June 2014 Vol. 6, Issue 6

The Skep

Columbiana & Mahoning County Beekeepers' Association

CDC on CCD: Will Congress Act?

A new study by researchers from the Harvard School of Public Health says that the widespread demise of honeybees is due to the use of a class of popular insecticides called neonicotinoids, combined with cold temperatures during the winter months. The study is published online in the *Bulletin of Insectology*.

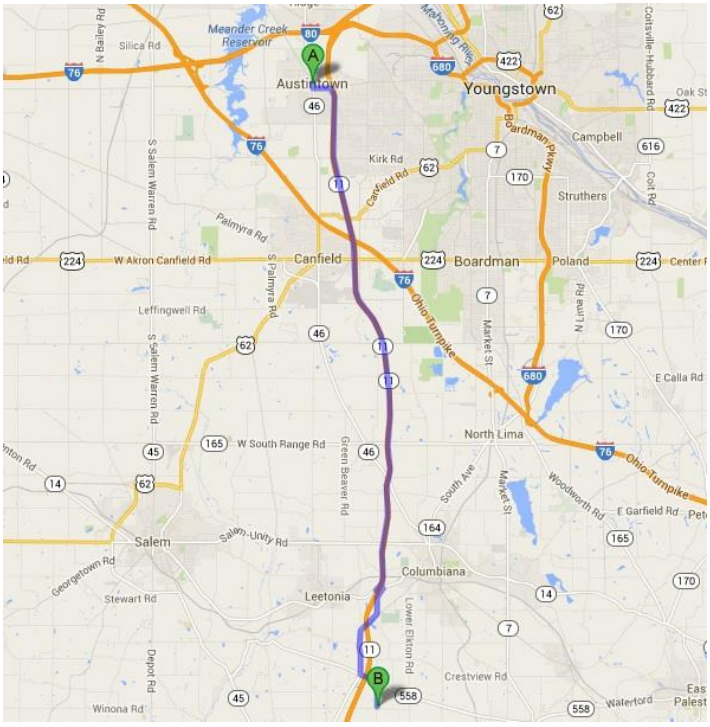
Board member Don Kovach explains the latest Center for Disease Control findings about Colony Collapse Disorder to a gathering at May's monthly meeting.

The deadly combination of insecticides and cold weather causes honeybees to abandon their hives – a phenomenon known as Colony Collapse Disorder (CCD). Over recent years, Western countries have lost between 30 percent and 70 percent of their honeybee populations, scientists say.

The new study replicates earlier research by the same research team that found a link between CCD and low doses of imidacloprid, another neonicotinoid insecticide.

"We demonstrated again in this study that neonicotinoids are highly likely responsible for triggering CCD in honeybee hives that were healthy prior to the arrival of winter," said lead author Chensheng (Alex) Lu in a statement.

Lu's group studied the health of 18 honeybee hives in three separate locations in central Massachusetts from October 2012 through April 2013. At each location they separated six colonies into three groups, one treated with clothiamidin (another neonicotinoid), one treated with imidacloprid, *Continued on Page 2*



Our next monthly meeting will be held on Sunday, June 15, at the home/alpaca farm of

Chris Blair
4836 Woodville Road
Leetonia, OH 44431

Potluck luncheon: 1 p.m.
Business meeting: 2 p.m.
Speaker: Scott Suab, Columbiana Cty. Bee Inspector

Driving directions from Austintown, OH
Take OH-11 South (15.1 mi)
Take OH-344 exit toward Columbiana/Leetonia (0.3 mi)
Turn left onto OH-344 E (0.2 mi)
Turn right onto OH-164 S (0.9 mi)
Take the 1st right onto OH-164 S/OH-164 Scenic S (2.0 mi)
Turn left onto OH-558 E (0.6 mi)
Take the 1st right onto Woodville School Road
Destination will be on the left (watch for the Association sign)

CDC on CCD

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and another left untreated.

The researchers observed a steady decline in the size of honeybee colonies treated with insecticides. By April 2013, six of the 12 neonicotinoid-treated colonies had abandoned their hives. Only one of the control colonies was lost, the study says.

So what is the big deal? The sharp reduction in honeybee populations is worrying because bees are responsible for pollinating about a third of the world's crops, with some saying that in the United States, honeybees pollinate as much as 80 percent of agricultural crops.

Although Lu's team has shown a strong correlation between the use of neonicotinoids and CCD, they do not yet know what it is about exposure to these chemicals that causes bees to leave their hives.

"Although we have demonstrated the validity of the association between neonicotinoids and CCD in this study, future research could help elucidate the biological mechanism that is responsible for linking sub-lethal exposures to CCD," Lu said. "Hopefully we can reverse the continuing trend of honeybee loss."

The massive population decline has led some to speculate that Congress may consider tightening regulations of pesticides linked to CCD. Calls for action are already building at the state level. Earlier this month, the Oregon Association of Nurseries urged Congress to use a collaborative and scientific approach to regulating pesticides that some blame for honeybee deaths.

"This chemical class, when used properly, is vital to the success of our industry," said OAN director Jeff Stone told members of the House Agriculture Subcommittee on Horticulture, Research, Biotechnology and Foreign Agriculture. While CDC may eventually spur members to find a solution, a number of lawmakers have expressed little interest in addressing an issue that is likely to pit environmentalists against agriculturalists.

Flipside: Fewer Bees Perished Over Winter – but Reason Remains Mystery

From the *New York Times*: Honeybees could be on their way back, according to a new federal report.

The collapse of bee populations around the country in recent years has led to warnings of a crisis in foods grown with the help of pollination. Over the past eight years, beekeepers have reported winter losses of nearly 30 percent of their bees on average.

The new survey, published in mid-May, found that the loss of managed honeybee colonies from all causes dropped to 23.2 percent nationwide over the winter that just ended, down from 30.5 percent the year before. Losses reported by some individual beekeepers were even higher. Colony losses reached a peak of 36 percent in 2007 to 2008.

The survey of thousands of beekeepers was conducted by the Department of Agriculture and the Bee Informed Partnership, an organization that studies apian health and management.

"It's better than some of the years we've suffered," said Dennis van Engelsdorp, a director of the partnership and an entomologist at the University of Maryland. Still, he noted, a 23 percent loss "is not a good number." He continued, "We've gone from horrible to bad."

He said there was no way to say at this point why the bees did better this year.

Jeff Pettis, the co-author of the survey who heads the federal government's bee research laboratory in Beltsville, MD, warned that "one year does not make a trend."

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A prominent environmental group found "an urgent need for action" in the new report. Lisa Archer, director of the food and technology program for the organization Friends of the Earth, said, "These dire honey bee numbers add to a consistent pattern of unsustainable bee losses in recent years."

Dr. Dennis van Engelsdorp, a director of the partnership and an entomologist at the University of Maryland.

While much attention has been paid to colony collapse disorder, in which masses of bees disappear from hives, that phenomenon has not been encountered in the field in the past three years, Dr. van Engelsdorp said. Instead, what has emerged is a complex set of pressures on managed and wild bee populations that includes disease, a parasite known as the varroa mite, pesticides, extreme weather and poor nutrition tied to a loss of forage plants.

Treating colonies for the varroa mite, an Asian parasite that first reached the United States in 1987, seems to have the most direct effect on stemming losses, Dr. van Engelsdorp said. "The beekeepers that are treating for varroa mites lose significantly fewer colonies than beekeepers that are not treating colonies for varroa mites," and those who treat them four or five times a year do better than those who treat them only once or twice, he said.

The new report will not satisfy those who argue that the loss of bees can be traced to a class of pesticides known as neonicotinoids, especially one manufactured by Bayer.

Those views are supported by papers such as one published this month in the journal *Bulletin of Insectology* that found that six of 12 previously healthy colonies exposed to the pesticides died and all exhibited symptoms of colony collapse disorder in the winter.

Bayer attacked that study, saying that the lead author, Chensheng Lu of the Harvard School of Public Health, "greatly misdiagnosed colony collapse disorder" in the colonies he studied, and that he used dosages of the pesticide 10 times greater than what bees might encounter in the wild.

In an interview, Dr. Lu said that Bayer should reveal what it believes an "environmentally relevant" level of the pesticide should be.

Dr. van Engelsdorp said that Dr. Lu and his colleagues gave the bees doses far beyond what they would encounter in nature, and over longer periods of time, so the new study only shows that "high doses of 'neonics' kill bees — which is not surprising."

Rather than looking for a single chemical or class of chemicals, Dr. Pettis said, it is important to assess the interplay of parasites, illness, food sources and pesticides. "Nobody likes that kind of complicated story, but year to year, all those factors could play into colony health," he added.

Eric Mussen of the University of California, Davis, said colony collapse disorder and other pressures have made beekeepers focus more intently on maintenance of their colonies.

"People are being forced now to look more carefully at their bees," he said. "If you don't take care of them, you lose them."

Springtime Care for Honeybees

Brooke Binder of the Lancaster County (PA) Beekeepers Society

The Initial Hive Inspection

On a day when the bees are flying and the weather is relatively warm, it should be safe to remove any insulation and felt paper that is on the hive. It is also okay to remove the tray under the screened bottom board if one has been installed and also any insulation boards that you may have on top of the inner cover.

If the temperature is above 60 degrees and there is very little or no wind it should be safe

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Springtime Care *continued from Page 3*

to remove the top and inner covers. You will most likely find many bees at the top of the hive.

When removing frames at this time of year, you must take care to not allow the brood to get chilled.

Do not keep the frames of brood out of the hive for extended periods of time.

When removing frames be sure not to hurt the queen.

Do not start removing frames from the center of the super first. The queen may be on one of these frames, so start with one of the outer frames.

Things to consider when removing frames from the hive:

- Where in the hive is the brood nest located?

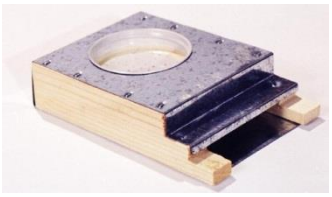
If the bees are in two deep supers, the brood nest may be completely up into the top deep super by this time.

- Check the bottom super to determine if there is still brood in it. Bees start the winter in the bottom of the hive and over the course of the winter move up to the top.
- If the brood nest is completely into the top deep super, it is often advisable to **reverse the two chambers,** putting the bees back down on the bottom. Reversing the top and bottom hive bodies when there is still brood in the bottom deep will split the brood nest. This is not a good idea.
- Are there eggs and larvae which will prove that the queen in alive?
- Is the brood pattern solid, indicating that the queen is doing a good job?
- Determine if the brood nest area is crowded.
- Is there plenty of room for the queen to lay eggs?
- Is there empty drawn comb above and around the brood nest?
- Is there adequate honey and pollen (bee bread) in the hive to sustain it? The hive will not raise the desired amount of brood without sufficient honey and beebread in reserve.

Feeding the bees

If you have determined that there is not enough honey in the hive, considering both the top and bottom hive bodies, the hive should be fed sugar water in a 1:1 ratio by weight or volume. Cane sugar is best. Never use high fructose corn syrup.

Some beekeepers feel that it best to use some type of feeder other than a Boardman feeder at the entrance of the hive. These have been known to start robbing, especially if there is no nectar flow in progress.



Boardman entrance feeder

OVER-FEEDING THE COLONIES IN THE SPRING CAN LEAD TO BROODNEST CROWDING AND EVENTUALLY SWARMING.

Considering the conditions described above, top and bottom bodies can be reversed and this will put the bees and brood nest back down on the bottom. Some beekeepers consider this to be a stop-gap measure and a temporary fix until more time is available, the weather is warmer or it is time to make splits if that is the plan.

Hive Manipulation

Two of the most common conditions that will cause a hive to swarm are:

1. Crowding of the brood nest area
2. A queen that is old or not in good condition

Both of these conditions can be determined with the initial inspection described above.

Cautions:

Rearranging the frames in a hive is a very invasive process and should not be done when the weather is cool or windy. When frames of brood or eggs are removed from the hive the bees cannot keep them warm and care must be taken to prevent them from being chilled.

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Springtime Care *continued from Page 4*

When removing frames, start with one or two from the sides. These would be frames 1 or 2 and 9 or 10.
Removing a frame first that is in the brood nest increases the possibility of damaging the queen by "rolling" her as the frame is removed. Removing an end frame or two and temporarily leaving it out will provide more room to extract and replace frames without hurting the bees. As you prepare to extract a frame slide it slightly into the free space now available.

The bottom deep

Ideally, the brood nest will be in the center of the bottom deep surrounded on each side by frames of drawn comb, bee bread and honey.
If the brood nest is large enough, some beekeepers will insert a frame of drawn comb between each frame of brood but not more than one frame placed between each frame of brood. This will help to prevent crowding of the brood nest which is a major cause of swarming. . It is ok to use frames of foundation for this if there is a honey flow in progress or if you do not any frames of drawn comb. Put the drawn comb closest to the brood nest.

The top deep

The upper hive body should have frames of drawn comb placed right above the brood nest on the bottom.
On each side of the frames of drawn comb should be placed any available frames of beebread and honey.
If no drawn comb is available use foundation.
After placing most of the frames of brood in the bottom hive chamber, if there are any frames of brood remaining, they can be placed in the upper super right above the brood that was placed in the lower super. When a large amount of brood is available some beekeepers will put a frame of brood above each frame of foundation that was placed in the bottom and a frame of foundation above each frame of brood. In this way the frames of brood and drawn comb are staggered. A process of this type is sometimes referred to as checker boarding. It is a way of expanding the brood nest to help prevent swarming.
Care should be taken to not spread out the brood nest by more than a single frame of drawn comb between each frame of brood because it will make it difficult for the bees to keep the brood warm.
Many beekeepers have determined that the bees will only draw out foundation when there is nectar being brought into the hive or when the hive is being fed sugar syrup.

Procedure tips

Before beginning the above manipulations it is a good idea to set the supers aside, preferably on an inverted top cover and clean the bottom board.
Many beekeepers will have an additional empty deep super that they will place on the cleaned bottom board and they will place the frames into it as described above.
Likewise an additional hive body can be used to place the remaining frames and it will become the top deep.
Perform the procedures as efficiently and quickly as possible so that the brood is not cooled down.
Many beekeepers will locate the queen and put her and the frame she is on in a safe place where she will not be harmed or fly away.

Special thanks to our generous suppliers who have provided us with catalogs and door prizes. It means a lot to these folks to hear back from you, so be sure to mention our club when doing business with them:

Koehnen; Better Bee; Miller Bee Supply; Sailor Plastic; Mann Lake; Glory Bee; Pigeon Mount Trading Co.; A.I. Root – Bee Culture; Drapers; Beeline Apiaries; B&B Honey Farm; Blue Sky; Brustly Mt. Bee Farm; Cowen; Dadant; American Bee Journal; Mother Load Products; Rossman Apiaries

A Passion for Finding a Cure

In 2005 longtime Association member Sandra Hays, wife of board member Don Hays, was diagnosed with Leukemia. Following an unsuccessful round of chemotherapy, Sandy learned that she needed a bone marrow transplant. She spent the next two months in the Cleveland Clinic fighting for her life.

"I will be forever grateful to my brother, my donor," Hays told *The Skep*. "I have a passion for helping to find a cure and mentoring other cancer patients."

To fuel this desire, Sandy volunteers as a mentor for Olympic gold medalist figure skater Scott Hamilton's 4th Angel program at the Cleveland Clinic and is active with the American Cancer Society's annual Boardman Relay For Life, Team Jared.

This year's relay/walk was held May 16-17. More than 600 walkers, organized into 62 teams, participated in the 21st annual Boardman Relay, whose fundraising goal was $200,000.

The Association donated $250 to Hays' effort. Subsequently the Boardman fundraiser exceeded its goal by taking in $247,428.

Jo Ann Crank, Northeast Ohio Regional Vice-President of the American Cancer Society, said the success of the events can be attributed to the people involved.

"The people who take part in this event, as well as all of the Relays, are an energetic group who take pride in what they do. Without their continued support it would not be possible to achieve these outstanding marks year after year," Crank said.

The 50 Relays held throughout Ohio this spring brought in a total of $15,611,006, including $4,421,739 from northeast Ohio.

After recovering from his cancer, Scott Hamilton identified three angels who helped him through the ordeal. Scott's oncology physician at The Cleveland Clinic was his first angel; his oncology nurse, his second angel; and his family and friends, his third. What he felt was missing, however, was a fourth angel: someone who had gone through a similar experience and would understand what he was feeling; someone who had been there. His idea was to create a format in which cancer survivors or caregivers could talk to their peers about the cancer experience. Thus, the survivor-to-patient/caregiver mentoring programs were born.

With Scott as its driving force, 4th Angel is an innovative, interactive approach to cancer care in which newly diagnosed patients or caregivers are matched with trained volunteers. While emphasizing one-on-one contact, people are matched with mentors of similar age and cancer experiences to best empower caregivers and patients with knowledge, awareness, hope – and a helping hand.

Upcoming Events

June 28: Columbiana Wine Festival: American Legion, Post 290 in Columbiana. The Legion is located between 165 and 7 on SR 14/46. Details TBA

July 2: Fourth of July Float setup at the home of Barb Pagani, 101 Court Street, Canfield, 5 p.m.

July 4: Fourth of July Parade – Float launch at the home of Barb Pagani, 101 Court Street, Canfield, 7 a.m.

July 13: Creamed Honey Workshop at the Kovach home, 376 S. Turner Road, Austintown, 1 p.m.

Limited queen rearing event at Don's – Details, date and time TBA