



# OHIO INFO BEE



Ohio State University Extension Service - - - - Ohio Department of Agriculture

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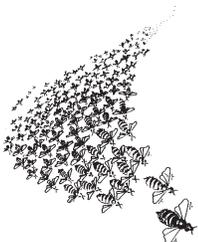
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## SOME BEE THINGS I CAN'T EXPLAIN FROM THIS PAST SEASON

James E. Tew

### Quaking bee mystery

This past season, several of you contacted me asking about “shaking” bees and whether or not an insecticide was involved. The few bees affected appeared to have a neurological problem that made them appear drunk. I have no idea if these bees recovered. At first, I thought it just to be one of those “bee things” but after getting thee calls, I began to give it more thought. Later, I noticed a few bees in my own observation hive exhibiting what I suppose were the same symptoms. They staggered around looking purposeless and intoxicated. Otherwise, they looked fine. Within a day or so, the symptoms were gone. I have no idea if the affected bees recovered.

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## UPSIDE OF CCD

John Grafton

This beekeeping season has been plagued by the massive number of dead colonies that were discovered last spring. The questions have persisted. What caused it? How could it have been prevented? How is it identified? Can the equipment be reused? Has it happened before? Will it happen again, when? Did the loss affect crop pollination? How will the honey crop be affected? The list of questions just goes on.

With all this apparently negative side to beekeeping has there been anything positive come out of the beekeepers' loss? It may not be immediately apparent but some gains have been made.

- All beekeepers need to cull out old equipment at some point in time, though perhaps not to the degree that this caused.
- Media coverage of CCD was the most media coverage that most people can recall of the beekeeping industry.
- Media coverage brought the honey bee into conversations of people who had never before considered the insect, let alone considered talking about it.

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Obviously, environmental or internal hive chemical contamination could be suspected, but I have no supporting data to clearly say that. Occasionally, foraging bees work plants that have negative effects on them. Possibly, a genetic problem is the answer. Is any of this related to Colony Collapse Disorder? Another big unknown is whether or not all surrounding colonies were affected or just a few bees in a few colonies. All I can say at this time is that this past season a few bees within a few colonies acted strangely and that the condition appears to have passed.

### ***Crawling bee mystery***

In July, I had a look at some colonies in my backyard and was surprised to see numerous young bees weakly crawling away from my colony. Two of my three colonies seemed affected. The bees appeared to be newly emerged and were still covered in new, whitish hair. The bees were completely unable to fly and certainly had no business being outside the hive. There were several hundred bees involved. As I watched, the occasional affected bee would stagger from the hive entrance and drop to the ground. No one else contacted me describing these symptoms. They did not appear to have the quaking characteristic described above. I have no idea what was ongoing. Since the colonies in question were already stressed, I didn't open the hives. Within a few days, the malady appeared to be gone. All I can say at this time is that this past season several hundred very young bees left the hive to face certain death and that the condition seems to have passed. I don't know what it was.

### ***Bees foraging at salt water swimming pools***

I didn't know salt water swimming pools and spas existed. They do and in some instances, foraging bees are attracted to them – in large numbers. In some instances, the pools and the surrounding pool deck were unusable due to the large number of foragers. Many bees died in the water while many others seemingly just sat around appearing lethargic and sickly. Obviously, the non-beekeeping pool owners were anxious to get rid of the bees. I had no idea what to recommend or to

explain what the bees were doing in such large numbers. Clearly, they were collecting the salt water but was it making them ill? Was the chlorine having an effect? Were all foragers affected or were some just able to return to the parent hive? Did any of the affected bees recover? I have very few answers.



Figure 1. Some of the drowned bees floating on the surface of a salt water swimming pool

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## **CHANGES IN THE OHIO STATE UNIVERSITY BEE PROGRAMS**

James E. Tew



For the present, the scope of the beekeeping research program on the Columbus campus at the Rothenbuhler Bee Laboratory has been reduced. Due to funding restrictions, the bee scientist position has been vacant for several years. Sue Cobey, who for many years provided technical support for the bee program, has recently relocated to The Laidlaw Bee Laboratory at The University of California at Davis.

The OSU Entomology administration recognizes the importance and contributions

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continued from page 1 -- Upside of CCD. . .

- Media coverage started the average person thinking about pollination and food sources.
- Politicians, both federal and state level, began to look at the beekeeping industry.
- Legislation was introduced to provide research and assistance dollars to the beekeeping industry.
- Task force committees were formed.
- Grant sources are being researched and proposals written.

The majority of the items on this partial list (less the culling of equipment) may seem to have little effect on the part-time beekeeper. The part-time beekeeper though in many cases has the time and ability to apply the information that is being generated by the research. Both full-time and part-time beekeepers can use the media coverage to promote the positive issues surrounding honey bees. The Ohio State Beekeepers' Association is currently in the process of attempting to secure grants for various projects.

The upside of CCD: Beekeeping has been brought off the back burner and into the forefront of attention. What comes of that attention is up to the beekeeper.

## ARE YOU A HOBBY BEEKEEPER?

*John Grafton*

Until a few weeks ago I would have said that the majority of the beekeepers in Ohio are hobby beekeepers. A hobby is defined by Webster as something that a person likes to do in his spare time. Beekeeping may be thought of that way by some; however, do you enjoy sweating inside that veil, lifting heavy boxes of honey, being stung, worrying that there is enough space, enough food, that the queen is doing a good job, and cleaning up dead outs. What about all those management decisions that need to be made: feed, requeen, add space, cull old frames, disease control, pollination service. Then there is (hopefully) the honey to deal with, when does it need taken off, how and where to store it, what to do with the surplus that you can't eat, how to bottle it, and what style of label to use.

**WOW** — Beekeeping has just become a part-time job, even if you only have one or two colonies. The answer to the question, "**Are you a hobby beekeeper?**", is no. Congratulations, like it or not you have officially entered the enterprise of being a part-time beekeeper.

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## NOTICE: GIANT HOGWEED (*HERACLEUM MANTEGAZZIANUM*) IS A NOXIOUS PLANT FOUND IN NORTHEAST OHIO

*James E. Tew*

Giant hogweed is a noxious plant that can cause extreme skin irritation if contact is made with the sap of the plant. It has primarily been found in Northeast Ohio, but has been spread by humans to many different locations. Though the tall imposing plant has been used as garden plants, this plant is to be avoided. I have been unable to find any information on the effects of bees pollinating the plant, but normally it is probably not found in large enough concentrations to affect a pollen/nectar flow. This is a very large plant with large leaves. The inflorescence on giant hogweed is arranged as a compound umbel with thousands of tiny, white flowers.

The inflorescence forms a flat top with a diameter up to 2.5 feet and looks like a large white umbrella. Giant hogweed flowers in late June to early July. All recommendations are not to culture or encourage this plant. For a complete information see:

<http://ohioline.osu.edu/anr-fact/pdf/hogweed.pdf>

Giant hogweed's umbrella-shaped inflorescence can group to 2.5 feet in diameter.



Photo Credit:  
Number: 2121076  
Description: Flower(s)  
Photographer: Thomas B. Denholm, New Jersey Department of Agriculture



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Number: 1148089  
Description: Flower(s)  
Photographer: USDA APHIS PPQ Archive, USDA APHIS PP

# COLONY COLLAPSE DISORDER UPDATE

**James E. Tew**

Essentially, the honey bee industry is waiting to see if yet another outbreak of Colony Collapse Disorder (CCD) will decimate our bee hives again this fall and winter. A clear cause has not yet been established though a virus, the Israeli Acute Paralysis Virus (IAPV) has been found in affected bees and is presently being researched to determine if it is an important factor in CCD. Due to the attention that CCD and the newly found virus have been receiving, I have used some Dr. Diana Cox-Forster's comments directly.

*"We examined all organisms (viruses, fungi, bacteria, protozoa, parasites, etc) that were present in both CCD and non-CCD bees using a metagenomic approach. We have found a single virus (Israeli Acute Paralysis Virus) to be highly correlated with CCD samples from 10 different operations and found in one non-CCD sample (Australian imports). With our data, we CANNOT at this time declare this to be the direct cause of CCD. The next phase of research needs to test whether or not IAPV is a direct causal agent of CCD or just a really good marker for CCD. In either case, we do believe that detection of IAPV will be important in determining the probability that colonies are apt to undergo CCD and that this will enable closer monitoring of bee health. We also do NOT believe that IAPV can be acting alone to cause CCD, but rather that the virus requires additional triggers. Other pathogens (such as KBV, Nosema apis and Nosema ceranae) may be important in triggering CCD, but by themselves are not the cause of CCD. Also environmental chemicals (pesticides, herbicides, fungicides) and/or nutritional stress may also act as triggers. Of course, the varroa mite may also help to stress colonies and allow for onset of CCD; however, our data clearly demonstrate that Varroa, tracheal mites, and Nosema do not underlie CCD by themselves."*

*"We do not believe that we have solved CCD, contrary to what the media may have claimed. Rather, we have narrowed the suspects and there remains a great deal to do. It is also important to ensure that the public, legislators, and our worldwide colleagues also understand that much research is needed by all of us to help ensure bee health and develop methods to prevent CCD onset."*

Source: Dr. Diana L. Cox-Foster, Department of Entomology, Penn State University

## **Colony Collapse Disorder – What should you be doing?**

There has always been many unsolved beekeeping mysteries. I have referred to some of them elsewhere in this newsletter. Though this may be a fact, it does not make it a fact with which we are comfortable, but live with it we must. At this point, CCD has no clear cause, but research has been conducted and initial progress has been made. Certainly, we are optimistic that some cause and remedy will be found. Until that time, what should you as beekeepers be doing to prepare your hives for another onslaught of this syndrome? The answer is unsettlingly simple – do what you have always done to keep your colonies vigorous and productive. I have offered some general recommendations below that are intended to keep colonies strong.

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## **SOME PRACTICAL MANAGEMENT RECOMMENDATIONS ARE:**

**James E. Tew**

1. Control mites as best you can in ways that are the least disruptive to the colony.
2. Monitor for American foulbrood and aggressively get it out of your apiary once it's found.
3. Treat for Nosema with Fumabil-B. It seems to be more important than ever.
4. Requeen on a regular basis and be proficient when performing the procedure.
5. Super before the bees need it and super with more equipment than they can fill.

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## APPLYING IDEAL MANAGEMENT PRINCIPLES TO PERFECT COLONIES

*James E. Tew*

Our beekeeping slide started about twenty years ago with Tracheal mites, Killer Bees, Varroa mites, and now Colony Collapse Disorder. Just for good measure, sprinkle everything lightly with small hive beetles, new strains of Nosema, and insecticide exposure. Is anyone surprised that both honey bee populations and beekeeper populations have dwindled? If you studiously apply all management procedures to all hives, all the time, your beekeeping will have become hard work. Yet, most of us are doing it for enjoyment. Every one of us slips. I don't know of anyone who can implement all recommended management procedures to all hives all the time.

As beekeepers, we must be realistic about our colony management programs. Some would say – and I am one – that we are near our maximum limit on management programs that can be realistically implemented on today's beehive. Consider some examples from my ***Practical Management List (page 4)***. Item #1 – *Control mites as best you can in ways that are as least disruptive as possible.* That should really read, “*Do something to control mites.*” What about Item #2? In a perfect world, American foulbrood is only found in weak colonies in rotting equipment. What if you find it in a strong colony in new equipment? Are you going to kill all those expensive bees and burn new equipment? What about requeening? If you requeen and she's rejected, do you order another \$20 queen and try again or just combine the colony and hope it winters strong? Recommending is easy, but implementing can be very challenging.

Management recommendations are given out by people like me as though we all live in perfect worlds and keep perfect colonies. That has never been true. As beekeepers, with limited time, energy, and economic resources, you are within your rights to question every management protocol that is recommended and decide if it is practical for your operation. It is good to requeen every year, but is it practical for you to do it? You need to

control Varroa populations but need to realize you have no hope of actually eradicating Varroa populations. Some level of Varroa will always be in your colonies. So what if you didn't get enough supers on and lost part of your honey crop – your bee life should go on.

Management recommendations – in totality – are offered as an “ideal” list of appropriate things to do to perfect hives in perfect yards by knowledgeable beekeepers. That is not a practical picture for most of us. Decide if a particular management recommendation is practical for your operation. As best you can, implement it. Develop a management program that works for you and your bees. Expect setbacks – even colony deaths. Change your management plan as it begins to fail. Stay calm in the face of the announcement of new viral pests and even more unsolved bee mysteries. Our bees have always had some viral pests and we've certainly always had bee mysteries. Even if we have new pests and diseases, don't lose sight of the incredible impact that Varroa has had on our bee industry. We are still trying to understand the changes that Varroa brought. All the while, old fashioned American foulbrood is alive and well. Don't underestimate that old disease. At the end of the day, the recommendation must be to manage your bees as best you can; otherwise, leave them alone.



*Photo by: James E. Tew*

# ISRAELI ACUTE PARALYSIS VIRUS

*John Grafton*

With the recent announcement that this virus has been identified in approximately 96% of the CCD samples analyzed it becomes more important that beekeepers realize the implications of moving honey bees.

The virus was identified in Israel in 2004 and implicated in colony losses. It has since been identified in honey bee packages imported into the US from Australia and also in royal jelly from China.

Is this then the culprit that caused all the loss? Probably not, however it does give researchers a common link that can be traced. Because it is a virus, there is no “control method” other than to continue to maintain otherwise healthy colonies that will be able to resist the virus. Sort of like keeping ourselves healthy to avoid a cold.

This also points to knowing what you are buying when first getting bees or when making up losses. You need to ask the seller if he/she has a health certificate from a qualified agency. This is required by Ohio law and is set up to help prevent disease spread. Viruses are hard to identify but the more background information you have prior to buying and moving bees the better chances you have of not getting and spreading problems.

At this point in time there has been no IAPV identified in any Ohio honey bees. We will continue to work with various agencies to conduct surveys and testing in an effort to keep abreast of the situation in Ohio.



*continued from page 2 -- Changes in OSU Bee Programs. . .*  
of the Rothenbuhler Bee Lab, but restricted funding is a fact within university systems across the US. All honey bee related questions and issues can be directed to the OSU Wooster Bee Laboratory to either James Tew or Sherry Ferrell.

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*continued from page 4 -- Practical Management Skills . . .*

- Essentially, the top super should always be empty.
6. More so than in the past, only set up good yards – yards with protection from prevailing winter winds and protection from summer’s hot sun. If you are uncomfortable in your yard, so are your bees.
  7. Winterize the colonies and promptly summarize them the next spring.
  8. Keep mice out of wintering colonies.
  9. When colonies need working, work them. Otherwise, leave them alone.
  10. In all ways, stress colonies as little as possible.

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