

Chronic Bee Paralysis Virus (CBPV)

Cause

As its name suggests this is a virus. It is an ellipsoid with a size of 20 X 30 to 60 nm. It is believed to be endemic in the UK.

Disease

The virus multiplies in the bees tissues giving rise to 2 distinct syndromes.

Signs in the colony

Syndrome 1 Abnormal trembling of the wings and body. The bees cannot fly and often crawl on the ground and up plant stems. In some cases the crawling bees can be in large numbers (1000+). The bees huddle together on the top of the cluster or on the top bars of the hive. They may have bloated abdomens due to distension of the honey sac. The wings are partially spread or dislocated.

Syndrome 2 Affected bees are able to fly but are almost hairless. They appear dark or black and look smaller. They have a relatively broad abdomen. They are often nibbled by older bees in the colony and this may be the cause of the hairlessness. They are hindered at the entrance to the hive by the guard bees. A few days after infection trembling begins. They then become flightless and soon die.

Both syndromes may occur in the same colony but one usually predominates.

CBPV may be the final cause of colony collapse following other adult bee diseases.

Treatment

There is no treatment for viral diseases.

Control

Most viral diseases of bees are associated with stress. This may take the form of climatic pressures but is more often associated with other diseases. Viral disease has been much more common in colonies affected by Varroa.

In this case the signs described are very similar to those stated as being due to 'Isle of Wight disease' a condition previously ascribed to Acarine. It is likely however that its expression was due to the bees being weakened by the Acarine mite. Severe Nosema infections have also been implicated.

It has been suggested that there may be a genetic component in some colonies making them more susceptible to the disease.