



Scientists Study Virus With Possible Connection to Bee Loss, Colony Collapse

Scientists continue to study virus connections to loss of bees; author offers advice for keeping bees healthy.

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About the Author

Tom Meade is a writer, beekeeper and vegetable gardener in Rhode Island. The discovery that an Israeli virus is present in collapsed honey bee colonies is a step in determining what is killing bees throughout the United States. Meanwhile, Ross Conrad, a Vermont beekeeper, is advocating organic approaches for keeping bees healthy in his new book, *Natural Beekeeping*.

© Tom Meade Scientists Discover Virus Connection

A team led by scientists from the Columbia University Mailman School of Public Health, Pennsylvania State University, the USDA Agricultural Research Service, University of Arizona, and 454 Life Sciences has found a significant connection between the Israeli Acute Paralysis Virus (IAPV) and colony collapse disorder (CCD) in honey bees. Colony collapse disorder has killed thousands of honeybee colonies in America.

"I hope no one goes away with the idea that we've actually solved the problem," said Jeffery Pettis, research leader of the U.S. Department of Agriculture's Bee Research Laboratory. "We still have a great deal of research to do to resolve colony collapse disorder and why bees are dying."

Could Honey Improve Memory?

Could honey join dark chocolate as one of the sweet treats that we're allowed to indulge in guilt-free because of its health benefits?

A recent study showed that rats on diets including honey had better spatial memory and were less anxious. Click here for more... "This discovery may be helpful in identifying hives at risk for disease," said Dr. Ian Lipkin, a physician and professor of epidemiology, neurology, and pathology at Columbia University. He and his team used revolutionary genetic technologies to survey microflora of colony collapse disorder hives, normal hives, and imported royal jelly.

"The next step is to ascertain whether IAPV, alone or in concert with other factors, can induce CCD in healthy bees."

This is the first report of IAPV in the United States. Transmitted by the Varroa mite, a pest in bee hives, IAPV was first described in 2004 in Israel where infected bees had shivering wings which progressed to paralysis, and then they died just outside the hive.

Bee Diets and Pest Control Methods Could Be Key

In the U.S., "IAPV was found in non-CCD hives in some cases, which could reflect strain variation, co-infection, or the presence of other stressors, such as pesticides or poor nutrition," according to a statement from Columbia University.

Many American beekeepers, especially commercial pollinators and honey producers, feed their bees syrup made from refined sugar or high-fructose corn syrup after taking away some of the bees' natural honey stores in late summer or early autumn.

"Such unnatural food sources add to the stress on the bee's digestive systems and ultimately can compromise and weaken the immune systems of each individual within the hive," writes Ross Conrad in his new book, *Natural Beekeeping, Organic Approaches To Modern Apiculture*. Chelsea Green, a Vermont publisher, released the book this summer.

To eliminate mites and other insects thought to be pests, many American beekeepers also treat their hives with lethal



chemicals in doses that do not kill the bees.

“The effect of exposing honey bees to sub-lethal doses of these compounds is rarely discussed,” Conrad writes.

“Just as with people, the long-term health and vitality of the hive is likely to be compromised by such exposure, even if such detrimental effects are not readily and immediately evident.”

Beekeepers should treat the hive as a teacher, Conrad believes.

He writes:

“The honey bee inspires me to work into my daily life this lesson: that we should take what we need to live in the world in such a way that we give something back and improve upon things, thus making the world a better place. Many of the world’s problems could potentially be solved in short order if every person took this single lesson from the honey bee to heart and worked to manifest it in his or her life.”