

The Zombie Fly – A Real Threat

The Zombie Fly, *Apocephalus borealis*, is responsible for the deaths of large numbers of honeybees. The fly was only discovered to attack honeybees in 2008, so there is very little knowledge about its implications right now, including how widespread the parasitations from them are. **That's where you come in!**

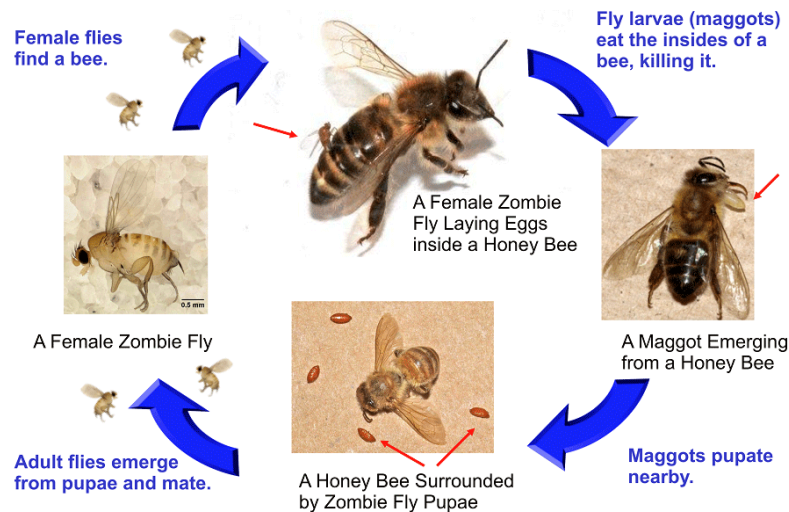


APOCEPHALUS BOREALIS,
THE ZOMBIE FLY,
LAYS ITS EGGS ON A BEE,
AND ITS LARVAE EATS
THE BEE FROM THE
INSIDE OUT.

The zombie fly was first found infecting honeybees in San Francisco and now their area has determined that over 70% of their worker bees are infected by the Zombie Fly. According to an article from Scientific American:

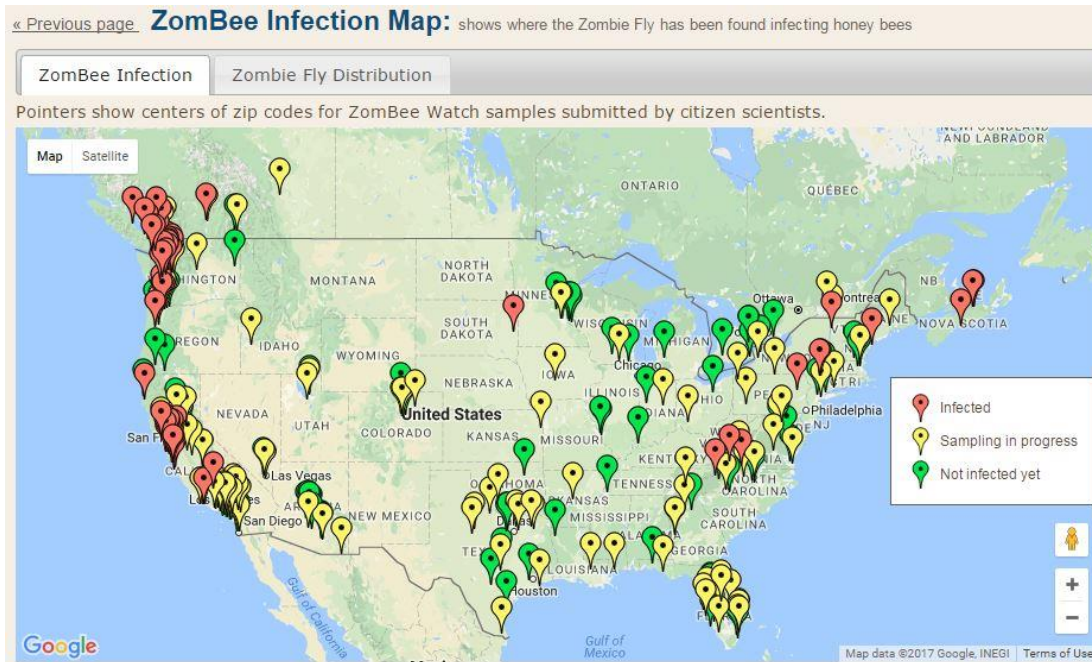
“Bees from affected hives—and the parasitizing flies and their larvae—curiously also contained genetic traces of *Nosema ceranae*, another parasite, as well as a virus that leads to deformed wings—which had already been implicated in colony collapse disorder. This double infection suggests that the flies might even be spreading these additional hive-weakening factors.”

Life Cycle of the Zombie Fly *Apocephalus borealis*



SFSU has created www.ZomBeeWatch.org to help determine the exact spread and depth of this issue and what role, if any, the zombie fly may be playing in Colony Collapse Disorder. **YOU can help them. See reverse side for more information on how.**

ZomBee Watch is looking for citizen scientists to test for infections in their area and to report the results back to them. The JP2 Rockslides, an FLL robotics team from Minnesota studying human-animal relationships, are helping beekeepers and all citizens with this testing.



In partnership with SFSU and Dr Hafernik, the **Rockslides** have created test kits to make testing easier and more affordable, and are trying to get these kits out to as many testers as possible **FOR FREE!**

The test kits include the basics you need for testing including the light trap, tweezers, and instructions. The Rockslides even created a new version of the light trap that is solar powered in case hives are away from electricity.



There are 9 states that have no tests in them at all, and many only have one or two. Infections have been found on the east and west coasts, even into Canada, so the cold may not be an issue for the zombie fly. **Most beekeepers that had bees dying because of the zombie fly had never even heard of the issue before.** It is important to learn about zombie flies and the issues they bring, as well as to consider testing in your area and report the results back to help SFSU, and beekeepers across the US with this issue.



To get a **FREE** test kit (limited quantities available), contact the JP2 Rockslides through their website: www.SherCoFIRST.org/JP2-Rockslides or by email: Jennilynn633@gmail.com

You can find out more information about the San Francisco State University research on the zombie fly attacking honeybees on their website: www.zombeewatch.org