

Trade + Bees = CCD

Jim Fischer

At this point it seems pretty clear that the U.S. needs to do a much better job of inspecting imports more carefully – consider pet food, toothpaste, and toxic toys.

There is an old Chinese curse – “May you live in interesting times”. These certainly are interesting times for beekeeping. Nearly everyone we meet asks us how our bees are doing, many civilians are suddenly interested in taking up the craft, and beekeepers are learning to not wear beekeeping tee-shirts in public if they don’t have the time to talk with a dozen people about the plight of bees. People with swarms in their trees or established hives in their walls now feel obligated to have the bees carefully removed, and don’t mind paying for the privilege of “saving the bees” in their own small way. If you haven’t at least doubled your retail honey price, you’ve been selling yourself short.

The downside to all the increased awareness is the specific problem that prompted all of the increased awareness. “Colony Collapse Disorder,” (CCD) has remained a precise-sounding pseudo-scientific term which translates into plain English as the “Huuuuuh?” sound made by “Scooby-Doo” in the 1970s cartoons. There’s no diagnosis yet, so there’s no “cure”, either. All beekeepers can do is watch hives die. Depressing. Total bummer. Lucky I don’t have it myself. Hope you don’t, either.

No one is sure how many hives have crashed from CCD so far, but exact numbers don’t matter. If even 1% of cows in multiple cattle herds were dropping dead for reasons unknown to ranchers and their veterinarians, everyone from the National Guard to the Boy Scouts would have been mobilized. Bees just don’t get no respect.

But rumors have been circulating of a scientific paper slowly slogging its way to publication in a science journal that must remain nameless. Lots of rumors. Attributed to people that aren’t in the habit of rumor-mongering. Published in obscure and unusual places and authored by people you wouldn’t expect to report on science at all, let alone entomology and beekeeping.

We’ve all kept our mouths shut about it so far. Science journals demand “exclusive first-publication rights” for papers. If reports appear elsewhere first, they may refuse to publish the paper at all, and the paper may lose the aura of respectable Science (with a capital “S”) that comes from publication in a major peer-reviewed journal. Yes, it is high-handed, yes, it is unfair, but it is what scientists have to tolerate. Nearly everyone gets raises, bonuses, tenure, and promotions based in large part on such “published results.”

So, what’s the paper say? Well, that would be telling, wouldn’t it?

The paper may have been published by the time you read this. If so, you will be able to find at least the abstract, perhaps even the full paper at www.bee-culture.com/ccd/.

I can say that the term “pathogen” has appeared frequently in the informal comments of the research teams, and the more specific term “virus” has been used often. But that’s not as interesting as what is said about the source of this pathogen. It apparently has been traced to “two points of entry” into the USA.

Now, I’m not revealing anything not already “in the press.” Several other publications printed some quotes they shouldn’t have. The cat got partially out of the bag. But confirmation has not been offered. Those quoted would apparently prefer to not be quoted again. Or misquoted. More interestingly, denials have not been forthcoming either. The only possible conclusion is that the quotes were violations of confidence rather than amazingly similar works of fiction by different authors.

And rather than “virus,” perhaps I should be saying “viruses.” Even that’s not yet clear. Multiple groups of researchers have each announced that they have found one or more viruses that appear to be different than anything yet identified, but the groups are not cooperating, not comparing notes, and thereby not able to say if they are talking about the same virus or different viruses. There will likely be a prolonged squabble over who found what when, and who deserves credit for which. No one involved gets a gold star for “plays well with others.” Rather than receiving the usual 15 minutes of fame owed to those who isolate a “cause for CCD”, they may all end up as a mere footnote – a textbook example of the perils of allowing a “team effort” to break down into tag-team wrestling. Yes, science is a full-body contact sport, but this is starting to get embarrassing.

But how could a bee virus travel to North America? The easy way would be to travel in live bees. Perhaps the only way. So how might bees cross oceans?

One way would be to fly. No, not on their own, bees can’t fly that far. They are flown in as air freight. Don’t tell Samuel L. Jackson. He got all worked up over mere snakes on a plane.

Another way would be to arrive as stowaways on ships

and in cargo containers. This is how Florida's Africanized bee problem got started, with bees arriving by sea from Central and South America. The problem continues, although one might expect that Africanized bees would find the inspectors long before the inspectors finished even a cursory inspection of a ship and its cargo. The conclusion here is that even cursory inspections are rare.

Regardless of the source of the bees or the type of transport, the mechanism for the spread of CCD seems to be international trade, combined with a lack of port-of-entry inspections.

WTO-Mandated Imports Of Live Bees

In 2004, World Trade Organization rules forced the USA to abandon its long-standing prohibition on imports of live bees without permits and a quarantine period. Under the WTO, bees are "goods", no different from TVs or steel girders. (See "*Apis APHIS*", Dec 2002 *Bee Culture*)

So, beekeepers could buy bees from the other side of the planet. Why would anyone do that? In a word, "almonds." Almond trees bloom in February in California. That's too early for any but the strongest overwintered hives. Some hives die every year from a variety of causes, mostly all the other invasive pests and diseases that have arrived from overseas in the past 20 years. So, bees from South of the equator on the other side of the planet, where it is Summer, are sold to replace hives that have died, or to expand hive numbers to keep up with the ever-increasing acreage planted with almond trees.

Some of us pushed for some form of port-of-entry inspections to be written into the import regulations, pointing to the UK and European Union, where this was already done without any objections from the WTO or the exporting nations. *We were ignored by USDA-APHIS*, but what really hurt was that the proposal was also ignored by both national bee organizations. Bees were apparently not worthy of any consideration in trade negotiations, so no provision was made for even sampling shipments for diseases and pests. Did I mention that bees don't get no respect?

When you travel internationally, you need nine hands – one hand to hold your boarding pass and passport, one for your shoes, one for your baggie with three ounces of shampoo and toothpaste, one for your cellphone, one for your laptop, one for your jacket, one for your belt, one for your coins and keys, and one to salute the flag as you approach the x-ray scanner. But bees? They glide effortlessly into the country, as if they had diplomatic passports. (Drug smugglers, arms smugglers, terrorists, and spies take note – you can likely smuggle anything inside a bee shipment.)

The WTO rules dictate that the exporter, the guy selling the bees, "certify" that the shipment is free of diseases and pests based upon his own inspections or those of his friendly neighborhood local inspector. It is no surprise that not a single bee shipment has ever been delayed or cancelled due to concerns over diseases or pests. The exporter does not get paid unless he ships bees. The importer in the U.S. also only gets paid if the bees ship.

To make matters worse, state inspectors and state apiarists (in the few states that still fund this basic service) have no right to inspect these imported bees even after

In 2004, World Trade Organization rules forced the U.S. to abandon its long-standing prohibition on imports of live bees without permits and a quarantine period. Under the WTO, bees are "goods," no different from TVs or steel girders.

they arrive in their states, as state-level bee regulations are superceded by the WTO agreements. International treaties trump federal and state laws. (See "*Where Are We Going, And What's With This Handbasket?*", Jan 2005 *Bee Culture*)

CCD is exactly the sort of "worst-case scenario" predicted by those of us who lobbied for port-of-entry inspections for live bee imports back in 2002. We were ignored. I think I've mentioned this before, bees don't get no respect.

A tiny number of people seeking personal profit appear to have introduced yet another hive-killing problem into the U.S., but they won't even be asked to pay to clean up their mess. In fact, CCD "outbreaks" make them even more money. Some beekeepers who have suffered losses from CCD bought new "packages" of bees from overseas to replace their dead hives.

But the surreal business of shipping live queens and packages from far, far away was not originally intended to meet U.S. "demand." The entire scheme would not have been cooked up if not for Canada. When tracheal mites arrived in the U.S. from Mexico, Canada banned shipments of bees from the U.S., over the objections of some of their largest operations, who pointed out that bees, pests and diseases tend to ignore imaginary "borders" when they are nothing more than lines drawn on maps.

This left Canadian beekeepers with no reliable source of queens and packages. The large Canadian operations in Alberta learned the hard way how to overwinter bees rather than depopulating in the Fall, but Canada could not produce enough queens and packages early enough to meet the demand. So, beekeepers in New Zealand and Australia saw a market, and figured out a way to serve that market.

When Canada found that tracheal mites had either crossed the border from the U.S. or gotten into the country via other means, they did not learn from experience, but instead claimed that the border should remain closed for each of a series of excuses. *Varroa*, miticide-resistant *Varroa*, Small Hive Beetle, and then, in desperation to justify their stance, Africanized bees. During this period, some Canadian beekeepers voted with their feet, risking a \$250,000 fine for smuggling U.S. bees across the border. Some got caught. More didn't. When people are willing to break the law to buy your product, you clearly have a better product.

Once the complex logistics of air-freighting bees

around the planet were worked out, the exporters realized that the WTO agreements allowed them to force the US to allow imports of bees. To hear them tell the story, the U.S. controls on imports were "a barrier to trade" rather than prudent biosecurity. But neither bee-exporting nations feel that their *own* prohibitions on imports of live bees are a "barrier to trade." Somehow, they seem to understand biosecurity when it might protect their own bee industry, yet not when it might protect ours.

And, despite the compelling endorsements inherently made by the Canadians caught smuggling U.S. bees into Canada, some U.S. beekeepers couldn't resist buying imported bees.

So, to summarize, Canadian bureaucrats created a need to ship live bees across oceans, the WTO agreements made "trade" more important than biosecurity, our own bureaucrats could not be bothered to at least mandate the sampling of bee imports for diseases and pests, and a short list of people put their own profits above the collective well-being of U.S. beekeeping.

Inadvertent Imports Of Live Bees

While not mentioned in any of the rumors, I must point out that some colonies of bees arrive here as stow-aways in other cargo. One need look no further than Florida's experience with Africanized bees for a clear example of how this happens, and how often it seems to still be happening. Florida's woes did not start with a single colony that slipped in on a single tramp steamer. Multiple Africanized bee colonies have been found around nearly every port in Florida. More than could be explained by one colony arriving at each port. The conclusion here is that it is happening more often than anyone wants to admit.

If CCD was carried by Africanized bees, this would neatly explain how the pathogen(s) got to the U.S. without any symptoms being noticed by exporters of packages and queens. Africanized bees tend to abscond for multiple reasons, so CCD-like symptoms could go unnoticed in areas where all the bees are now Africanized bees.

Greed + Transport = CCD

So, what's the exact cause of CCD? Can't say. That would be telling.

But it doesn't seem to be The Rapture, pesticides, cell phones, genetically-modified crops, sunspots, Bat Boy, or bees of the "Russian" breed being hybridized by Russian mad scientists to "fly back to Russia."

It seems pretty clear that CCD is a result of greed. Greed amplified by trade regulations that treat live bees as nothing more than another "commodity," rather than live animals that can carry foreign, invasive, virulent diseases and pests into the Western hemisphere, and need to be inspected at port-of-entry.

Or, if you prefer, you can blame trade regulations that ignore the need for inspections of cargo even if to only verify that the cargo does not contain hitch-hiking insects that can carry foreign, invasive, virulent diseases and pests into the Western hemisphere.

But either way, greed is clearly the driving force.

But let's wait for a genuine paper to be published in a science journal. Without publication in a journal, we won't have Science with a capital "S." We have to play by the WTO's rules, and their rules state that "biosanitary concerns must be science based," and the rules also put the burden of proof upon us.

At this point, it seems pretty clear that the U.S. needs to do a much better job of inspecting imports. Even if bees still won't get no respect, there are other reasons to start inspecting all imports more carefully, the most recent examples being pet food, toothpaste, and even toys.


So, there's reason for hope that bees might start to get some respect.

Or at least some inspections.

But you didn't hear it from me, OK? **BC**

James Fischer plugged the output of the rumor mill directly to the input of the printing press for this story, but he doesn't like it one bit, as the primary obligation of "the press" is to be custodians of fact.

From Bee Culture -



What Do You Know? - X2 - \$20
Honey Bee Pests,
Predators & Diseases - X59 - \$43
Observation Hives - X87 - \$24
Bees Besieged - X139 - \$25
The Backyard Beekeeper - X141 - \$25

To Order Call or Send Check To
Root Publications
623 West Liberty Street, Medina, OH 44256
800.289.7668 • www.bee-culture.com
All books are postpaid in the U.S.