



The bee's knees question – What do the years of 992, 1443, 1853, and 1903 have in common ?!?!

By Norm Benson | June 17th 2014 06:00 AM | Print | E-mail | Track Comments

Honeycomb of European honey bees (Apis mellifera) with eggs and larvae. (Photo credit – Wikipedia)

It's time once again for everyone's favorite game show – Environmental Whack-a-Mole !

What Black and White, Manichaeian Green scare do we have for scientific experts to bat down with nuanced arguments today, Johnny ?!?!

Johnny – “ This time It's Colony Collapse Disorder (CCD) that's in the news once again. Many greens want to ban a particular class of synthetic pesticide they say leads to CCD. Bee Colony Collapse Disorder is a mysterious loss of most or all worker bees from the hive of the European honey bee (Apis mellifera), where only a small number of young workers and the queen remain, and, even more baffling, the ample food supplies left behind are not raided by pests for several weeks after the collapse. ^[1]”

I see. Wasn't Bee Colony Collapse Disorder first identified in, what, 2006 ?!?!

Johnny – “ Yes, indeedly. But the first evidence for such disappearances goes back centuries. ”

That's longer ago than 2006.

“ Wow, nothing gets by you does it Sherlock ?!?!

“ Yes, 'In Ireland, there was a great mortality of bees in 950,' entomologist Joe Ballenger notes, 'and again in 992 and 1443^[2]. ’

“ In 1853, Lorenzo Langstroth, the father of American bee-keeping, described colonies that were found 'to be utterly deserted. The comb was empty, and the only symptom of life was the poor queen herself. ^[3]'

“ In 1868, an anonymous reporter told of abandoned hives with lots of honey still in them.

" In 1891 and 1896, many bees vanished or dwindled to tiny clusters with queens in the month of May, hence the name — 'May Disease'.^[4]

" In 1903 an outbreak occurred in Cache Valley in Utah.^[5]

" The Isle of Wight in the United Kingdom saw three epidemics between 1905 and 1919, 90per cent of the honey bee colonies there died.^[6]

" In 1918 and 1919 there were occurrences in the United States.^[7]

" There were more mysterious bee disappearances in the 1960s in California, Louisiana, and Texas.

" Another in 1975 in Australia, Mexico, and 27 U.S. states.^[8]

"In 1995, Pennsylvania bee-keepers lost 53per cent of their colonies.^[9]

" The term 'Colony Collapse Disorder' was coined and defined around 2007. "

And what brought it into the news again !?!?

Johnny — " It seems Chensheng (Alex) Lu, an associate professor of environmental exposure biology at the Harvard School of Public Health, says he knows what causes CCD. In a May 9th^[10] news release he announced 'that neonicotinoids are highly likely to be responsible for triggering Bee Colony Collapse Disorder in honey bee hives that were healthy prior to the arrival of winter. 'Neonicotinoids, such as Imidacloprid and clothianidin, are insecticides that are commonly used to coat seeds and then taken up by the plant where it helps the plant guard against insect attack. By the way, the first commercially available neonicotinoid, Imidacloprid, was first widely used in the United States in 1994. "^[11]

A very long time after the 'great mortality of bees' in the 10th century.

" Wow, you have a mind like a steel sieve, don't you !?!?"

Well—

" Harvard's media release goes on to say, 'Experts have considered a number of possible causes, including pathogen infestation, bee-keeping practices, and pesticide exposure. Recent findings, including a 2012 study by Lu and colleagues, suggest that Bee Colony Collapse Disorder is related specifically to neonicotinoids, which may impair bees' neurological functions.'^[12] That is Lu thinks these types of pesticides might be hurting the honey bee's nervous system, which includes its brain, which in turn may impair the ability to return to the hive or cause the bee to self-exile. "

Self-exile !?!? What are these bees Romney supporters !?!?

" Ha ha. I'll laugh since you sign my paycheck. "

Moving along; what do the experts say !?!?

Johnny — " As you might imagine, they have many nuanced arguments. "

Such as ?!?!

Johnny — “ First, what Lu and his team produced wasn’t CCD. “Well that seems a little picky. “ It’s a honking big deal if you say you reproduced Bee Colony Collapse Disorder and didn’t. Scientists point out that the condition of the hives that Lu and his team produced doesn’t match the definition laid out by the USDA in 2007. You can’t say you reproduced it, if it doesn’t look like it. If it doesn’t quack like a duck, it’s not a duck. “ Second, the sample sizes were too small. They used only eighteen hives — six controls and two groups of six given two different neonicotinoid formulations. So if they had reproduced Bee Colony Collapse Disorder symptoms in this case, the experiment would need a larger sampling to be statistically relevant. “ Most experts suspect Bee Colony Collapse Disorder results from a number of factors that stress the colony. According to the literature, Bee Colony Collapse Disorder is ‘strongly associated with hives that have been under stress from any of a number of known stressors These include mites, bacteria, fungi, viruses, protozoa, and [yes] insecticides. ^[13]”

So it is probably safe to say Bee Colony Collapse Disorder was here before neonicotinoids, it will be here after.

“ Puns. The lowest form of humor. ”

What ?!?!

“ Nothing. ”

So what is to be done ?!?!

“ As they say in the biz, ‘more research is needed. ’

“ Until then people might consider what Randy Oliver of ScientificBee-keeping.com wrote, ‘As a bee-keeper who makes his living from having healthy colonies of bees, I am acutely interested in the causes of colony morbidity and mortality. Without a doubt, pesticides can cause colony morbidity or mortality ... The neonicotinoid class of insecticides are no exception, and I’ve detailed problems associated with them ... Although I initially suspected that neonicotinoids may have been a likely cause of Colony Collapse, my extensive research does not support that hypothesis. ’

“ I asked Oliver about organic bee-keepers, since neonicotinoids aren’t allowed in organic crops. In an email, he told me, ‘During the original Bee Colony Collapse Disorder investigations around 2007, organic bee-keepers got hit just as hard as others. In fact, the queen of organic bee-keepers called me as the hives in her operation were crashing. ’ He describes his operation as largely organic, ‘other than that I move my hives to almonds for a month each year. I tend to have relatively low losses ... However, I know of many bee-keepers who use conventional treatments and run their bees in conventional agriculture who also have a low loss rate In general, those who keep varroa [mites] in check and maintain good nutrition have healthy bees. ’”^[14]

I guess that while neonicotinoid pesticides may be a problem, banning them won’t stop Colony Collapse Disorder.

“ That’s right. . . . And your elementary school teachers said you couldn’t be taught.

“As H. L.

Mencken said, 'For every complex problem there is an answer that is clear, simple, and wrong. ''

Footnotes:

[1] Source — Underwood, Robyn M. and Dennis vanEngelsdorp. Colony Collapse Disorder — Have We Seen This Before ?!?! [2] Ballenger, Joe. Colony Collapse Disorder — An Introduction <http://www.biofortified.org/2013/03/colony-collapse-disorder-an-introduc...> accessed 18 May 2014 Oldroyd BP (2007) What's Killing American Honey Bees ?!?! PLoS Biol 5(6) — e168. doi:10.1371/journal.pbio.0050168 [3] Nordhaus, Hannah An Environmental Journalist's Lament <http://thebreakthrough.org/index.php/journal/past-issues/issue-1/an-envi...> 2011. Accessed March 30, 2013 [4] Underwood, Robyn M. and Dennis vanEngelsdorp. Colony Collapse Disorder — Have We Seen This Before ?!?! [5] Ballenger, Joe. Colony Collapse Disorder — An Introduction <http://www.biofortified.org/2013/03/colony-collapse-disorder-an-introduc...> accessed 18 May 2014 Oldroyd BP (2007) What's Killing American Honey Bees ?!?! PLoS Biol 5(6) — e168. doi:10.1371/journal.pbio.0050168 [6] Underwood, Robyn M. and Dennis vanEngelsdorp. Colony Collapse Disorder — Have We Seen This Before ?!?! [7] Oldroyd BP (2007) What's Killing American Honey Bees ?!?! PLoS Biol 5(6) — e168. doi:10.1371/journal.pbio.0050168 [8] Nordhaus, Hannah An Environmental Journalist's Lament <http://thebreakthrough.org/index.php/journal/past-issues/issue-1/an-envi...> 2011. Accessed March 30, 2013 [9] Ballenger, Joe. Colony Collapse Disorder — An Introduction <http://www.biofortified.org/2013/03/colony-collapse-disorder-an-introduc...> accessed 18 May 2014 [10] Dwyer, Marge. Study strengthens link between neonicotinoids and collapse of honey bee colonies <http://www.hsph.harvard.edu/news/press-releases/study-strengthens-link-b...> 2014. accessed May 18, 2014 [11] Staveley, Jane P. , Sheryl A. Law, Anne Fairbrother, and Charles A. Menzie. A Causal Analysis of Observed Declines in Managed Honey Bees (*Apis mellifera*). Human and Ecological Risk Assessment, 20 — 566–591, 2014 p583 [12] Dwyer, Marge. Study strengthens link between neonicotinoids and collapse of honey bee colonies <http://www.hsph.harvard.edu/news/press-releases/study-strengthens-link-b...> 2014. accessed May 18, 2014 [13] Honey Bee Colony Collapse Disorder — A Literature Review <http://www.biofortified.org/2008/11/honey-bee-colony-collapse-disorder-a...> accessed 16 May 2104 [14] Email correspondence with Randy Oliver. 16 May 2014.