very small transparent ribbed walking sticks with no colour.
Having found 'your eye' you will soon learn to seek & find more but perhaps only a few as they are just long enough to straddle the wire mesh or get caught on the expanded metal mesh.
However, having found just one you have the sign that a bee pupa has been uncapped and removed. A worker has tugged on that antennae and it has broken off and been dropped.
That find is really more significant as it indicates to you that a pupa has been removed from its cell and the hive. A closer search of the tray will usually identify very tiny baby varroa mites, watery white, transparent, and often only found because you see a tiny spec with little dots that are its legs. These were dropped off the pupa during its removal and will usually be found fairly local to where the antennae were found and under the brood area. Very difficult to pick up but slight dampening of the brush and teasing it to a point will help. Gently ease it off the brush inside the pot. It doesn't really matter if you do cause some damage as these are only to be counted, not checked for damage but you do not want to squish them so badly that they cannot be recognised for what they are.

Antennae exposed

Larval Antennae

Again, having found the first then suddenly you will find a second, then a third. Turn the tray to catch the light from different angles as this helps to reflect light off the tiny shiny bodies. Even if doubtful about what you are seeing pick them up.

Take them home for study with your microscope and surprise yourself because even at 20X you will see tiny mites with tiny legs. They are filled with a watery liquid and will collapse like a burst balloon if you are the least bit clumsy when collecting them. They need collecting almost daily and checking soon after as they do dry out and shrivel a bit.

Baby Varroa Mites

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ARE YOUR BEES HYGIENIC?

Swindon Honeybee Conservation Group

WHY NOT FIND OUT?

Founded 2004

WHY?

Your bees may already be hygienic … you just don't know it yet.
You are probably using one or more of the chemicals that are now causing as much, maybe even more problems than the mite itself,

1. Foundation you buy is already loaded with residual chemicals.
2. Drone eggs are removed when Formic Acid is used.
3. Drone semen viability is greatly reduced
4. Queen, Worker & Drone longevity reduced.
5. Varroa has become immune to some chemicals.
6. Acaricides placed in colonies expose not only mites to the compound, but eggs, larvae and adult bees.
7. Queens dying or being superceded early.
8. Failure of the colony to produce a new queen.

These are only a few of the problems documented by eminent entomologists.

WHAT IS NEEDED?

Suggested equipment needed to conduct Hygienic Checks. (In order)

- Well-made varroa floor with removable smooth white tray. The screen should preferably be of the woven wire type.
- A strong hand-held magnifying lens. (I use a 7X sensor loupe by "VisibleDust", as used for cleaning sensors on SLR digital cameras. These have 6 inbuilt LED's but cost over £50 in 2010).
- A very fine artist brush, 4-0's.
- Small pot with lid to hold mites. (1oz plastic honey pot perhaps)
- More pots needed if more than one hive involved.
- A dissecting microscope, 20 to 40X.
- And at the apiary somewhere well lit to sit comfortably, out of the wind, a building, shed, greenhouse, even the front passenger seat of a car may have to suffice to collect mites. Do not be tempted to wrap debris in newspaper for sorting at home. You will no doubt inflict your own damage.

WHEN TO DO IT?

I have found two types of hygienic behaviour in my hives.

1. Grooming adult mites, from adult bees by other worker bees.
2. Uncapping and removing larvae by worker bees.

The first may be checked at almost any time of the year.
The second only when there is plenty of capped brood.

HOW TO DO IT?

A day or so before commencement thoroughly clean the varroa tray/s.
If more than one hive then hives and their trays should be numbered.
For Grooming behaviour take the tray carefully from the hive, protect debris from the wind and take to the collecting place.
Using a strong magnifying lens and the fine artist brush, gently collect mites, placing them into a pot taking extreme care not to inflict your damage. For record purposes, if more than one hive is involved the pots should be numbered. At home, with top light switched on, place a few mites at a time on microscopes white platen. Using the fine brush gently bring each mite into view and turn them to view both sides. You may find the carapace damaged or legs removed. Make a record and place the mites into two more pots marked "Damaged" and "Undamaged".
I don't doubt you will be successful but only your diligence will prove how successful. (I checked more than 50,000 in 2 years).

Antenna & Baby Mite

If you are able to breed queens then make some from the best groomer colony and follow a control study of each new queen. The drone father has obvious influence on the new queen so the odds are that not all your new queens will head grooming colonies.

For Uncapping behaviour you will need to wait until late spring but may continue as long as there is an abundance of sealed brood, For this check I DO NOT recommend the use of the expanded sheet metal type varroa mesh as the cut edges create a trap for the larval bits you are seeking to find on the tray.
As before, take the tray to the collecting place. Protection from the wind is extremely essential this time as some of the debris is very small and very light.
Though you may still see and collect adult mites you must 'adjust' your eyes to look for other things. Not quite as easy as it seems as the larger mites will keep attracting your attention.
What you may first look for are the partially formed antennae of larval bees. These look like

Adult Antenna