inspector **immediately**. Place in a freezer for at least 12 hours if asked to post a sample by the inspector.



Figure 3 *Varroa* and *Tropilaelaps* spp. (approx. 30x)

Small hive beetle (*Aethina tumida*)



Figure 4 Adult Small hive beetle (approx. 10x) and Small hive beetle larvae (approx. 10x)

4. Biannual sampling of floor debris

Please sample the floor debris at a routine inspection twice during the season (March to June and July to October).

- Lift the brood box from the floor, scrape the floor and place any debris in the self-seal envelope provided.
- Label the envelope with the apiary details etc. and post to the NBU in a 'Jiffy' bag for laboratory examination.
- If you use open mesh floors, take the sample from the inspection tray under the floor (insert at least 7 days prior to sampling).
- Samples can be from a single colony or combined from a number of colonies in the apiary.

5. Asian Hornet Monitoring

All beekeepers are advised to monitor for the Asian hornet. Early identification of nests will enable these to be destroyed before they produce the next generation of mated queens and so prevent the establishment and spread of this pest.

The Asian hornet (*Vespa velutina*) is smaller than our native hornet, with adult workers measuring from 25mm in length and queens measuring about 30mm. Its abdomen is mostly black except for its fourth abdominal segment which has a yellow band located towards the rear. It has characteristically yellow legs and so is often called the yellow legged hornet and its face is orange with two brownish red compound eyes.



Figure 5 Asian hornet (*Vespa velutina*)

After hibernation over winter, the queen will emerge in early spring and seek out an appropriate sugary food source in order to build up energy to commence building a small primary nest. During construction of the nest, she is alone and vulnerable but she will rapidly begin laying eggs to produce the future workforce. As the colony and nest size increases, a larger, secondary nest is either established around the primary nest or they relocate and build elsewhere, favouring a position where food and water are readily available.

Monitoring traps containing a sweet bait should be deployed during this period. There is a fact sheet and short video detailing construction and use of a suitable home-made design on BeeBase at <http://www.nationalbeeunit.com/index.cfm?pageid=208>

Any sightings of Asian hornets should be reported to the Non-Native Species Secretariat

(NNS) immediately at alertnonnative@ceh.ac.uk, the NBU office and your Regional Bee Inspector. The NNS have also developed a new app called [Asian Hornet Watch](#), which allows you to take photos and submit the location of your sighting using GPS.

If you suspect that you have found an Asian hornet, you can send a sample to the NBU laboratory for examination. Use a suitable sturdy container (cardboard rather than plastic) and provide as much detail as possible about the hornet and where you found it. Digital photographs are also very useful to help with identification.

Contact Details

NBU Office The National Bee Unit, York Biotech Campus, Sand Hutton, York, YO41 1LZ e-mail: nbu@apha.gov.uk web site www.nationalbeeunit.com Tel 0300 3030094 Fax 01904 462111

Think you've seen an Asian Hornet? Report it!



Report through the Asian Hornet Watch app or www.bit.ly/asianhornetreport



Help us to look out for Asian hornet! Download the [Asian Hornet Watch](#) app for detailed guidance on identification and to quickly report potential sightings.

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Find out more about Asian hornet [here](#).

