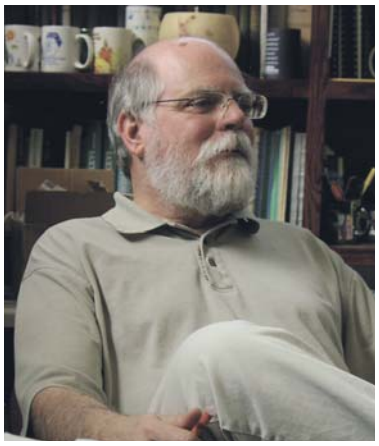
INNER COVER



As I scribble these notes in early March the U.S. Beekeeping Industry basks in the bright light of media attention unlike any experienced in years. This extraordinary coverage begins with the basics - News Releases by the Penn State PR machine, supported by interviews from the Bee Alert Researchers in Montana, the Pennsylvania Department Of Agriculture, and the Florida State Department of Agriculture and Consumer Service. *Colony Collapse Disorder* (CCD) has a life of its own now...and comes complete with over 40,000 hits on Google. National and international television, radio, blogs, and magazines and newpapers have joined in. Its got legs, as they say in the news business. Not Anna Nicole, but close.

Certainly the gathering of USDA, University, government and independent researchers and beekeepers at the two meetings in Florida in February gives this Disorder even more, and stronger legs on a professional and industry basis. (See Malcolm Sanford's exclusive articles for *Bee Culture* this month). And a front page story in the New York Times at the end of the month, and then the OP-ED piece a few days later got everybody who wasn't already interested, interested. I wasn't even remotely associated with this story as an information source, though I knew some things, but on a single afternoon this office received 11 emails from newspapers, and 23 phone calls from TV, newspaper and magazine reporters. But those really in the thick of this are bogged down with an extreme number of interviews and calls and not able to get real work done . . . it's one of the "Be Careful What You Wish For" scenarios. It'll come back to bite you sometimes.

So. So far these scientists have examined thousands of colonies that are going through or have recently gone through this Disorder. Colonies are discovered with no, or very few bees remaining. Often they find only a queen, a small amount of brood and a handful of workers struggling to survive, and maybe raise that brood. But sometimes . . . nothing. Nothing at all. There's food in the colony, most of the time, but interestingly almost always no small hive beetles or wax moths or robbing bees have moved in to cannibalize the remains (is there a toxin lurking within?). And this decline is rapid – from colonies at a strength appropriate to time of year and location . . . to nothing, in a matter of days, or short weeks.

Analyses show a variety of things going on, but there seems to be no common thread. From Florida to New York to the Dakotas to California, colonies are dead and dying in essentially the same way, but from seemingly different causes . . . or maybe the same cause not yet discovered.

Indeed, this malady may have a yet undiscovered denominator. Several new nasties have been found so far in the search . . . a new fungus in the bee's gut for instance, unexplained viruses and bacteria, and especially some new toxins are being found. But no matter what it is, if it is to be discovered the good people now in search of this curse will certainly master it. Even better, they are gathering and preserving samples by the score to examine later . . . and to keep and see if it comes 'round again.

Right now there is too much talent and too much need not to find the fundamental cause. There's even money . . . well, seed money if you will . . . in the equation – money from the government (and more being asked for), money from the industry, money from places unexpected. We are hopeful it is enough. But it could be more with your help . . . it could be enough to match the will and the determination of those now leading the way. You can add to the supply if interested (see Malcolm's article for information on how to participate).

But back to the story. Not surprisingly, some beekeepers had something similar last year and even some the year before, it seems. Maybe the same thing? Maybe they had a head start and it spread from there to everywhere else this year? And there's a host of things the researchers have to choose from that it could be. Which one, do you suppose is the root of this evil, the cause *celeb*?

There's the *Varroa* Complex, for starters. That's not a surprise, is it? This devil is lethal on so many levels, starting with basic damage to larvae and adults simply by the feeding activity of adult mites. Damaged adult bees don't live long, and damaged larvae grow up to be damaged adults who not only don't live long, but aren't 100% at being nurse bees either, which puts the next generation at an immediate disadvantage. And that puts the next down a notch, and the next . . . it goes on until there are no more generations left. And then there's this virus thing. Nine, at least nine, viruses visit honey bees. *Varroa* are responsible, apparently, for transferring viruses from bee to bee, and for causing silent others that have been lurking to suddenly rise and be counted. Viruses get around and can, and do strike hard and fast on several fronts. But *Varroa* is the middle man, every time.

Then there's this nutritional thing. Lousy weather last year in many places led to lousy forage, and lousy pollen. And what got stored, if anything got stored, was just as bad. Lousy food makes for fewer Winter bees, fewer Spring bees, fewer bees. Poof. No bees. Throw in the high fructose corn syrup conspiracy – that is overheated HFCS, or acid-made vs. enzyme-made . . . something, it seems, may be responsible for tankers of off-spec syrup . . . or so it is thought.

Certainly there's the catch-all Stress thing. Here's just some of the things on that list to add to all of the above:

Not enough food; pesticides outside the hive (increased use of imidacloprid as a foliar spray this year

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Death By A Thousand Cuts, Perhaps

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has some thinking that's the culprit); two, three or more years of drought; tracheal mites; too late *Varroa* treatments; pesticides inside the hive (from outside, and those added by beekeepers); contaminated comb; everyday pests, predators and diseases; queen problems; genetically modified crops; moving colonies, moving them again, and again, and again; that new Nosema disease (that's a scary situation considering how lethal they say it is, and how fast it can kill a colony); and everything else we do to bees that bees shouldn't be subjected to. This is without doubt a litany of woes without precedent.

But let's not forget the ordinary, the mundane . . . that normal 20% or so loss we have every year. The left side of the curve drops off predictably and that amounts to nearly a half-million colonies right there. The weak, the sick and the queenless always don't make it.

CCD may be a new, exotic, imported, insidious horrible pest of some kind, or a brand new pesticide we haven't been exposed to before. Or maybe one that's always been here. It even may be the Disappearing Disease of old or simply African absconding behavior. But, I'll tell you what I think after talking to those in the middle of this, the researchers, the scientists, the beekeepers who have had to pick up thousands of empty boxes (there are, by the way, lots of beekeepers who haven't seen this, and don't know what I'm talking about . . . Recall the Brethren?). No, I don't think it is any of these. Nope. Rather, I think it's *all* of these. I believe they'll find that exotic bug, that newest virus, that lethal disease or toxin from hell . . . but frankly, even when they do I don't think it's the only thing they'll find.

What this is . . . well, what I think this is, is *The* classic case of Death By A Thousand Cuts. One tiny thing after another after another after another, until it's simply one thing too many, and the bees rise up and scream to everyone and anyone who will listen – ENOUGH! WE HAVE HAD ENOUGH OF YOUR CRAP!

After all, they're only bugs in a box. What can you expect?