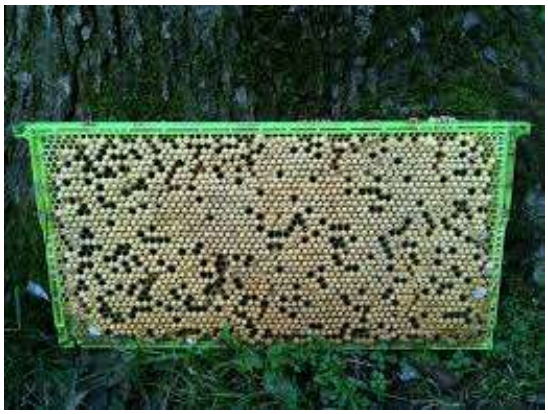
Common Honeybee Pests

By Ken Kloepper (Kloepper Apiaries)

1. **Varroa Mite:** *(Varroa Destructor)*
2. **Small Hive Beetle:** *(Aethina tumida)*
3. **Common Field or Wood Mouse:** *(Apodemus sylvaticus)* or House Mouse *(Mus musculus)*:
4. **Greater Wax Moth Larvae:** *(Galleria mellonella)*
5. **Honeybee Tracheal Mite:** *(Acarapis woodi)*
6. **Skunk:** *(Mephitis mephitis)*
7. **Ants:** *(Various species)*
8. **Spiders, cockroaches, other insects and animals** *(Various species)*
9. **Bee Louse:** *(Braula coeca)*
10. **Bear:** *(Various species)*

1.  **Varroa Mites:** Enemy number one of the honey bee in the US since the mid 1980's. If you have honeybees, you most likely have varroa mites! Because Varroa mites feed on honeybee fat bodies and vector viruses to the honeybee, it is important to manage mite populations through regular mite counts and treatments. Mite count goal … as low as possible with 3 mites/100 bees considered the economic threshold. Many treatment options are available from strong chemical miticides to integrated pest management techniques such as drone trapping and brood breaks, or the use of varroa resistant breeding stock such as Russian bees,



, hygienic Italian, VSH or varroa sensitive hygienic bees, and even mite biters. Colonies often appear strong in autumn, but due to the high mite counts and virus loads, will fail to make it through winter. Winter colony losses of 33% or more are becoming all too common.

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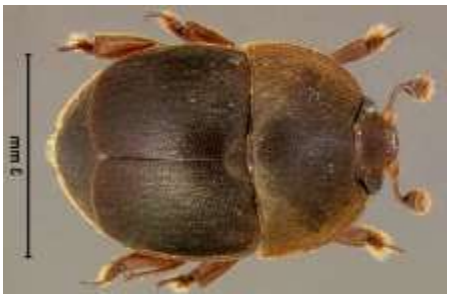
2.  Small Hive Beetle: 

If the varroa mite is enemy number one of honeybee colonies, the small hive beetle may well be on its way to becoming the most problematic pest for beekeepers. While the small hive beetle is considered only a secondary predator of bees, anyone that has dealt with SHB knows that they can turn even a strong honey bee colony into a fermenting, nasty, slimy mess that ultimately results in the bees

absconding or fleeing from their hive in search of a new home. Beekeepers try all sorts of chemicals, mechanical traps and devices to keep the SHB out of the hives, but often find in just a few days since the last inspection, a hive overloaded with SHB and a real mess to clean up or destroy. The SHB is a tropical insect originally from Sub Saharan Africa and in hot humid weather can hatch eggs into tiny larvae in only 24-48 hours. The larvae mature in 10 to 16 days and then leave the hive to burrow and pupate in the soil around the colony. In 3 or 4 weeks, the pupae emerge as adult SHB and the females will mate and begin laying eggs back in a beehive in about a week. The larvae defecate in the honey and carry a yeast (Kodamaea ohmeri) which ferments beebread and honey and smells something like rotten oranges which is believed to be highly attractive to adult SHB females. When removing honey and brood combs from colonies containing SHB, they must be extracted quickly (< 2 to 3 days) or frozen near 0

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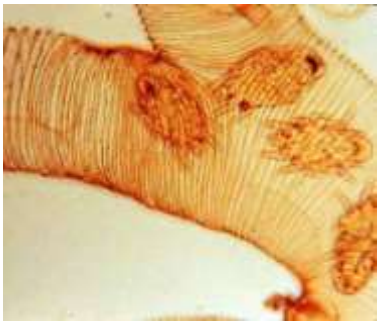
degrees F. for 48 hours to kill any SHB eggs which might potentially hatch, thereby ruining the honey or brood combs.

3. Common House, Wood, or Field Mouse: The common mouse, while an easily controlled pest of the honey bee colony, will attempt to enter the bee hive in fall when outside temperatures start to drop. In winter, honey bees cluster in order to generate enough heat to survive. Mice quickly learn that the bees are unable to chase them out of the hives, so will try to sneak in and build a nest somewhere away from the cluster of bees. They chew holes in the frames and foundation as well as hauling in bits of wooden sticks, pine needles or other debris to build their nests. In addition, they leave their droppings and urine behind making a nasty mess inside your colony. Fortunately, most mice can be kept out of the hive by the beekeeper installing mouse guards or entrance reducers made of metal or wood each autumn, and then removing them again in the spring once temperatures rise enough to allow the bees to resume guarding the entrance.

4. Greater Wax Moth Larvae: One of the most destructive pests of the honey bee colony is the Greater Wax Moth Larvae. While the adult wax moth poses little risk to the colony itself, the female wax moth can enter the hive and lay many eggs which then hatch into larvae that do all the damage. The larvae will tunnel through the combs reducing the frames to a tangled mat of webs, comb bits, and digested beeswax, and even create larvae-shaped gouges in the wooden frames under each cocoon where the wax moth larvae spins during its metamorphosis. This often weakens the wooden frames to a point that they can not be repaired. The inner surfaces of brood boxes and supers will also be damaged and become unsightly but are usually left structurally sound and able to be reused. Fortunately, the introduction of plastic frames and foundation over the past 20 or so years have reduced the overall damage the larvae can do to the frames. I often hear beekeepers claim that the wax moths killed their hives. This is rarely the case, as the Greater Wax Moth larvae is a secondary predator and most reasonably strong hives will keep the wax moths out and under control. The hive in most cases was either sick from diseases or under attack from other pests or

had lost its queen and only succumbed to the wax moth after the hive had weakened to a point where it was no longer able to defend itself.



5. Honeybee Tracheal Mites: The honey bee tracheal mite was first discovered in the US in 1984. It is a parasitic mite that feed and reproduce inside the respiratory system of adult honey bees. For many years, beekeepers had severe losses from tracheal mites. While no longer a major cause of loss, tracheal mites are still found in certain populations of honey bees. Transmission is through direct contact with infected bees. The female mite enters the spiracles of adult honey bees less than 3 days old, and travel to the bee's tracheae to begin laying eggs. The only way to confirm tracheal mites is through dissection and examination under a microscope. Requeening is a very good method of non-chemical control or menthol pellets may be placed inside the hive to vaporize and kill the adult mites. This menthol treatment must remain for 2 weeks to allow time for eggs and larvae to mature and inhale the fumes as adults.

6. Skunk: The skunk, a nocturnal animal, is interested in the honeybee itself for its meal. Skunks will scratch and paw at the sides and the bottom board of the hive until the bees rush out of the hive to investigate. Look for muddy foot prints on the side or bottom boards of colonies. Elevating the hives to 2 or 3 feet or more will force the skunk to stand in order to reach the bottom board and will expose its tender underbelly to bee stings. In addition, you may install carpeting tack strips across the front of the bottom board with the pointed tacks facing the hive. When the skunk begins to paw at the carpet strips it will cut its paws eventually causing it to stop.

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7. Ants: While a minor threat to bee hives, ants can and will be found around your honey bee colonies. You may see ant trails from the ground up the sides of the hives or upon removal of the outer cover you may find thousands of ants surrounding the inner cover hole. Generally, a strong colony will keep them from entering the hive. Ants can be persistent and difficult to get rid of completely. Possible solutions include locating colonies on hive stands with the legs placed in mineral oil or water to create a barrier. Keeping tall grass and weeds down to eliminate a travel path for the ants may help. You may sprinkle powdered cinnamon around the inner cover. Do not use poisons or ant baits in the hive… remember you are producing honey for human consumption and you don't want it contaminated. I found in one case by changing the size of the gap between the inner and outer covers, I was able to allow the bees to just fit through the gap and they then forced the ants out. Previously, the gap was large enough for the ants to come and go and use for a nest, but since the bees couldn't fit through the gap, they were unable to patrol and remove the ants.

8. Spiders, cockroaches, other insects and animals: Generally, most other insect pests do not present much of a problem for a strong colony. You may see spider webs near the colonies with a bee or two trapped in the web. The spider may be successful catching a few honey bees, but the small number should have little effect on the hive. I try to smash as many spiders as possible and clean their nests from between colony boxes and parts in order to reduce their overall numbers mostly because I just don't like spiders! As for other small beetles and cockroaches, keeping your bottom board as clean as possible and removing other debris from around hives should minimize the number of these creepy crawlies as well. Small animals such as toads and lizards are commonly found around apiaries, but normally have little impact and most likely won't require treatment or control.

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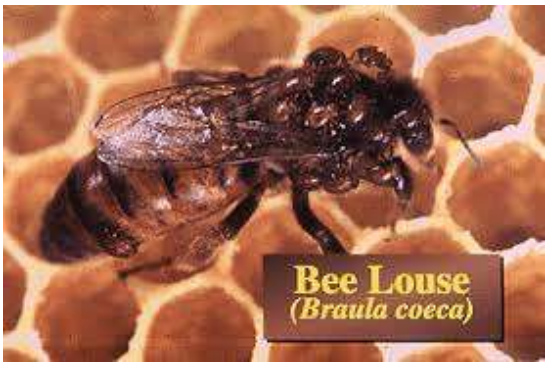
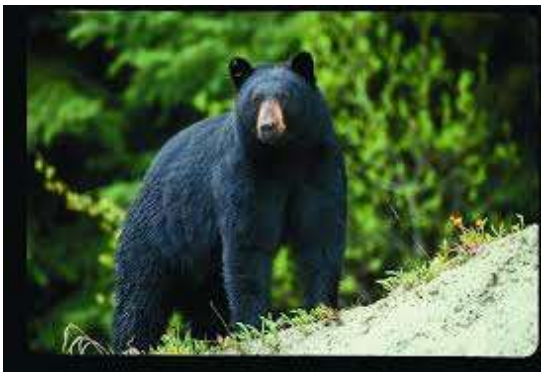
9. 

Bee Louse: While I have heard of this pest before, I have never seen one since I started keeping bees in 1974 or know of any beekeepers that have reported them. According to the U. of Florida, while it is found in the US, it is believed to have little impact on the beekeeping industry and probably does not require any treatment.

10. 
Bear: Last, but certainly not least, our friend, the bear. Bears are certainly attracted to beehives, and for areas that have bears, they are a financial and physical nuisance, mainly since they destroy so much equipment when they attack an apiary. The only prevention is to build a very carefully designed electric fence to surround the colonies. The spacing of the wires I've read, is critical to stop a bear, as they must receive the shock before they push their nose too far in between the wires so that they will back up instead of just plowing forward through the wires. I would recommend getting professional help, perhaps from the Illinois Dept. of Conservation should you find an apiary that has evidence of a bear attack.