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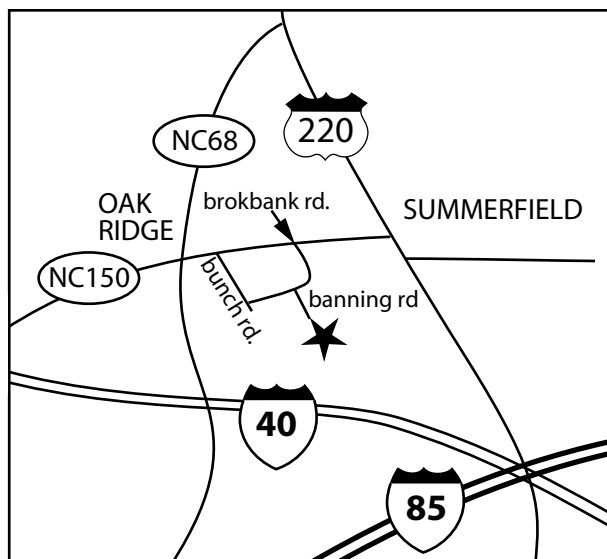
**GUILFORD
COUNTY
BEE
KEEPERS
ASSOCIATION**

**beekeeping
NEWS**
APRIL, MAY, JUNE, 2006

a local chapter of NORTH CAROLINA STATE BEEKEEPERS ASSOCIATION, INC.

MEETINGS & PROGRAMS:

- **Saturday, April 22, 10:30 to 2:00 p.m. NOTE THIS IS NOT OUR USUAL DATE** Annual Field Day at the farm of Jim Bennett. (see map below) The club will provide hot dogs, hamburgers and fixin's. Members bring own drink, side dish and/or dessert. If you plan on testing, bring your smoker and veil. Everyone...bring your lawn chair or blanket if you plan to sit! Activities and prizes will be awarded.



- **Tuesday, May 9, 6:30. Covered dish meal.** Dr. Buddy Marterre, *Presiednt of Forsyth County Beekeepers*, will present his program on "Honey Bee Biology." I have met Dr. Buddy (a real surgeon) and guarantee you will find his talk exceptional.
- **Tuesday, June 13, 7:00. No meal.** Chuck Norton who writes "*Smokers & Hive Tools*" for the *American Bee Journal*, will present a program on setting up a honey house. This is a timely topic so don't miss it.

NEEDS YOUR ATTENTION:

- **THOSE OF YOU who purchased the Russian Nucs.** Cool spring temps. have delayed production. You will be contacted by phone. We are still planning for mid April at the Barn so you can pick up your Nucs between 1& 2 p.m. Saturday afternoon.
- Thank you to all who have volunteered to help our club with plans and organization of the summer convention for the North Carolina Beekeepers Association. We will be having a few more meetings to get jobs organized and IT IS NOT TOO LATE TO JOIN.



ARTICLES OF INTEREST

From Dr. Tarpy's Report files:

How has the Africanized honey bee been so ecologically dominant?

"How often do you get stung?" is the most frequently asked question of beekeepers when they are first revealed as such. Most of us have the social graces to keep ourselves from groaning, then we simply bob our heads and reply "Sometimes" or some equivalent generic answer in the hopes of not requiring a more lengthy, involved response. [One of my favorite corollaries of this annoying question is: "How often do you get bit?!" Of course, because bees sting rather than bite, I take great pride in asserting "Never!" just to see the surprised look on their face]. The second most frequently asked question of beekeepers is: "Do you have those killer bees?" While most of us have canned replies for this question as well, the subject should be of much greater concern to most beekeepers since there is a very real possibility that they will someday inhabit most of the southern third of the country (including North Carolina).

The Africanized honey bee (AHB) gained notoriety in the 1970's, along with its very unfortunate 'killer bee' moniker, largely because of their increased defensiveness. Brought to Brazil in order to breed a locally adapted tropical bee, the AHB has become one of the most spectacular examples of a biological invasion in the Americas. They officially entered the U.S. boarder in 1990 and have since populated most of Texas, the desert southwest, and the lower half of California.



Rather than interbreed with the resident European honey bee (EHB) population, which scientists first thought would mute their unfavorable characteristics, the AHB has successfully supplanted the more docile EHB colonies and has remained a genetically and behaviorally isolated strain. The means by which they have been able to maintain their genetic purity has been a curious puzzle for honey bee biologists, who wish to determine how they have remained so ecologically dominant over the EHB in an effort to better control them.

One means by which the AHB may supplant the EHB is through colony parasitism. Previous reports have shown that small AHB swarms, no bigger than the size of a softball, can cluster near the entrance of a colony. Over a few days, the workers in the swarm can overcome the defenses of the hive and usurp the resident queen, leaving the colony wide open for the AHB queen in the swarm to take over. Such a coup d'etat can change an EHB colony into an AHB colony literally overnight.

A recent study was published by UNC-Charlotte Professor Stanley Schneider and his collaborators in Arizona at the USDA Carl Hayden Honey Bee Research Facility that addresses this issue. They placed many five-frame

nucleus hives in their bee yard, all headed by EHB cordovan queens, and they tracked the progress of these hives over the course of two years. They performed weekly or bi-weekly inspections of each colony and rated its strength (according to the amount of brood and number of adult bees) and queen status (thriving, weak, queenless, or superseded). They witnessed dozens of invading parasitic AHB swarms and the resultant usurpation of the EHB queen.

They found an average take-over rate of 21% over the course of the study, much higher than previously thought. Moreover, there was a seasonal effect of this process, such that most swarms were seen during the months of October, November, and December. There was also a highly significant effect of EHB colony status on the likelihood of being parasitized. Thriving colonies had only a 1.6% chance of being usurped each month, but weak and queenless colonies had a 2.2% and 12.8% chance of usurpation, respectively. These results suggest that the parasitic AHB swarms are somehow able to locate colonies with weakened defenses and take them over at a surprisingly high rate.

Knowing how this usurpation process works may enable beekeepers to take certain measures to minimize how often their colonies can be taken over by Africanized bees. It is for this reason, and many others like it, that make beekeepers the first line of defense against the AHB.

Reference: Schneider, S. S., T. Deeby, D. C. Gilley, and G. DeGrandi-Hoffman. (2004). Seasonal nest usurpation of European colonies by African swarms in Arizona, USA. *Insectes Sociaux*, 51: 359–364.

No Joke

portions of letter from Dennis Murrell, Casper, WY

...As a commercial beekeeper, I've worked all kinds of hot hives over three decades. But I've never worked any like the AHB's. They are very easily controlled with smoke **most** of the time. But **not all** of the time... the slightest hive disturbance, without smoke, can set them off like no other bees I've encountered. Gently removing a lid without smoke can cause an attack that is instant and vicious. They will kill any sparrow/robin sized bird that flies through the area. They will sting the black plastic molding around the windows and doors on a bee truck. They will force a normally suited/veiled/experienced beekeeper with his smoker into the safety of his truck in a few minutes. They will harass anything that moves within 100 yards of the hive and continue this activity unabated until sunset.

It is absolutely irresponsible to negate the effects this kind of bee can have on the general public's health and safety. Those who minimize, deny, or negate the problem aren't doing beekeepers any favors. And I surely wouldn't want them keeping bees in an AHB area, around my neighborhood, my aged parents, my wife, my children or my friends....



This closeup shows Africanized honey bees surrounding a European queen honey bee that is marked with a pink dot for identification. Africanized and European honey bees cannot ordinarily be distinguished with the naked eye.



Africanized Honey Bees Are Still on the Move

By Kim Kaplan
March 6, 2006

In 2005, Africanized honey bees showed up for the first time in Louisiana, Arkansas and Florida. An updated map showing the spread of Africanized honey bees by county and state has been posted on the Agricultural Research Service (ARS) website at www.ars.usda.gov/ahbmap/.

The arrival in Florida was not contiguous with the bees' spread from the Southwest. It was most likely a result of human-assisted transport, by which trucks, ships, railroad cars or other types of transportation inadvertently bring Africanized honey bees into new areas.

Usually, human-assisted transport finds are not considered part of Africanized honey bees' spread. But because they have been found in 14 counties, the state of Florida now considers Africanized honey bees to be established there.

The ARS Carl Hayden Bee Research Center in Tucson, Ariz., is responsible for official identifications of Africanized honey bees, especially when the bees are found in new states. Additional information about ARS research on Africanized honey bees can be accessed at gears.tucson.ars.ag.gov/.

Among ARS' recent research accomplishments related to the bees is new guidance for beekeepers on the best time to requeen hives to reverse Africanization of honey bee colonies. Queens of known genetics, from reputable breeders, should be introduced into hives in the fall to give them the best chance of being accepted by the bee colony.

ARS is the U.S. Department of Agriculture's chief scientific research agency.

- Don Hopkins, State Inspector: (336) 376-8250
- Guilford County Beekeepers Association web site <http://www.guilfordbeekeepers.org>
- North Carolina State Beekeepers Association web site <http://www.ncbeekeepers.org>



Guilford County Beekeepers Association

A LOCAL CHAPTER OF THE NORTH CAROLINA STATE BEEKEEPERS ASSOCIATION

Norman Faircloth, editor (nfaircloth@northstate.net)

Bobbie & Kimberly Moore are members of our club and have a bee related business. You can check them out at www.thewildbee.com. Kim wrote the following article which was published in The Natural Triad for a local newspaper.

Hi Norman,

It's nice to hear from you! Bobbie and I have been neglectful about attending our local meetings, but our honey business has been taking over our lives. We still keep 2 hives - in fact, we still have to take the practical part of the test so we can get our certifications (we already passed the written part!) Hopefully, things will settle down so we can pick up where we left off. We got some absolutely divine honey last year, so we're looking forward to this year's crop.

MOVE OVER SUGAR – HONEY IS HERE!

By Kimberly Moore

The average American consumes about 150 pounds of sweeteners each year. Plain sugar has no nutrient value and health experts are still cautious about artificial sweeteners. Raw honey is a nutraceutical food which contains all the essential minerals for sustaining life, including Vitamins A, B-complex, C, D, E, and K; beta-carotene; minerals; and enzymes. And unlike fruits and vegetables, honey can be stored indefinitely at room temperature. According to The National Honey Board, honey stored in sealed containers can remain stable for decades and even centuries! Viable honey has been found in pyramids over 5,000 years old.

Folks watching their weight may worry about indulging in honey, which has 60 calories per tablespoon, but there is power in those calories! Volunteers in a study at the University of California study consumed honey each day for a month with no weight gain. The researchers noted that “they reported feeling fuller after eating, and they found that they had fewer cravings for sweets.”

A note to diabetics: Both honey and sucrose have been shown to produce a lower glucose response than starchy foods such as white bread. The total amount of carbohydrate consumed is probably more important than the type of carbohydrate when it comes to blood sugar levels. Thus, experts agree that diabetics may include moderate amounts of “simple sugars” in a balanced diet.

The Academy of General Dentistry has reported the anti-cavity causing effects of honey. Volunteers were given less than a quarter ounce of honey and asked to swish it in their mouths for 4 minutes and then swallow. Volunteers' saliva samples were taken before and after they received the honey. The researchers found that despite the fact that honey contains about 70 percent sugar, honey taken in higher concentrations had an anti-cavity causing effect. Ten minutes after the volunteers had swallowed the honey, a 70 percent reduction in total cavity-causing bacteria counts was found.

You may want to consider honey as a marinade for meat. Honey promotes browning and glaze formation while reducing the production of cancer-causing compounds during grilling and frying. One type of carcinogenic compound, called heterocyclic aromatic amines (HAA), is formed when meat is cooked at a high cooking temperature. Researchers at Michigan State University demonstrated that when meats are covered in marinades consisting of 30 percent honey for four hours, the formation of HAA oxidants in honey is significantly reduced.

Honey contains 21 calories per teaspoon compared to sugar which contains 15 calories per teaspoon. Because of its high fructose content, honey has a higher sweetening power than sugar. This means you can use less honey than sugar to achieve the desired sweetness. When substituting honey for granulated sugar in recipes, begin by substituting honey for up to half of the sugar called for in the recipe. Honey can replace all the sugar in some recipes.



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Honey has the ability to absorb and retain moisture which prevents baked goods from drying out while adding a golden brown glaze. Honey adds a sweet and distinctive flavor to recipes. When baking with honey, remember the following:

- Reduce any liquid called for by 1/4 cup for each cup of honey used.
- Add 1/2 teaspoon baking soda for each cup of honey used.
- Reduce oven temperature by 25°F to prevent over-browning.
- A 12-ounce jar of honey equals a standard measuring cup.
- When measuring honey, coat the measuring cup with non-stick cooking spray or vegetable oil before adding the honey. The honey will slide right out.

Be creative! Use as a sweetener in beverages such as tea and coffee or add to milk for extra zest. A glass of water, a teaspoon of honey, and a little lemon make a great thirst quencher and provide both a quick burst of energy and endurance. Honey is great on toast and bagels or added to sliced fruit. And don't forget the honey-lover's favorite: eat it from a spoon, straight from the jar! Replacing plain sugar with nutrient-rich honey whenever you can contributes to your overall good health.