



Meetings & Programs

- **TUESDAY, July 12, 6:30 p.m. Hamburger and Hotdog for \$1.00 (bring side dishes and desserts.**
James Brown will give a presentation on extracting honey.
- **TUESDAY, August 9, 7:00 p.m. (no meal)**
Carolyn Ivey and Martha Boren will speak about preparing and presenting exhibits at the Guilford County Fair.
- **TUESDAY, Sept. 13, 6:30 p.m. (Covered dish meal)**
A panel of experienced beekeepers will answer your questions. We will also be asking for your input and suggestions for what GCBA can be doing in the upcoming year.

Articles of Interest



ApiNews

AUSTRALIA- HOW THE BEES FIND THE WAY TO COME BACK TO THE HIVE Sydney, May 19 (IANS)

How do bees display this incredible knack of navigating cross-country? Scientists have now hit upon the reason for this -- bees are sky readers!

Bees can home in on their hives from 11 km away, thanks to their ability to remember landmarks and read information from the sky. (apx.1.6 km = 1 mile)

Led by Prof ShaoWu Zhang from The Centre of Excellence in Vision Science, the research team released bees in Canberra, where the landmarks include Black Mountain, Mount Ainslie and Lake Burley Griffin, etc.

“We found that from four kilometres onwards, honeybees homing from the eastern direction return to their hives sooner than bees from the north, west and south,” says Prof. Zhang, according to a Vision Science statement.

“Also, when we released these bees from seven kilometres and above, only those from the east can successfully find their way back.

“This is because bees released from the east can see Black Mountain in the opposite direction. It also helps if they are released in the early afternoon, when the sun is situated in the west, too.”

In the study, the team caught foragers as they returned to their hives and displaced

them in a black box. The bees were then released in novel spots at various distances up to 13 kilometres (apx 8.1 miles) in north, east, south and west.

“In their forage trips, one way that honeybees use to find their way home is by storing distance and directional information when they venture out,” Prof. Zhang says. “In other words, they try to go back the way they came.

“Catching them as soon as they reach their hives and placing them in a black box sets their pre-calculated information back to zero, so the bees are deprived of any directional information in relation to the hive.

“By doing this, we can confirm that they are relying solely on knowledge that they have gathered about the landscape to travel home,” said Prof Zhang.

The team also used new technology to track the bee’s journey. They placed Radio Frequency Identification (RFID) tags on each bee and left a receiver at the hive entrance.

USA- RESEARCHERS DISCOVER THAT A BEE PROTEIN, IS A VERY SENSITIVE EXPLOSIVE SENSOR

Tuesday, 10 May 2011 16:15 Written by Horacio Mezziga

Massachusetts Institute of Technology MIT researchers have developed a new sensor which is so sensitive it can detect singular molecules of explosives like TNT.

The chemical engineers coated carbon nanotubes, which are hollow, one-atom-thick cylinders made of pure carbon, with bombolitin protein fragments normally found in bee venom.

The researchers found the proteins react to explosive, particularly those from the nitro-aromatic compound class, which includes TNT. Such sensors could be far more sensitive than existing explosives detectors, which use spectrometry to analyse charged particles in the air. While ion mobility spectrometers are inexpensive and very reliable, the nanosensors could be the ultimate detection device, with the capability of detecting single molecules of explosives at room temperature and atmospheric pressure.

Morristown, 061511, Shaun Ananko,

Farm Manager of Grow It Green Morristown's Urban Farm at Lafayette, gives the Morristown High School AP Environmental Science a lesson on bee keeping at the Early Street Community Garden.

Justina Wong/Staff Photographer MOR 0616 Honeybee Class / Staff Photo

MORRISTOWN — Some were calm and others apprehensive as a colony of Italian bees swarmed over the heads of Morristown High School students Wednesday afternoon in the Early Street Community Garden.

The AP Environmental Science students were learning about beekeeping in a class led by Shaun Ananko, 28, the farm manager of Grow It Green Morristown's Urban Farm at Lafayette. Bees were first introduced to the garden last year.

Roughly 30,000 bees live in the eight-frame-deep box hive at Early Street.

Ananko added another box to the hive Wednesday to expand the bee population.

He will teach another class on beekeeping at 3 p.m. Saturday at the garden, across from Morristown High School.

The class is open to the public



Relief for S.C. beekeepers uncertain this year

Posted: May 14, 2011 - 9:06pm By [Sarita Chourey](#) BLUFFTON TODAY COLUMBIA BUREAU

COLUMBIA — **South Carolina beekeepers who sell their honey as a hobby may eventually get a break from costly certification standards, but the path to relief is taking some turns.**

On Wednesday a House panel approved H. 4005, legislation to exempt people who produce up to 400 gallons of the sweet, antimicrobial substance from meeting professional standards.

“What the bill is intended to do in the long haul is promote more beekeeping in the state,” said sponsor Rep. Tom Corbin, R-Travelers Rest. “Beekeeping is down right now, and it’s very important to agriculture and the pollination of crops.”

The issue began this year when beekeepers worked with S.C. Department of Agriculture officials to craft a regulation aimed at exempting small-scale beekeepers from using a certified “honey house” facility to harvest the honey they peddle at farmers markets and other venues.

But Corbin and other lawmakers sent the regulation back to the agency to be revised, along with another regulation they opposed because it reinforced an existing requirement that private citizens who sell homemade foods have their kitchen certified by the state.

If lawmakers had not rejected the original proposal pertaining to honey, the looser restrictions would have become effective Wednesday.

Under the defeated regulation change, the amount of honey that someone would have been able to sell without getting a state inspection was 150 gallons - a lower threshold than the 400 gallons in Corbin’s later bill.

But supporters had hoped the 150-gallon exemption in the regulation would be an efficient way to assist some beekeepers until more significant legislative changes could be made. Professional beekeepers use a certified “honey house,” which can cost thousands of dollars.

After the House Agriculture Subcommittee voted to send Corbin’s bill, H. 4005, to the full committee Wednesday, the lawmaker said he hoped to find a way to get it enacted into law this year. His bill missed the May 1 Crossover Day deadline to pass from one chamber to the other, which means it faces difficult odds.

Derek Underwood, food safety and compliance manager for the S.C. Department of Agriculture, said Corbin’s bill addresses a need in South Carolina.

“It’s going to cause our number of bees to go up and our small farmers, our small hobbyist beekeepers to go up,” said Underwood.

“I don’t want to say the beekeepers are dying out, but they’re dying out. It’s a generation loss,” Underwood said.

“You have people who are retired or in their senior years who are doing this because this is something they thought was going to be fun to do and they realize it cost a lot of money for gas traveling back and forth to place their bees,” he added.

Reach Sarita Chourey at sarita.chourey@morris.com or (803) 727-4257.

'Bee Informed' to inform beekeepers

North Carolina State University will play a central role in a 5-year, \$5 million U.S. Department of Agriculture effort to compile a nationwide honey bee database designed to make beekeepers more productive.



Dr. David Tarpy, associate professor of entomology and North Carolina Cooperative Extension apiculturist in N.C. State's College of Agriculture and Life Sciences, will direct the North Carolina part of an effort that has been dubbed the Bee Informed Partnership.

The partnership is an effort "to fill a void at the national level in our ability to collect data and information about the managed honey bee population," Tarpy said. The nationwide effort, which is being led by Penn State University, will involve entomologists around the country.

Tarpy explained that surprisingly little is known about the nation's honey bees, which play an indispensable role in pollinating many crops.

"Honey bees tend to fall between the cracks," Tarpy explained. "If you have a cow, you know it's there, and it's going to be there. With honey bees, you have a hive. All of a sudden next week, it can swarm, and then you have two hives, or you have half a hive. Or they (the bees) die out. And they get moved all across the country. It's much more of a fluid thing.

"That lack of information or the fuzziness of that information has hindered our ability to make strong, concrete recommendations."

The Bee Informed Partnership is designed to rectify this situation by creating a database that will contain information about all things related to honey bees. N.C. State's role in creating the database will be to try to get a handle on important pathogens and parasites that afflict honey bees.

"There's no systematic mechanism to track patterns of disease and disease outbreaks (in honey bees)," Tarpy said. "That's what our component is going to do."

Project field teams will collect honey bees around the country, then ship them to N.C. State, where the bees will be analyzed for the presence of disease or parasites. What is learned about bee health at N.C. State along with a range of other information collected as part of the project will be compiled in a database that will be available to beekeepers and others through a website.

"A very large component of this initiative is to develop an infrastructure to take those data and turn them into useful information, and through a web conduit broadcast that information so that beekeepers can see where disease outbreaks are in real time so that they can make informed decisions (about their bees)," Tarpy said.

Tarpy added that the interactive website that is developed as part of the project should allow beekeepers to enter information about their bees -- information, for example, about a parasite that is afflicting their bees -- then get back strategies for dealing with that parasite or other problem.

The website will provide beekeepers with the information they need to assess the risks and rewards of using various strategies to deal with a problem.

It is hoped that the project's educational efforts will introduce beekeepers to best management practices that will reduce national losses in honeybee populations by 50 percent over the next five years.

Project collaborators, in addition to N.C. State and Penn State, are the University of California -- California Cooperative Extension, University of Illinois, University of Georgia, University of Tennessee, University of Minnesota, Appalachian State University, Lincoln University, the U.S. Department of Agriculture Agricultural Research Service, U.S. Department of Agriculture Animal and Plant Health Inspection Service and the Florida Department of Agriculture

Read more: [Garner News - Bee Informed to inform beekeepers](#)

TEMPORAL ANALYSIS OF THE HONEY BEE MICROBIOME REVEALS FOUR NOVEL VIRUSES AND SEASONAL PREVALENCE OF KNOWN VIRUSES, NOSEMA AND CRITHIDIA

Wednesday, 08 June 2011 08:00 Written by Horace Mezziga

Paper prepared by Charles Runckel, Michelle L. Flenniken, Juan C. Engel, J. Graham Ruby, Donald Ganem, Raul Andino and Joseph L. DeRisi

Abstract: Honey bees (*Apis mellifera*) play a critical role in global food production as pollinators of numerous crops. Recently, honey bee populations in the United States, Canada, and Europe have suffered an unexplained increase in annual losses due to a phenomenon known as Colony Collapse Disorder (CCD). Epidemiological analysis of CCD is confounded by a relative dearth of bee pathogen field studies. To identify what constitutes an abnormal pathophysiological condition in a honey bee colony, it is critical to have characterized the spectrum of exogenous infectious agents in healthy hives over time. *We conducted a prospective study of a large scale migratory bee keeping operation using high-frequency sampling paired with comprehensive molecular detection methods, including a custom microarray, qPCR, and ultra deep sequencing. We established seasonal incidence and abundance of known viruses, Nosema sp., Crithidia mellificae, and bacteria. Ultra deep sequence analysis further identified four novel RNA viruses, two of which were the most abundant observed components of the honey bee microbiome (~1011 viruses per honey bee). Our results demonstrate episodic viral incidence and distinct pathogen patterns between summer and winter time-points. Peak infection of common honey bee viruses and Nosema occurred in the summer, whereas levels of the trypanosomatid Crithidia mellificae and Lake Sinai virus 2, a novel virus, peaked in January.*

Mite-Away Quick Strip Questions & Answers

(From David VanderDussen NOD Apiary Products)

MAQS has been in the marketplace in Hawaii for 18 months, and now parts of the US for 2 months. There has been a lot of interest and many phone calls. Here is a Top-10 Frequently Asked Questions (FAQ) list for MAQS:

- 1) Subject: The paper wrap on the gel strip. Q) I remove the outer plastic wrap, should I peel the inner paper wrap off of the of the gel? A) The paper wrap stays on. It works as a wick to help control the vapour release.
- 2) Subject: Examining the colony and then treating. Q) The label says to disturb the colony as little as possible at time of application. Can I do a full colony exam and then treat immediately, or should I wait and come back and treat? A) The bees need to have their affairs in order when treated. When running trials it was found out that the colony assessments were best done 3 days in advance of the application. If the colonies were taken apart, assessed, reassembled and then treated shortly after we saw some absconding. It also increased the risk of queen loss. After an exam it would be best to wait at least until the next day to apply MAQS.
- 3) Subject: Treating with honey supers on. Q) Can I really treat with honey super on? Why does it not flavour the honey? A) Formic acid naturally occurs in honey at levels ranging up to over 2,000 parts per million (ppm). The formic acid concentration in hive air during MAQS treatment remains well below 100 ppm, so the levels in the honey do not go outside of naturally occurring levels.
- 4) Subject: Screen Bottom Boards Q) Should I leave the Screen Bottom open or close it off? A) There was only one trial run so far with screen bottom boards open, by Randy Oliver (www.scientificbeekeeping.com). He published the results in the February 2011 issue of American Bee Journal. There was a 4 to 5 % reduction in efficacy over a solid bottom board, however, both open screen and solid bottom boards saw over 90% drop in mite loads, so it is basically up to the beekeeper.
- 5) Subject: Additional entrances, cracks in the equipment. Q) Should I close off all entrances except the fully open bottom board entrance? A) The fully open bottom entrance should be seen as meeting the minimum ventilation need. Having additional entrances does not seem to affect the efficacy of the treatment. Adequate ventilation is critical with this product. For 2 brood chamber colonies some beekeepers slide back the second story to create a temporary full width entrance, and then slide the boxes back square sometime after the first 3 days.
- 6) Subject: Colony response - bees bearding on the hive. Q) It looks like most of the bees in the hive are bearding out on hive. Is this normal? A) It is normal for the bees to beard out for the first day, especially under warmer conditions. See the University of Hawaii photos in their report from 2009, found at: <http://www.miteaway.com/V1-wright-varroa.pdf> . There may be an increase in adult bee mortality in the first three days after application. Remember natural loss of bees occurs at about the same rate as egg-laying; with the formic treatment the bees may not be able to clean away the bees as quickly as usual.
- 7) Subject: Field bee activity. Q) Will the bees continue to forage during the treatment? A) Yes, the bees continue to forage.
- 8) Subject: Impact on brood - reducing dose? Q) What is impact on the brood? Can I reduce the dose? A) Studies have shown that reducing the dose reduces the effectiveness, and may still cause some brood damage. What we know from trials conducted so far is that MAQS works best by the 2-strip dose. Any brood damage that occurs is quickly made up, the queen is laying throughout the cluster area by Day +7. There are often lots of eggs by Day+4 although they may be as far away from the strips as possible. Any damage is cleaned up by Day +7. The field bees can continue to get pollen through the whole treatment, so there are good protein reserves when all the larva need feeding. The next time that MAQS is used, even if it is months later, the bees somehow know how to cope better.
- 9) Subject: Moving bee hives during treatment. Q) Can I move the bees during the 7-day treatment period? A) The bees should not be disturbed during the treatment period.
- 10) Subject: Removing the strip residue after treatment. Q) The bees chewed up some of the strip but did not remove it all. How do I dispose of the residue? A) The residue from MAQS will simply compost over time. It can be handled the same way as any other organic yard-waste material.



World's oldest beehive discovered in ancient church

Scottish chapel made famous by 'The Da Vinci Code' reveals secret, man-made hives.

By Michael d'Estries

Thu, May 13 2010 at 5:06 PM EST

Photo: Ruaridh Stewart/ZUMA Press

[Rosslyn Chapel](#), the same church featured in the best-selling novel and movie "The Da Vinci Code," has revealed a sweet secret completely hidden for the last 650 years.

While undergoing restoration — thanks in large part to a massive increase in tourism to the site — workers discovered two man-made stone beehives inside a pair of pinnacles atop the roof. Considering the age of the church, this would make them the oldest carved, functioning hives in the world.

"We had no idea they were there," [project architect Malcolm Mitchell](#) told [Building Design online](#). "The chapel has so many elaborate pinnacles, but we could not know what was going on behind. The two pinnacles are on the east gable side, and there was no outward sign that the hives were there other than the flower."

Ah yes, the flower. Apparently, stone masons constructing the hives left small openings in the center of each flower for the bees to enter and exit through. Nice, right? Once opened up, each of the hives measured 650 millimeters high and 40 millimeters in diameter, with a bit of comb left inside. Researchers, however, suspect that they haven't been used in about a decade.

Now that restoration work on the pinnacles has finished, officials are hopeful that the bees may return. Either way, it's yet another little secret to add to the tourism booklet for next year's fans.



I know this is already past but think it is a good idea to keep in mind for future projects by GCBA...Norman



Duke Farms to host class on natural beekeeping

Published: Saturday, May 21, 2011, 2:17 PM

By **Michael J. Kelly/Messenger-Gazette**

Follow

A day-long class on treatment-free beekeeping will be offered on Sunday, June 5, at Duke Farms in Hillsborough.

The course — offered by the Northeast Organic Farming Association of New Jersey — will explore a path for beekeepers who want to stop using treatments of all kinds in their apiary. The class will cover three areas of management: regressing bees to small cell, treatment-free management practices, and queen rearing and honeybee breeding.

Treatment-free beekeeping seeks to raise healthier bees without the use of preventative medications. These sustainable beekeeping practices are necessary steps to increasing the health of the honeybee population. By regressing to smaller cells within the hive and raising their own queens, beekeepers can help protect the future of healthy honeybees.

This class will be lecture, discussion, and hands-on (weather permitting). The instructors will discuss the use of foundation of various sizes and foundationless comb, methods to regress colonies of various configurations methods with which you can raise queens on any scale, how to build on the genetics in your yard and area rather than replacing them with mated queens. Please bring whatever protective equipment you deem necessary when dealing with unknown bees. Also bring a magnifying aid to help with some hands-on grafting.

Participants should have some experience in managing honeybees, as a working knowledge of honeybee behavior and management will be required.

Dean Stiglitz and Laurie Herboldsheimer are long-time treatment-free beekeepers and educators. They are authors of "The Complete Idiot's Guide to Beekeeping" and run the annual Northeast Treatment-Free Beekeeping Conference. They live in Leominster, Massachusetts where they own and operate Golden Rule Honey.

The course will be held in the Coach Barn at Duke Farms from 10 a.m. until 5 p.m. The cost of the course is \$125 for association members and \$175 for non-members. For more information about the course and to register, go online to nofanj.org or call 908-371-1111 ext 5.

The Northeast Organic Farming Association (NOFA-NJ) is dedicated to supporting sustainable food and agriculture in New Jersey through education, technical assistance, and policy action. It is a 501(c)3 non-profit organization

Our web site, www.guilfordbeekeepers.org is your source for local beekeeping information, questions, and answers. Sign up for our forum board and join the conversation!

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Guilford County Beekeepers Association

A LOCAL CHAPTER OF THE NORTH CAROLINA STATE BEEKEEPERS ASSOCIATION

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