

News For South Carolina Beekeepers



February 2007

Vol. 18, No. 1

LOCAL NEWS

SPRING MEETING. The South Carolina Beekeepers will meet jointly with the North Carolina State Beekeepers on 2-3 March 2007. The meeting will be held at the Union County Agricultural Center in Monroe, North Carolina. You will find included in this newsletter a tentative meeting program. The Union Agricultural Center address is 3230-D Presson Road and is located just off US 74 about 3 miles west of Monroe.

This will be a very informative meeting and we hope to have a good turnout of South Carolina beekeepers. You will note on the tentative program that some outstanding speakers are scheduled for the meeting including Dewey Caron from the University of Delaware, Theodore Cherbuliez, MD from Maryland, David Westervelt from Florida, and Tom Webster from Kentucky State University. These speakers along with many others will give presentations or workshops which you will find very interesting and informative.

The meeting program will include a Friday evening meal at 7 PM which advance tickets are required. An introductory 3-hour beekeeping short course will be offered for beginners on Saturday afternoon. The program for the short course is listed later in this newsletter.

There will be a \$10 late registration cost to beekeepers who show up and have not pre-registered. To avoid the late registration fee, complete the meeting registration form included in this newsletter, and mail it, along with a check, to cover fees at least 10 days prior to the meeting. Make sure to make your hotel reservations well in advance.

If you have questions concerning meeting registration, contact Mike Hood at phone: 864-656-0346 or email: mhood@clermson.edu.

OTHER NEWS – Several beekeeper short courses for beginners will be offered this winter and spring. Some of those offering courses are the York County Beekeepers, the Pickens County Beekeepers, the Aiken County Beekeepers, and the Mid-State Beekeepers. Some courses begin in January or February so advise anyone interested to contact the local association soon to enroll.

SUMMER MEETING. The South Carolina Beekeepers will host a summer meeting at Clemson University on 19-21 July 2007. Two prominent guest speakers have already been confirmed for this meeting. Jerry Hayes who is the Florida Chief of Apiary Inspections and Steve Sheppard who is a research apiculturist at Washington State University. Make plans now to participate in the summer conference and have a great time.

QUEEN BEES SHOWN TO PASS VIRUSES TO THEIR OFFSPRING

Article by Alfredo Flores

The first evidence that viruses can be transmitted vertically from mother queens to their offspring in honey bee colonies has been discovered by Agricultural Research Service (ARS) scientists.

ARS entomologists Yanping Chen, Jeff Pettis, Jay Evans, Anita Collins and Mark Feldlaufer in Beltsville, Md., made the discovery by testing individual queen bees and their offspring for deformed wing virus, sacbrood virus and black queen cell virus.

The finding, reported earlier this year in the journal *Applied and Environmental Microbiology*, will be discussed this week at the annual meeting of the Entomological Society of America in Indianapolis, Ind.

The researchers examined queen feces and various tissues including hemolymph, heads, guts spermatheca and ovaries. Tissues of gut, ovaries and spermatheca, as well as the feces, were found to carry viral infections. In a separate study, the virus status of queens and their offspring was examined simultaneously. Once viruses in the queen bees were identified, the same viruses were found in their offspring, including eggs, larvae and adult workers.

According to Chen and her colleagues, this information is invaluable for improving understanding of the epidemiology of virus infections in honey bees. It could be used to predict bee colonies at risk of virus infection, which, in turn, would contribute to the development of effective disease-control strategies.

Honey bees pollinate an estimated \$15 billion worth of U.S. crops each year. The health of honey bee colonies

is continuously threatened by various pathogens, with viruses posing an unknown risk because of lack of information concerning transmission and outbreaks.

The Entomological Society of America, founded in 1889, has more than 5,700 members and is the largest organization of entomologists in the world. More than 2,000 entomologists and other scientists are expected to attend this year's annual meeting.

Chen, Pettis and Evans are with the ARS Bee Research Laboratory in Beltsville, Md. Collins, formerly with the lab, is now retired. Feldlaufer, formerly with the lab, is now research leader of the ARS Chemicals Affecting Insect Behavior Laboratory in Beltsville.

SOURCE: USDA ARS web site, December 11, 2006

NATIVE BEES COULD FILL POLLINATOR HOLE LEFT BY HONEYBEES

Article by Robert Burns

If you build it, they will come. Native bees that is. "And when native bees do come, they may be a hundred times more efficient as pollinators than are honeybees," said Jeff Brady, research assistant with the Texas Agricultural Experiment Station.

Brady, working with Dr. Forrest Mitchell, Experiment Station entomologist, is building trap nests, a way to encourage native bees to do the agriculturally vital role honeybees have been relied upon for so long: pollinating crops. Honeybee populations, either because of fierce competition from Africanized honeybees or from species of mites they have no resistance to, are on the decline.

Native bees offer an alternative because they are resistant to both the varroa and tracheal mites. And because they do not live in hives, native bees are not at risk of being overcome by Africanized bees.

Native bees, also called solitary bees, do not live in collective hives as do honeybees. They build nests in tiny holes or tunnels that they find, typically in trees and shrubs. Unlike honeybees, who have workers with specialized tasks, with only a part of the hive collecting pollen, each native bee is "on her own," and each is a potential pollinator, Brady said.

Each native bee deposits her collected pollen as small balls inside the tunnel of a nest, then lays an egg, and seals it off with mud or circular pieces of leaves.

She'll then collect more pollen, deposit another pollen ball then lay another egg and so on. Depending upon the species of native bee and the depth of the nest, the female may lay as many as 15 to 20 eggs in a single nest, sealing each egg off in its own cell with its own pollen ball. She may make as many as 100 trips to and from flowers to gather pollen for each of these eggs.

And while honeybees hover around flowers taking pollen when and if they can, many native bees may have

evolved so their actions on the flower actually trigger pollination.

"You can actually find a native bee that's been (evolutionarily) tailored to a specific crop," Brady said.

For example, some native bee species are particularly suited - having adapted their life cycles - to crops such as peaches, blackberries or water-melons. For example, one species is dormant or in developmental stages for 11 months of the year, and only emerges when crops such as melons are pollinating. Other species have adapted to row crops such as alfalfa may be active for most of the year.

There's a great deal of genetic variance, Brady said, with more than 500 native bee species in Texas alone. Each may be adapted to specific crops, and each may have a different preference for nesting sites.

For these reasons and others, for a specific crop at least, native bees, such as the alfalfa leafcutter bee, may be much more efficient pollinators than honeybees, Brady said. "Two hundred alfalfa leafcutters can to do the same amount of pollination that a 20,000 honeybee hive could."

Honeybees have other advantages however, most notably their honey production. Because humans have cultured them for centuries, Brady said, they offered some advantages to the agricultural producer who wished to ensure there were enough local pollinators for his crop. He or she could simply establish hives near the crop. And though honeybees aren't as efficient pollinators as native bees, they make up for it in the sheer brute force of numbers. But these advantages have waned as both wild honeybees and cultured honeybees have fallen prey to parasitic mites and Africanized bees.

Living in hives, honeybees have strength in numbers offering the collective protection from enemies. Native bees, because of their solitary nature, are often at the mercy of predators, such as woodpeckers and parasitic wasps.

"They are completely opportunistic when it comes to finding nests," Brady said. "They'll nest wherever they find the right size hole, in a dead tree, in a wind chime, even in the empty bolt holes of an abandoned tractor."

This "opportunistic" behavior offers researchers an opportunity of their own, he said. By learning to build the right size nests for native bees, he or she should be able to encourage them to nest near agricultural crops for pollination.

But it's not just a simple matter of one size fits all, he said. Not only are native bees adapted to specific crops, they are also adapted to different sizes and depths of holes. So the first stage of Brady's research is to take a bee census, finding what bees are attracted to what crops and what size holes they prefer.

Brady has been building dozens of different size "trap nests," blocks of wood with holes or collections of tubes designed to "capture and hold" the bees as eggs, larvae and/or pupae. He distributes the trap nests near crops in the spring, and when collected later in the year, they can give him a snapshot of what bees and how many frequent certain crops.

Brady can also get an idea of what size holes or tubes certain species prefer, he said. Knowing the right nest for the right native bee species will eventually allow him to help build populations where they are needed.

Brady noted that many native bee species build their nests in the ground. Presently, the only species drawn to the trap nests are the ones that opportunistically hunt for already-made holes as nests.

But Brady cautions what he's actually doing is perfecting a technique for determining the best nests for native bees, not building a one-size-fits-all nest. That would be impossible.

"The interesting thing about them (native bees) is they vary so much from region to region, he said. "The biological and other dynamics vary quite a bit."

It is that variance, however, that makes them so well adapted - and the perfect choice as pollinators for many crops, he said.

SOURCE: American Honey Producers Association Magazine, Winter 2007
[www.americanhoneyproducers.org]

GENES MAY TELL A LOT ABOUT THE SECRET LIVES OF BEES

Article by Alfredo Flores

Despite the fact that bees are one of the most beneficial insects in the world, much of their behavior remains a mystery--even to the apiculturists who tend them. To better understand such fundamental processes as reproduction, and cope with problems such as bee mites and diseases, scientists are at work on a state-of-the-art genomics resource.

Agricultural Research Service (ARS) entomologist Jay Evans and colleagues at ARS' Bee Research Laboratory in Beltsville, Md., are working with National Institutes of Health (NIH) collaborators on what's called the Honey Bee Genome Project. Since the unveiling of the bee's entire genome in early 2005, the project has proved to be a significant new source of information about genes suspected of involvement with various honey bee traits.

Using quantitative genetic approaches and gene knockdown and expression studies, the Beltsville scientists are assessing the functions of various candidate genes. So far, some 150 honey bee genes have been selected for analysis by Evans and his team.

The team is currently developing databases to manage the new wealth of information that is coming in.

One of the databases, called "BeeBase" and funded by NIH, is a dedicated analysis-and-display environment for the honey bee genome that's headed by scientists at Texas A&M University. BeeBase also gives users the genome sequences for two key honey bee pathogens, *Paenibacillus* larvae and *Ascosphaera apis*—both genomic projects led by ARS.

Honey bees pollinate about 130 fruit, vegetable, nut, ornamental and fiber crops in the United States and contribute approximately \$15 billion annually to the national economy through improved crop yields and product quality.

More information about this research is published in the current issue of Agricultural Research magazine.

SOURCE: USDA ARS web site, January 3, 2007

NATIONAL HONEY BOARD CREATES BIG BUZZ WITH INTRODUCTION OF FIRST 100% HONEY BALSAMIC VINEGAR

Old World Taste Meets New World Innovation

Honey Balsamic Vinegar, the first balsamic vinegar made exclusively from honey, is the newest brainchild of the National Honey Board's product development program. Committed to increasing the demand for honey, the National Honey Board (NHB) has established a product development program utilizing honey's unique flavor and attributes to create new twists on familiar foods.

The benefits of Honey Balsamic Vinegar start with the label. Consisting of just two honey-based ingredients—naturally brewed honey vinegar (55%) and caramelized honey (45%)—the product contains *no sulfites* (the Food and Drug Administration estimates one in every 100 consumers is sensitive to sulfites). This pure honey product delivers the deep, mellow flavors typical of traditional balsamic vinegars but ends with a distinctive sweet-tart finish, making it an ideal choice for salad dressings, sauces and reductions, and condiments and relishes.

With the popularity of gourmet vinegars and condiments on the rise, the National Honey Board projects their newest product concept is a likely candidate to flourish in both retail and foodservice markets. While honey vinegars can be found on European grocery shelves, purchase options in the U.S. are uncommon, and none are balsamic varieties. National Honey Board Marketing Director, Bruce Wolk, predicts a promising future for Honey Balsamic Vinegar. "Honey's all-natural status has a proven track record for consumer appeal. Coupled with the widespread popularity of Mediterranean cuisines and ingredients, Honey Balsamic Vinegar is positioned for consumer approval," said Wolk.

Honey Balsamic Vinegar has been developed according to modern balsamic production, utilizing industrial acetator fermentation and rapid wood aging. The National Honey Board has taken the concept to the plant trial stage, and is offering the product formulation and process at no charge to any manufacturer interested in producing and marketing Honey Balsamic Vinegar. However, full-scale production, product identity, packaging and distribution would be the responsibility of the manufacturer or marketing entity.

To find out more about Honey Balsamic Vinegar or other new honey products, including solid honey disks, contact Charlotte Jordan at charlotte@nhb.org or (303) 776-2337. For more information about the National Honey Board and its marketing and promotion programs, visit www.honey.com.

The National Honey Board, through its staff in Longmont, Colorado, conducts research, advertising and promotion programs to help maintain and expand domestic and foreign markets for honey. The Board's work, funded by an assessment of one cent per pound on domestic and imported honey, is designed to expand the awareness and use of honey by consumers, the foodservice industry and food manufacturers.

SOURCE: National Honey Board Newsletter, August 2006

BEGINNER SHORT COURSE TO BE OFFERED

A beginner beekeeping short course will be offered during the joint North Carolina State Beekeepers/South Carolina Beekeepers spring meeting on 3 March 2007 in Monroe, North Carolina. The 3-hour short course will begin at 2 PM. Participants should bring bee protective gear for the last hour which will be a demonstration. Find below the agenda.

Hour 1

- 2:00-:10 Introduction; Safety in the Beeyard – veils, Epi-Pen, smoker, allergy testing
- 2:10-:20 History of Beekeeping
- 2:20-:30 Basic Bee Biology
- 2:30-:40 Basic Bee Biology
- 2:40-:50 Bee Seasons – spring, summer, fall, winter
- 2:50-:3:00 Bee Seasons – spring, summer, fall, winter

Hour 2

- 3:00-:10 Diseases – One off from normal - What a normal hive looks like, AFB, Varroa
- 3:10-:20 Diseases – One off from normal - What a normal hive looks like, AFB, Varroa
- 3:20-:30 Selecting an apiary site; the hive – Parts, hive decisions, Frames, Foundation, bottom boards
- 3:30-:40 The Hive – Parts, hive decisions, Frames, foundation, bottom boards
- 3:40-:50 Bee Equipment – suits, veils, smokers, and hive tools, etc.

- 3:50-4:00 Bee Yard Management – move slow, bananas, use of smoker, Hive Stands, ensuring have easy access to hive, keeping grass mowed
Around Hive – vibration from mower, facing your hives, smoking your Hands and Stings.

Hour 3

- 4:00-:10 Lighting Your Smoker
- 4:10-:20 Approaching a Hive, what to look for before opening the hive
- 4:20-:30 Where to stand, how to open the hive, what to look for and smell for
- 4:30-:40 Identifying workers, drones, queen, pollen, brood, eggs, larvae;
Honey-capped and uncapped;
General layout of the brood nest bee hive– brood nest across frames and honey stored above brood nest;
Layout of a frame depending on where is in brood nest;
Looking for diseases and Varroa, using the 5 bees per square inch rule to determine when to add supers.
- 4:40-:50 Installing a package simulation
- 4:50-5:00 Installing a package simulation

Bee notes Clemson and NCSU:

[http://www.cals.ncsu.edu/entomology/apiculture/Beekeeping_notes.html]

[<http://entweb.clemson.edu/cuentres/index.htm>]

NOTE TO THE EDITOR

RE: Clemson's Entomology Information Series Fact Sheet on Yellow Jackets

[<http://entweb.clemson.edu/cuentres/eiis/pdfs/mv3.pdf>]

This article seems to be historically accurate, but something has changed recently. I believe one statement may be a forewarning of that change: A huge southern yellow jacket colony was discovered in Charleston County in August, 1991. It contained an estimated 250,000 workers.

Last spring and summer I noticed a much higher than usual yellow jacket population on our property near New Prospect. It seems that yellow jackets are the most commonly observed insect on our property now. Worse, they have not gone dormant or died this winter they are still very active, as soon as the sun touched the ground, even following a heavy frost. They don't seem to be any more aggressive than in the past, but they are very much more present than I can remember in my 60 years. Also I have noticed they are building nests in the ground right in the lawn nowhere near a tree or shrub or other shelter, just right out in the open mowed lawn.

I recall a news article recently regarding an increase in enormous, multiple-queen yellow jacket nests in the South, rather the usual single-queen colony. Has something changed with this insect? I'm a little worried

about the safety of children and visitors who may be allergic to wasp stings.

Winfred Kennedy,
Campobello

EDITOR'S RESPONSE:

Due to our unseasonably warm winter so far, there is a good chance that some yellow jacket colonies are surviving longer than normal, especially those colonies that may be located in nests protected from the elements. I'm certain that a few consecutive days of cold/freezing weather will eliminate most of the yellow jackets that you are seeing especially those colonies that are nesting in exposed places like lawns which by the way is quite common. Over the past couple years I have had a few beekeepers contact me reporting that yellow jackets have been a major pest problem in their bee colonies in the fall. Beekeepers should keep healthy bee colonies which normally can fight off an attack from yellow jackets. Reducing the colony entrance size will help. If the yellow jacket population in the area appear to be causing a major problem, the beekeeper has three alternatives. 1) Purchase one-way yellow jacket traps and bait them with bologna placing them at least 100 meters from the apiary to attract them away from the bee colonies, 2) seek out and destroy nearby yellow jacket nests or 3) move your bee colonies to an alternative site where yellow jackets are not a problem.

As for the safety of children, visitors, and pets, it is always a good idea to keep them away from yellow jackets (particularly nesting sites) which can be easily disturbed setting off a multiple stinging incident. It is best to mark and eliminate yellow jacket nests in yards and recreational areas.

However, remember yellow jackets are considered to be beneficial insects during the summer months when they prey on other insect pests especially around our gardens and farms. Indiscriminate destruction of yellow jacket colonies is not recommended.

HONEY RECIPE IDEAS FOR SUPER BOWL SUNDAY

Hot 'n' Honeyed Chicken Wings

Prep Time: 10 minutes
Cook Time: 55 minutes
Makes 24 pieces

Wings have never tasted this good before-with a sweet and spicy glaze touched with ginger. These appetizers are great for casual entertaining or a family film night. They're easy to fix-toss wings with sauce and bake in a hot oven.



Ingredients:

1 cup Pace® Picante Sauce
1/4 cup honey
1/2 tsp. ground ginger
12 chicken wings (tips removed) OR 24 chicken drumettes

Preparation:

MIX picante sauce, honey and ginger.

CUT wings in half at joints to make 24 pieces. Toss wings with picante sauce mixture. Place in foil-lined shallow baking pan.

BAKE at 400°F. for 55 min. or until glazed and done, turning and brushing often with sauce during last 30 min.

SOURCE: <http://www.campbellkitchen.com>.

Honey-Barbecued Ribs

Prep Time: 10 minutes

Cook Time: 1 hour 15 minutes

Serves 4

Tender parboiled pork ribs are glazed on the grill with a sweet-and-spicy sauce.

Ingredients:

4 lb. pork spareribs
1 pouch Campbell's® Dry Onion Soup and Recipe
3/4 cup ketchup
3/4 cup water
1/3 cup honey
1/2 tsp. pepper
1/4 tsp. garlic powder OR 2 cloves garlic, minced

Preparation:

CUT ribs into serving pieces. Place ribs in saucepot. Cover with water. Heat to a boil. Cover and cook over low heat 45 min. Drain.

MIX soup mix; ketchup, water, honey, pepper and garlic in saucepan. Heat to a boil. Cook over low heat 5 min.

GRILL ribs 30 min. or until done and glazed, turning and brushing often with sauce. Serves 4.

SOURCE: <http://www.campbellkitchen.com>.

Respectfully submitted,

A handwritten signature in black ink that reads 'William Michael Hood'.

William Michael Hood
Extension Apiculturist

2007 North Carolina State Beekeepers Association/South Carolina State Beekeepers Association
Spring Conference Joint Meeting, March 2, 3, 2007
Union County Agricultural Center, Monroe, NC

Friday, March 2

- 11:00 AM **Registration** – Union County Agricultural Center
Late Registration Fee \$10
Exhibitor Set up, Hotel Check in
- 1:00 PM **Call to order** – Charles Heatherly, President, NCSBA
Invocation
Welcome – TBA
- 1:15 PM **Presidents' Reports**
Charles Heatherly, President NCSBA
Henry Chasserau, President, SCSBA
- 1:30 PM **Surviving the Winter** - Dr. Dewey Caron, Professor, Extension Entomologist, University of Delaware
- 2:30: PM **North Carolina Update** - Dr. David Tarpy, Professor, NC State University
South Carolina Update - Dr. Mike Hood, Professor, Clemson University
- 3:15 PM **BREAK**
- 3:30 PM **Healing Powers of the Honeybee** – Dr. Theodore Cherbuliez, MD, American Apitherapy Society
- 4:15 PM **African Honey Bee in Florida, An Update** - David A. Westervelt, Environmental Specialist, Tavares, FL
- 4:45 PM **Putting It All Together Panel Discussion** - Dr. Dewey Caron, Dr. Tom Webster, Dr. David Tarpy, and Dr. Mike Hood
- 6:00 PM **Adjourn**
- 7:00 PM **Banquet** - Advance Tickets Required
Keynote Speaker Dr. Tom Webster, Professor, University of Kentucky
- 9:00 PM **Adjourn for Evening**

Saturday, March 3, 2007

- 8:30 AM Announcements and Door Prizes
- 8:45 AM **The Small Hive Beetle, an Overview** - Dr. Dewey Caron
- 9:15 AM **Diet of the Honeybee** - Jennifer Keller
- 9:45 AM **BREAK** Visit Exhibitors
- 10:15 AM **Small Hive Beetle** - Dr. Mike Hood
- 10:45 AM **Question & Answer** period - All Presenters on Panel
- 11:30 AM **NC, SC Associations meet for Business Sessions**
- 12:00 Noon - **Lunch**
- 1:00 PM - **Controlling Pests Without Chemicals** – Dr. Tom Webster
- 2:00 PM - **Workshops** 45 minute concurrent sessions, rotating at 3:00 PM and 4:00 PM
Apitherapy – Dr. Theodore Cherbuliez, MD and Dr. Frederique Keller, American Apitherapy Society
Small Hive Beetle Traps – Dr. Mike Hood
MBP/Agent Training on the AHB – Dr. David Tarpy
Building Local Chapter Membership – Johnny McCracken and Mike Barbee
Boutique, Creams & Lotions – Marlene Thomas
Honey for Show – Virginia Webb
Russian Bees – Carl Webb
Beginners Short Course – David MacFawn
- 2 PM - 5 PM **In the Apiary with the Experts** – Dr. Dewey Caron, and Dr. Tom Webster
- 5:00 PM **Conference Ends - Drive Home Safely**

ADVANCE REGISTRATION FORM

NCSBA/SCBA SPRING MEETING---2007

MONROE, NC MARCH 2 & 3, 2007

Host, NCSBA Local Chapter, UNION COUNTY BEEKEEPERS

Please complete and send with your check, to: PAUL MADREN, REGISTRATION
(Make Check payable to NCSBA) 329 LAUREL STREET
MOUNT AIRY, NC 27030-2911
Phone: (336) 786-4848
EMAIL: plmadren@mindspring.com

[please print clearly]

NAME _____
(last) (first) (spouse) (Children)

Address: _____
(street) (city) (state) (zip)

Local Chapter: _____ Phone (_ _)- _____ email _____ @ _____

County of Residence in NC : _____

REGISTRATION FEE:

(Note: These are ADVANCED mail-in fees, WALK-IN fees at the Conference will be \$5.00 higher on Individual and Family registrations)

AMT. PAID

Individual Registration (NCSBA member) - \$20.00 = _____
Family Registration (NCSBA member) - \$25.00 = _____
NON-NCSBA member Registration - \$35.00* = _____
NON-NCSBA family Registration - \$40.00* = _____

BANQUET: Friday evening # _____ @ \$ 17.00 each = _____

TOTAL amount of Check = \$ _____

(SCBA and VSBA members are not required to join the NCSBA, may join if you would like to.)
(* this includes 2007 NCSBA membership dues)

DUES *(If have not paid your Annual dues for YEAR 2006, you are an inactive NCSBA member and you must pay your 2007 Annual dues to Register.)

- (If you are a non-NCSBA member, Annual dues are included with registration.
Note that South Carolina Beekeepers do not need to join the NCSBA to register)

* (If you have paid your 2007 dues at the Local Chapter, register as an active Member, you should soon get a membership card with the date paid)

Annual NCSBA Membership - \$15.00 = _____
Annual Commercial Membership - \$30.00 = _____

For your information: **** * * * * * .

****Hotel Reservations** are your responsibility- Hotels are: Best Western , Tel # (704) 283-4746
Holiday Inn Express Tel # (704) 289-1555

This area for Registration use only: _____ plm,12/4/06

Amount Paid: _____ How Paid: Cash _____ or Check _____
(check # and date)

Number for Banquet # _____ Received by: _____, Date _____

Clemson University
Department of Entomology, Soils, &
Plant Sciences
ATTN: Rachel Rowe, Editor
"News for SC Beekeepers"
116 Long Hall
Box 340315
Clemson, SC 29634-0315
Phone: 864-656-3111
Fax: 864-656-0274
e-mail: rowe@clermson.edu

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