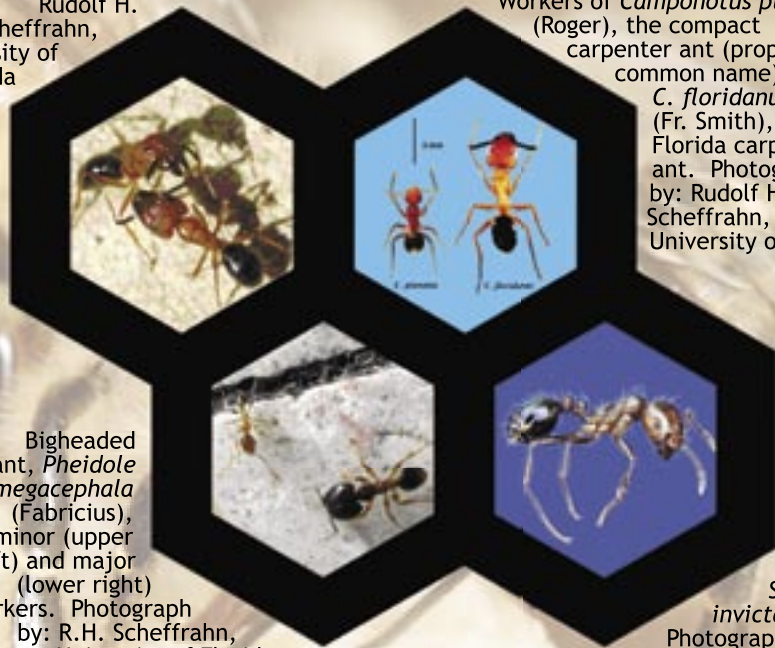


Major workers of *Camponatus floridanus*.  
Photograph by:  
Rudolf H. Scheffrahn,  
University of Florida



Workers of *Camponotus planatus* (Roger), the compact carpenter ant (proposed common name), and *C. floridanus* (Fr. Smith), the Florida carpenter ant. Photograph by: Rudolf H. Scheffrahn, University of Florida

Bigheaded ant, *Pheidole megacephala* (Fabricius), minor (upper left) and major (lower right) workers. Photograph by: R.H. Scheffrahn, University of Florida

Lateral view of a worker of the red imported fire ant, *Solenopsis invicta* Buren. Photograph by: David Almquist, University of Florida

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DACS-P-01492



# FLORIDA MELITTO FILES

NEWS FOR BEE LOVERS

Joint publication:

Florida  
Department of  
Agriculture &  
Consumer Services

University of  
Florida/  
Institute of Food  
& Agricultural  
Sciences

## Ants in Florida Bee Hives!

We have all had ants invade or at least appear in our honey bee hives - most often they are carpenter ants. Carpenter ants cannot sting, but can deliver slicing bites into which they spray formic acid. These ants, of which there are numerous species, are omnivorous, eating honeydew, nectar, honey, other insects and carrion. The most widespread and common is the Florida carpenter ant. The head and thorax are reddish and the abdomen is black. They do not excavate wood, but nest in voids. Vacant bee equipment is a favorite location. They won't raid healthy colonies, but will raid weakened colonies for honey and brood.



In the Florida panhandle, we have the black carpenter ant, *Camponotus pennsylvanicus*. These ants will excavate wood softened by fungi. Another species that was introduced to South Florida is the compact carpenter ant, *Camponotus planatus*. The compact carpenter ant is diurnal (active during the day), while the other carpenter ants are nocturnal. They are solid brown in color. I have had more problems with compact carpenter ants in South Florida than any other ant species. They excavate into the wood of lids and supers and have taken over nuc boxes.

Another exotic invader is the pan-tropical big-headed ant, *Pheidole megacephala*, whose colonies are hunting machines. These ants nest in the soil and send out foraging columns to find insects and other small animals to dismember and carry back to the colony. Normally they will be happy carrying off dead bees from the entrance, and small hive beetle larvae that leave the hive to pupate in the soil. If a colony becomes very weak, they will go inside the hive and carry off bee brood, small hive beetle larvae, and wax moth larvae.

Of course the most famous ant in Florida is an invader from South America, the red imported fire ant, *Solenopsis invicta*. Fire ants are known for their sting and ensuing blister. They will forage on insects, seeds, carrion, and even fruits. My experience with them living under the ant guards of my hives has generally been positive. They would rather forage for small hive beetle larvae in the soil or for dead bees on the ground, than to invade a healthy hive. A natural predator from South America, the decapitating phorid fly, has been introduced to Florida and may help keep fire ant populations to a reasonable size in the future.

If I have not covered the ants or other hive denizens you have questions about, contact Dr. Ellis or me for more information. Future articles may cover spiders, cockroaches, or even lizards. You can contact me at [whk@ufl.edu](mailto:whk@ufl.edu). Please visit the back page to view photos pertaining to this article.

Bill Kern, Associate Professor of Entomology, University of Florida  
Fort Lauderdale Research & Extension Center



## FROM THE DESK OF JERRY HAYES

In August, I represented the Florida Department of Agriculture & Consumer Services, Division of Plant Industry's apiary section at the North Central (NC) 508 meeting titled, "Sustainable Solutions to Problems Affecting Honey Bee Health." There were 25 attendees representing University Extension; USDA Cooperative State Research, Education, and Extension Service; American Association of Professional Apiculturalist; and, Apiary Inspectors of America. The meeting was designed to share, discuss and formalize committee mechanisms for collaborative research and funding possibilities to address honey bee health issues and challenges.

Jerry Hayes, FDACS/DPI  
Asst. Chief Apiary Inspection

Public awareness has been sufficiently raised, and the government's attention is focused as at no other time on the devastating loss of honey bees and other pollinators from the environment. Colony Collapse Disorder has been the riveting force for global recognition that honey bees are the vital link in production agriculture and the general health of the environment. Couple this raised awareness with the tremendous interest, support and political strength from other pollinator groups such as North American Pollinator Protection Campaign, Co-Evolution Institute, Monarch Watch, and the media, and you'll see it has led to Congress stepping up to the plate to respond to the public's demand for a solution.

There is a strong possibility that there will be funding made available through several pathways such as the Cooperative Agricultural Pest Survey, National Research Institute, 406 Programs, and others. The NC 508 group is preparing to access funding that becomes available to begin research in honey bee health.

DPI, while not representing pure research or extension activities, was invited to participate in this meeting as a partner and part of this community. For any substantive research to be conducted, field surveys will have to be performed. Beekeepers and apiaries will have to be identified and located. Samples will have to be collected and assessments made. DPI's apiary section was included in this seminal meeting in hopes that we would consider joining the collaborative effort if and when needed. Honey bee health and the health and vitality of our apiculture industry are the goals of all of us regardless of what "official" function we provide and who we serve. DPI was at the table, visible and willing to respond and be responsive within this community. We will have to see how this evolves, but I appreciate your support in extending the stride of DPI's apiary section as we work with our colleagues in research and extension in other parts of the nation.

The FDACS' Division of Marketing, Bureau of Education and Communication has produced a high quality DVD, "Africanized Bees in Florida: Coping With The Challenge." If you would like to share this video with your local media, please contact me by e-mail at hayesg@doacs.state.fl.us or phone me at (352) 372-3505 ext 128 to request a copy.

## FROM THE DESK OF DR. JAMIE ELLIS

Greetings Florida Beekeepers! I hope that the summer beekeeping season treated you well and that your colonies are strong and healthy. My students, technicians, and I remain busy with our research, extension, and instruction efforts. I look forward to discussing our progress with you at the fall meeting of the Florida State Beekeepers Association (see special FSBA insert).

I want to use this quarter's column to give you a sneak preview of the Florida Master Beekeeper Program. Jerry Hayes (FDACS-DPI), Ray Zerba (extension agent, Clay County), Tom Donovan (extension agent, St. Johns County), Amanda Ellis (FDACS-DPI), Bill Kern (UF-IFAS), and I have met and designed what we believe to be the best Master Beekeeper Program offered anywhere in the country. There is not enough space to discuss the program in detail here, but I plan to "unveil" the program in its entirety at the upcoming FSBA meeting in Winter Haven (you MUST attend this sure-to-be-great event!). Just to whet your appetite, I'll give you a few of the highlights now.

The Florida Master Beekeeper Program will be composed of 4 levels:

- *Apprentice Beekeeper* (participant has general knowledge of honey bees and beekeeping)
- *Advanced Beekeeper* (participant has advanced knowledge of beekeeping, honey bee biology, and other special topics)
- *Master Beekeeper* (participant chooses a "major" and demonstrates expertise in that major and in other specialized beekeeping topics)
- *Master Craftsman Beekeeper* (highest level in the program – the participant accrues public service credits, conducts a University-led research or extension project, and passes a series of challenging examinations)

The program is designed to challenge beekeepers to become masters of their craft. The program usually takes 4+ years to complete. Achieving the Master Craftsman level is the non-academic equivalent to being awarded a masters degree in apiculture from any U.S. university. Although designed to train and challenge beekeepers, the program is also intended to facilitate the transfer of "bee-knowledge" to the general public through the efforts of program participants. I consider this a win-win.

I realize that this is simply a snippet of information concerning the program. However, I plan to discuss the program in detail at the FSBA meeting in Winter Haven. Also, a website will be constructed for the program, and I hope to include the web address in the Jan – March issue of the **MELITTO FILES**. If you have questions about the program, contact me.

I've got more good news - my colleagues and I are planning a University of Florida Honey Bee College. Plans for this program are in the works. However, we intend to hold the event sometime in March of 2008. So begin making plans to attend this meeting now! The Master Beekeeper Program will officially begin at the spring short course. The next issue of the **MELITTO FILES** will have more details. I hope that your fall beekeeping endeavors are fun and profitable.



Dr. Jamie Ellis  
UF Asst. Professor

FDACS/DPI

UF/IFAS

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**FROM DAVID WESTERVELT**

Biological Scientist

Florida Department of Agriculture and Consumer Services

Division of Plant Industry

### **CHOOSING THE CORRECT TERRAMYCIN® FOR HONEYBEES**

Which Terramycin® product is the correct one to use? It's very simple, after talking to the professionals at Pfizer Animal Health - THE LABEL IS THE LAW! Terramycin®, manufactured by Pfizer, is the registered name of the product. The active ingredient, Oxytetracycline hydrochloride, is one of the most widely used antibacterial drugs. Pfizer has two products registered for use on honeybees for treatment of American Foulbrood *Paenibacillus* larvae: Terramycin® Soluble Powder (TSB) and Terramycin-343® soluble powder. TSB is the preferred method used by beekeepers. Treatment requires a 6.4 oz package mixed with 2 lbs (32 oz) of powdered sugar; apply 2 tbs. over the top bars of each colony 3 times at 5-7 day intervals in the spring, and repeat in the fall. Terramycin-343® soluble powder is concentrated Terramycin®, and it is recommended to be mixed in syrup. Treatment requires a 4.78oz (135.5g) package mixed with 512 gallons of syrup. Prepare only the amount of mix that can be consumed by the bees in 24 hours. The active ingredient starts to break down as soon as it is mixed in syrup and exposed to sunlight. Terramycin-343® is labeled for mixing with powdered sugar, but it is not recommended due to the high concentration of the drug. It is hard to get the correct mixture in small quantities. In both treatments, the dosage is 200mg/colony administered in 3 applications at a 5-7day interval.

#### **Registered premixed treatments**

The following is a list of Terramycin® products that have been registered for use on bees for the treatment of American Foulbrood, and they do not require any mixing: Terra Brood Mix® (Mid-Con), Tetra Bee Mix® (Dadant), Terra Patties® (Mann Lake), and Terra Pro® (Mann Lake).

**CAUTION:** Premixed treatments registered for use on other livestock are not legal for use on honeybees. They may contain ingredients that are harmful if consumed by honeybees.

**CAUTION:** Use products as sole source of Oxytetracycline, and prepare fresh solutions every 24 hours. To avoid contamination of production honey, the drug should be fed to and consumed by the bees in early spring or fall, or removed six weeks before main honey flow begins.

**FROM MICHAEL K. O'MALLEY**

Coordinator, African Bee Extension and Education Program

University of Florida

### **EXPLAINING AFRICAN BEE BEST MANAGEMENT PRACTICES**




These African bee Best Management Practices (BMPs) aim to preserve public safety and protect the beekeeping industry from being liable for any AHB incidents. To help beekeepers understand the importance and reasoning behind them, BMPs are being featured in the **MELITTO FILES**.

I discussed BMP points **1** and **2** in the last issue, and I continue with two more points below. A complete list of Florida BMPs is available by visiting on the web <http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>.

**3 Honey bee colony divisions or splits should be queened with production queens or queen cells from EHB breeder queens following Florida's Best Management Practices:** The goal of requeening is to maintain manageable colonies that are not a threat to beekeepers or other members of the community. Therefore, it is vital that beekeepers ensure that any new queen introduced into a colony is of manageable European stock. New queens should be purchased from breeders; beekeepers are discouraged from allowing colonies to produce their own queens. Even if colonies are certified as EHB, the density of African bees in some areas of Florida (particularly southern Florida) is such that if a virgin queen emerges, she has a high probability of mating with an AHB drone. To purchase a production queen, beekeepers should buy a queen from a Florida breeder that follows Florida's BMPs for queen breeders (also available on the web at <http://www.doacs.state.fl.us/pi/plantinsp/apiary/apiary.html>), or buy a queen from a part of the country where AHBs have not permeated.

**4 Florida beekeepers are discouraged from collecting swarms that cannot be immediately re-queened from EHB queen producers:** There is no way to tell the source of a swarm, and it may be AHB even if it does not immediately exhibit defensive behavior. The most common response by beekeepers to this point is that requeening a collected swarm with a European queen eliminates the potential for the swarm to cause problems. Yet, requeening a swarm is only half of the picture. When a beekeeper collects and attempts to "rehabilitate" a swarm by requeening it, they forget that the swarm also contains AHB drones. With the high queen turnover rate in managed colonies, a beekeeper can not afford to introduce AHB drones into his or her apiary. Finally, AHBs have a tendency to nest in open areas, so there could be comb being formed underneath what appears to be a swarm, meaning the colony is becoming established. If this is the case, any attempt to collect or disturb the bees may result in a stinging attack.

**Florida Beekeeper Management Calendar – Fall 2007**

		<b>Management Calendar</b>		<b>Blooming Plants</b>
<b>Month</b>	<b>Month</b>			
<p><b>North Florida</b></p> <p>Ensure that colonies have enough food. It can be cold in N. Florida during winter.</p>	<p><b>Oct – Dec</b></p> <p>Similar management schemes in Oct, Nov, and Dec. Pests become less of a problem late in year.</p>	<p>1) Varroa populations peaked in Aug/Sept. The economic threshold is 60+ mites/day on a sticky screen or 17+ mites in an ether roll for a <b>colony of average strength</b>. Treat if you exceed these numbers. Options include: Apiguard, ApilifeVAR, Mite Away II</p> <p>2) Can treat colonies for Nosema disease using Fumigillin. Colonies may need as much as 4 gallons of medicated syrup to control <i>Nosema cerana</i></p> <p>3) Monitor for and control small hive beetles (options include Checkmite+, GardStar, Hood traps and West Beetle traps)</p> <p>4) Feed colonies if light (colonies can starve!)</p> <p>5) Can treat for tracheal mites (mix vegetable oil and powdered sugar until doughy - not sticky to touch: place a pancake-sized patty on top bars of brood chamber)</p>	<p><b>Oct:</b> Spanish Needle, Mexican Clover<sup>N</sup>, Primrose Willow<sup>N</sup>, Spotted Mint<sup>N</sup>, Golden Rod<sup>N</sup>, Vine Aster<sup>N</sup>, Smart Weed<sup>N</sup>, Bush Aster<sup>ND</sup></p> <p><b>Nov:</b> nothing new blooms</p> <p><b>Dec:</b> nothing new blooms</p>	
<p><b>Central Florida</b></p> <p>Varroa remain an issue through winter due to warmer temps.</p>	<p><b>Oct – Dec</b></p> <p>Similar management schemes in Oct, Nov, and Dec. Pests become less of a problem late in year.</p>	<p>1) Varroa populations peaked in Aug/Sept. The economic threshold is 60+ mites/day on a sticky screen or 17+ mites in an ether roll for a <b>colony of average strength</b>. Treat if you exceed these numbers. Options include: Apiguard, ApilifeVAR, Mite Away II</p> <p>2) Can treat colonies for Nosema disease using Fumigillin. Colonies may need as much as 4 gallons of medicated syrup to control <i>Nosema cerana</i></p> <p>3) Monitor for and control small hive beetles (options include Checkmite+, GardStar, Hood traps and West Beetle traps)</p> <p>4) Feed colonies if light (colonies can starve!)</p> <p>5) Can treat for tracheal mites (mix vegetable oil and powdered sugar until doughy - not sticky to touch: place a pancake-sized patty on top bars of brood chamber)</p>	<p><b>Oct:</b> Spanish Needle, Mexican Clover<sup>N</sup>, Primrose Willow<sup>N</sup>, Spotted Mint<sup>N</sup>, Golden Rod<sup>N</sup>, Vine Aster<sup>N</sup>, Smart Weed<sup>N</sup>, Bush Aster<sup>ND</sup></p> <p><b>Nov:</b> nothing new blooms</p> <p><b>Dec:</b> nothing new blooms</p>	
<p><b>South Florida</b></p> <p>Varroa are an important issue in S. Florida in winter because colonies rarely are broodless.</p>	<p><b>Oct – Dec</b></p> <p>Similar management schemes in Oct, Nov, and Dec. Pests become less of a problem late in year.</p>	<p>1) Varroa populations peaked in Aug/Sept. The economic threshold is 60+ mites/day on a sticky screen or 17+ mites in an ether roll for a <b>colony of average strength</b>. Treat if you exceed these numbers. Options include: Apiguard, ApilifeVAR, Mite Away II</p> <p>2) Can treat colonies for Nosema disease using Fumigillin. Colonies may need as much as 4 gallons of medicated syrup to control <i>Nosema cerana</i></p> <p>3) Monitor for and control small hive beetles (options include Checkmite+, GardStar, Hood traps and West Beetle traps)</p> <p>4) Feed colonies if light (colonies can starve!)</p> <p>5) Can treat for tracheal mites (mix vegetable oil and powdered sugar until doughy- not sticky to touch: place a pancake-sized patty on top bars of brood chamber)</p>	<p><b>Oct:</b> Spanish Needle<sup>ND</sup>, Mexican Clover<sup>ND</sup>, Primrose Willow<sup>ND</sup>, Smart Weed<sup>ND</sup>, Melaleuca<sup>ND</sup>, <b>Nov:</b> nothing new blooms <b>Dec:</b> Maple, Willow</p> <p>*Brazilian Pepper blooms from September through October and is a significant fall source of nectar for bees.</p>	

<sup>N</sup>Continues to bloom in Nov, <sup>P</sup>Continues to bloom in Dec, <sup>ND</sup>Continues to bloom in Nov and Dec