

## Bee Diseases

### Stonebrood

(This is a currently non – notifiable disease)

Stonebrood disease is caused by a fungus and is considered of minor importance, but should not be totally ignored by bee inspectors and beekeepers. It is rarely encountered, but should be differentiated from the other more serious brood diseases. Several fungi belong to the genus *Aspergillus* can cause the symptoms of stonebrood although the primary causative organism is *A. flavus*.

It is not regarded as a serious disease in normal circumstances, its effects on the colony being only slight. It is generally present in the majority of colonies at some point in time and can be present in its spore stage without affecting the colony.

#### Recognition:

*Sorry, no images*

As in chalkbrood, stonebrood disease causes a mummification of brood. Larvae and pupae that are infected with *A. flavus* turn green in contrast to white or black in chalkbrood. The green growth is powdery and can be readily seen with the unaided eye. Fungus spores are found most abundantly near the head of affected larvae and pupae. Stonebrood diseased larvae are solid mummies and not spongelike as in chalkbrood.

#### Vectors

- Beekeepers - Transferring contaminated equipment / material between hives, colonies and apiary sites.
- Robbing - Colonies weakened by Stonebrood will fall prey to robbing, transferring spores to other colonies and apiaries.
- Drifting - As with Robbing will transfer spores to other colonies.
- Swarming - Swarms can carry the spores with them to new sites where the disease can spread once new brood is produced.

**Note:** beekeepers are the principal and most rapid means of spreading Stonebrood Disease.

### How to Manage Stonebrood Disease

Stonebrood is not regarded as a serious disease in normal circumstances, its effects on the colony being only slight. It is generally present in the majority of colonies at some point in time and can be present in its spore stage without affecting the colony. However, colonies that are already weakened by other circumstances may suffer to a greater extent and especially in early spring.

Please obtain an up to date copy of the CSL 'Foul brood diseases of honey bees' booklet by visiting the DEFRA website or downloading direct from the EMBA website.

#### Detection

**Hive Examination** - Examination of brood frames and floor debris is required especially in spring. Bees should be gently shaken from the frames to allow full inspection, abnormalities are then easily spotted. Stonebrood 'mummies' are easily seen and may even fall out of the cells during examination.

## Vectors

As with many honeybee related diseases, the beekeeper is the main vector in the spread of this disease by transferring, selling or exchanging frames and combs, honey or equipment which is infected. Robbing of infected and depleted hives and swarms from infected colonies also transmit the disease.

## Monitoring

Vigilance is important with all honeybee diseases. Check all apiaries and colonies regularly for health and suspect any colonies that are not thriving where there is no already known reason. Colonies that die out should be examined thoroughly and sealed to prevent robbing and spread of any disease present.

## Controls

There is no specific treatment recommended for Stonebrood. The disease has only slight effect on healthy colonies but may have a more serious effect on weakened colonies. Prevention is the best method of controlling this disease by maintaining healthy, strong and vigorous colonies that display good hygienic traits. Good husbandry contributes greatly to overall colony behaviour and health, thereby avoiding the conditions in which Chalkbrood can flourish. Colonies that suffer excessively from Chalkbrood may need to be re-queened.

**Note: Presently there is no effective medical treatments for Stonebrood**

Apiary Housekeeping:

- Always maintain a high level of hygiene in all your beekeeping practices
- Carry out methodical health inspections on a regular basis, checking for brood disease particularly in spring and autumn.
- Never transfer combs between colonies without checking for brood diseases
- Systematically replace old brood combs in your hives melting down the old comb to maintain clean and healthy brood.
- Never bring colonies or equipment into your apiary without establishing their origin, condition, and disease status.
- Sterilise any secondhand equipment or hive components before introducing them into your apiary
- Discourage drifting and robbing in the apiary
- Suspect stray swarm health until you know otherwise
- Report any incidence of disease or suspicious conditions immediately to your local association