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Guilford NEWS

APRIL, MAY, JUNE, 2005

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

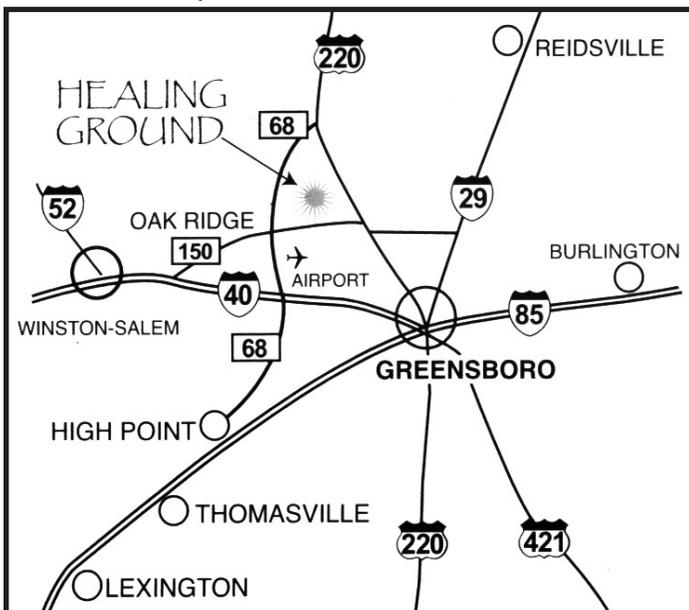
MEETINGS & PROGRAMS:

- **Saturday, April 16, FIELD DAY** this year will be held at the *Healing Ground*, 7622 Penns Grove Road in Summerfield, NC. (see map below) It is a park-like facility with several acres of beautifully landscaped gardens and trails.

Be sure to bring: lawn chairs, covered dish, a dessert and your drink. (Hamburgers, Hot Dogs, Buns, & Condiments will be provided). Lunch will begin at noon.

The practical tests will begin at 10:00 a.m. Those planning to take the practical test need to reserve a time and come prepared to work bees. Call Kurt to schedule. 336-697-2811

Emerson Heatherly will bring the package bees from Brushy Mountain.



DIRECTIONS TO HEALING GROUND

From Greensboro, take 220 North to Summerfield. Turn left on 150 West (you will pass 150 east on the way. 150 West will be the next traffic light.) Proceed 2.5 miles on 150 West...turn Right on Whitaker Drive and take the first Left onto Penns Grove Road. Tatum House is the 2nd drive on the right.. 7622, use the 4th drive on the right - just look for the horse crossing sign.

- **Tuesday, May 10, 6:30** Covered Dish Meal. James Bennett's experience in making splits makes it look easy. Kurt will follow with a show on extracting honey.
- **Tuesday, June 14, 7:00.** No meal. North Carolina's Chief Apiary Inspector, Don Hopkins, will bring us up-to-date with the very latest in problems and solutions (we hope)!

NEEDS YOUR ATTENTION:

- A trip to Miller Bee Products is planned for Saturday, May 14, to leave about 8:00 a.m. from the Farmers Market. Mr. Miller will conduct a tour of his business & show how the wooden ware we use is cut and assembled. Afterwards, plans are to have lunch at Shatley Springs Restaurant and maybe take in other sights as time permits. 40 riders are required to charter a bus. If fewer wish to go a car-pool/caravan will be worked out. Notify Emerson Heatherly at 869-2647.

- Remember that the newsletter is now posted on our web

page. Only those of you who do not have email will receive paper copies after this one. Our Board approved this as a cost saving practice.

- **PACKAGE BEE PICKUPS:** April 16 for Beginner class members @ Field Day. April 2 for returning club members who ordered.... 1:00-2:00 @ Barn Kitchen

- **Web site Help Wanted:** We are in need of individuals who would be interested in helping manage our web site. Specifically looking for someone who might be willing to put together a beginner FAQ section. *We are also interested in knowing about what members might like to see on our web site that would make it more relevant to them and their needs.*

REVIEW:

New Cuisine Wins Rave Reviews From Honey Bees



Honey bee hives from Maine to California are abuzz with news about a new food that originated

from a chance conversation between two ARS scientists. At an Entomological Society of America meeting in the summer of 2001, entomologists Gloria DeGrandi-Hoffman, who specializes in honey bee research, and Allen C. Cohen, who is internationally recognized for his pioneering work with foods for insects, met and discussed a problem that has plagued California's almond growers for years.

These orchardists, producers of the nation's \$1 billion almond crop, need bustling colonies of honey bees—alive with strong workers and healthy young, known as brood—to pollinate their vast orchards during the winter months. That's the time of year these trees begin to flower. But it's also when bees are in a near-hibernating state and not being very industrious. Cohen and DeGrandi-Hoffman, now research leader at the ARS Carl Hayden Bee Research Center, Tuscon, Arizona, decided to collaborate in developing a recipe for an artificial diet that would give honey bees the whole package of nutrients they need in an easily digestible liquid. This would keep the bees rearing brood and ready to work once the almond blossoms appear.

Presently, beekeepers use soy patties to feed bees during winter, before almond blossoms—floral treasure troves of pollen and nectar—are readily available. The major problem with these patties is that they are costly and labor-intensive.

...The patties—typically made of corn syrup, soy flour, and brewer's yeast—create another problem. For reasons not yet understood, bees that eat soy patties eventually lose their ability to produce a food, called worker jelly, that's vital for the brood.

With a liquid diet, a machine already used by beekeepers would be able to easily pump the bee food into the hives, a far less labor-intensive approach, says Cohen. ...

Nectar is rich in carbohydrates. Pollen is packed with protein, vitamins, minerals, fats, and perhaps as-yet-undiscovered compounds essential for bees' survival. "What we didn't know is whether bees would be able to take a liquid that combined the qualities of both

nectar and pollen and process it in such a way that the formula would be completely nutritious for them," says Cohen. "That was really one of the most exciting possibilities—to see whether we could essentially fool the bees' natural digestive mechanisms."

Cohen's classic recipe, modified slightly, thus became the Arizona lab's starting point for a new menu option for domesticated honey bees, *Apis mellifera*.

...The intent was to create an elixir so delectable that adult bees would not only eagerly eat it but would also, as is their usual practice, store some of it in the hive for nurse bees—the hive's round-the-clock nannies—to feed to the colony's brood.

...After 5 months and nearly 80 reformulations, the team hit on an apparently scrumptious creation that the finicky bees just couldn't resist. The scientists then tested it in full-size hives, each accommodating about 30,000 bees. Wardell and co-worker Fabiana Ahumada-Segura fitted each hive with a small window so that they could spy on the dining bees.

"At one point," says Wardell, "we saw 75 to 100 bees jammed around a petri dish, pushing and shoving each other to get to the food. In the commotion, some of the bees fell into the petri dish. It was like a bee mud-wrestling match."

Adds Cohen, "This is somewhat historic because people have tried for the past 50 years to develop diets for bees but were unable to get the bees to continue to rear brood on those formulas. With the new diet, bees have been able to rear continuous generations of brood."

...More work is needed, however, before the experimental food is ready for commercial and hobbyist beekeepers to use. "We want to cut the cost so the food is affordable," Wardell explains. "We're using very pure, pricey ingredients, but we intend to substitute less-expensive compounds." The scientists also aim to develop a dry mix. Lighter than the liquid, it should be cheaper to ship.

Further fine-tuning of the formula may boost brood survival rates and lengthen adult bees' typical 4-week life-span. Currently, both these measures are about the same among bees reared on pollen patties and those fed the novel food.

Another planned upgrade: compounds known as feeding stimulants that may entice bees to eat even more. Though these are already standard ingredients in other foods formulated for nourishing beneficial insects, apparently no one yet knows which feeding stimulants would appeal to honey bees.

The researchers intend to seek a patent for their bee cuisine.—By Alfredo Flores and Marcia Wood, Agricultural Research Service Information Staff.

This research is part of Crop Protection and Quarantine (#304) and Crop Production (#305), two ARS National Programs described on the World Wide Web at www.nps.ars.usda.gov.

Gloria DeGrandi-Hoffman is at the USDA-ARS Carl Hayden Bee Research Center, 2000 E. Allen Rd., Tucson, AZ 85719; phone (520) 670-6380, ext. 104, fax (520) 670-6493.

No Nail Frames

March 2005 Bee Culture Magazine

In the MailBox segment of this month's Bee Culture I found an interesting letter. The headline "Assembling Frames" did not spark my interest but one paragraph began "I am an engineer..." which caused me to question why an engineer would be interested in assembling frames.

Russ Walker is the engineer and he questioned the 100 year old process of putting all those nails into frames since we have high strength glues now.

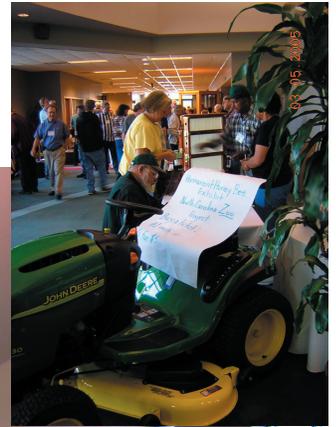
"Titebond II glue is made from polyvinyl acetate and a catalyst. This glue cross links upon drying and is water resistant. A typical wood/wood joint has about 3500 lb/sq. inch shear strength. With this strength it

should not be necessary to use nails, unless nails are used to hold alignment which is not necessary with a Kelly jig.

I was easily able to assemble and glue 10 frames in about 10 minutes. I used 2 spirit levels with pipe wrenches on them to keep weight on the frame joints until the glue had set... The jig & frames cannot be moved for about 1 hour 'till a preliminary set has taken place."

Sounds good to me! Wonder how much the glue will cost?

March 2005 Convention Rock Hill, South Carolina



Like to join Guilford County Beekeepers Association?
Meetings are held on the 2nd Tuesday of each month. (Odd months @ 6:30 p.m. with a covered dish meal, even months @ 7:00 p.m.)
Just come to our next meeting at the Guilford County Agricultural Center and join in. Dues are \$25.00 per year (that's \$10.00 for GCBA and \$15.00 for expanded membership in the North Carolina State Beekeepers Association).

FOR MORE INFORMATION:

- 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>

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Norman Faircloth, editor (nfaircloth@northstate.net)