This marks the 26th year of the partnership between Young Harris College and the University of Georgia Honey Program to provide one of the largest and most comprehensive beekeeping educational events in the southeastern United States. Due to last year’s successful event, and comments from attendees, we have decided to keep the extra day in order to fit everything in!

As always, our objective is to create an educational event that fits the needs of everyone, whether you’re an experienced beekeeper or you’re interested in getting your first hive. The Institute sponsors two additional and optional training opportunities – the Georgia Master Beekeeper Program and the Welsh Honey Judge certification Program. Details for these optional programs are included in this booklet.

The Institute proper, which takes place Thursday, Friday and Saturday, consists of lectures and workshops covering a vast range of beekeeping topics. Wednesday, May 10 is dedicated to training and examinations for the Welsh Honey Judge program as well as the three highest grades of the Master Beekeeper Program – Journeyman, Master, and Master Craftsman. Training and exams for the Certified level are incorporated into the normal activities on Thursday, Friday, and Saturday, and classes recommended for Certified candidates are highlighted in blue.

In 2015, our Institute’s footprint increased drastically by adding the new 121,000 square ft. Rollins Campus Center, located directly across the street from our long-time home, Maxwell Center. Classes will be held in both locations, so be sure to check the map in the back of this program for classroom locations.

One of the most rewarding opportunities at the Institute is the annual Honey Show. Along with honey, the Honey Show accepts entries in photography, art, candles, section comb honey, mead, and beekeeping gadgets. We urge students to participate in the Honey Show, even if you’ve never competed before. It costs nothing extra, and it’s a fun way to see how your honey compares to others’. You can find the Honey Show rules in this booklet and on our website.

Thanks for joining us as we celebrate 26 years!
THANKS FOR JOINING US!

On behalf of the speakers and staff, thank you all so much for joining us for the 26th University of Georgia and Young Harris College Beekeeping Institute! We look forward to seeing you again next year!
Lewis Bartlett
Hailing from Britain, Lewis is an infectious disease biologist and honeybee scientist. He is a PhD student at University of California Berkeley and working with Emory University, University of Georgia and University of Exeter (UK), to better understand how honey bee diseases might be evolving in response to varroa, migratory beekeeping operations and common beekeeping practices. Lewis uses mathematical models to make predictions about how bee diseases should behave which, with the aid of the UGA bee lab, are then matched against what we see in experimental hives.

Dr. Berry Brosi
Dr. Brosi is Winship Distinguished Associate Professor in the Department of Environmental Sciences, Emory University. The goal of his research program is to understand the causes and implications of bee declines, for both native bees as well as managed honey bees.

His work addresses topics such as: the effects of land-use change on bee communities, the impacts of bee species losses on plant pollination in diverse natural communities, the conservation and landscape genetics of bees, and understanding and managing disease threats in bees. His lab uses a range of scientific approaches including comparative and manipulative field studies, controlled laboratory experiments, mathematical modeling, population genetics, stable isotope studies, and GIS and remote sensing.

Dr. Debbie Delaney
Deborah Delaney is Associate Professor in the Department of Entomology and Wildlife Ecology at the University of Delaware where she mentors graduate and undergraduate students working on various aspects of pollinator health and productivity. She teaches Insects and Society and Apiculture and Pollination Ecology. She has over 20 years of experience working with pollinators, specifically honey bees, and maintains between 25-60 colonies in the teaching apiary at UD’s Newark farm. Her research program has four main focal areas: genetic identity and diversity of US honey bees, temporal stability of pollinator populations, and best management solutions for creating sustainable managed pollinator populations, and pollinator nutrition and forage mapping.

Dr. David Jenkins
Dr. David Jenkins studied Entomology and Plant Pathology at Clemson University and continued to study entomology at Montana State University and the University of Georgia. He worked for the University of Georgia as a research entomologist with a focus on pest management in peaches. He then worked for the USDA Agricultural Research Service in Mayaguez, Puerto Rico studying the pests and pollinators impacting tropical fruit crops. Now he works for the South Carolina Forestry Commission as the Forest Health Coordinator, working with landowners statewide to protect South Carolina’s forests.
Dr. Peter Neumann
Dr. Peter Neumann is Vinetum Professor at the Institute of Bee Health, University of Bern, Switzerland, and a world-renown expert on behavioral, evolutionary and molecular ecology of honey bees and their pathogens. Among his most recent accomplishments is serving as editor for the European COLOSS consortium “Bee Book” – a world-wide compilation of standard honey bee research methods.

Dr. Geoff Williams
Born and bred in Canada, Geoff experienced his first bee sting at the ripe age of 23. He has been hooked ever since. His graduate studies at Canada’s Dalhousie University improved our understanding of the fungal parasite Nosema ceranae, and his post-doc work at Switzerland’s University of Bern and Agroscope was the first to discern the potential damaging effects of neonicotinoids on honey bee reproduction.

Now as an Assistant Professor in the Department of Insect Pollination & Apiculture at Auburn University, Geoff represents the College of Agriculture’s first faculty member that specializes in bee health. In addition to typical research and teaching duties, Geoff is an enthusiastic member of the honey bee research consortium COLOSS (www.coloss.org), acting both as an Executive Committee member and Vice President. He is also an Editorial Board Member of Scientific Reports and an Adjunct Professor at Chiang Mai University, Thailand.

Michael Young
Michael lives in a Georgian Royal Village in Hillsborough, Northern Ireland. A Georgia Master Beekeeper and keeper of bees for over 30 years he is also a chef and works at the Belfast Hilton. In the year 2000, Michael Founded the Institute of Northern Ireland Beekeepers modeled on the Young Harris Beekeeping Institute after his first visit to Young Harris and the States in 1999.

A Senior Honey Judge and expert showman in exhibiting beekeeping products across the world, he has collected over 800 prize cards for his wares. He is skilled in many areas of apiculture including beeswax encaustic painting and mead making. A lover of nature, gardening and photography, he also has a passion for orchids and painting in oils and watercolors. In 2008 Michael was awarded the title of Member of the British Empire, MBE, for his services to apiculture and conservation. Michael was invited as a Beekeeper Advisor to the Obama White House. However, Michael’s most proud accomplishments are his 4 beautiful daughters, 5 granddaughters, and 1 grandson phew!!!
MEET OUR STAFF & INSTRUCTORS

Dr. Paul Arnold  
Institute Co-Founder, Professor  
Young Harris College

Kim Bailey  
Environmental Educator

Jennifer Berry  
UGA Bee Lab  
Apicultural Research Manager

Bob Binnie  
Blue Ridge Honey Company

Robert Brewer  
Institute Co-Founder  
Retired Towns County Extension

Mary Cahill-Roberts  
Georgia Master Beekeeper  
Pediatric Nurse Practitioner

Dr. Keith Delaplane  
Institute Co-Founder, Professor  
University of Georgia

Dr. Will Dix  
Emergency Physician  
ACEP Fellow

Keith Fielder  
Putnam County Extension  
WHJ Program Director

Lonnie Funderburg  
Two-Term President Alabama  
Beekeepers Association

Jack Garrison  
UGA Bee Lab Technician

Cindy Hodges  
President, Metro Atlanta  
Beekeepers  
Georgia Master Beekeeper

Slade Jarrett  
Jarrett Apiaries

Marybeth Kelley  
Senior Welsh Honey Judge

Will Montgomery  
Georgia Master Beekeeper

Julia Mahood  
Georgia Master Beekeeper, Urban  
Farmer & Graphic Artist
Bill Owens
Georgia Bee Removal
Georgia Master Craftsman

Jay Parsons
Master Beekeeper, Senior Welsh Honey Judge & Beekeeper

Avry Pribadi
UGA Bee Lab Staff & MS student

Ben Rouse
UGA Bee Lab Technician

Tom Watson
Georgia Journeyman Beekeeper & Active ABA Member

Nicholas Weaver
UGA Bee Lab Apiary Manager

Lance Wilson
Georgia Master Beekeeper
In 2017, the Georgia Master Beekeeper Program (GMBP) is offering qualifications at the Certified, Journeyman, Master, and Master Craftsman levels.

If you are interested in beginning this program, sign up for the “Certified exam” during the registration process and attend the conference lectures and exams on Thursday and Friday.

The certified practical exam will also be available Wednesday if you wish to leave more time for classes on Thursday and Friday.

If you are sitting for exams at the Journeyman level or higher, you need to attend the sessions on Wednesday, which are included in your exam fee.

Applicants to any level must mark their intention on the registration form and pay the appropriate fees. Payment of fee does not guarantee a passing grade. Aspirants to all grades must meet advance requirements detailed on our website (see the link to the left). Applicants at the Certified level must have had at least one year’s beekeeping experience prior to the Institute.

All exam questions are drawn from Institute lectures, lecture notes on the website, and other sources publicly available. It is understood that applicants will bring to the exam a degree of independent and prior knowledge. The official reference text for the program is the 2007 edition of *First Lessons in Beekeeping*, Dadant & Sons.

IMPORTANT NOTES

- Wednesday's emphasis is on lectures and exams for Journeyman, Master, Master Craftsman and Welsh Honey Judge candidates. The certified practical exam will be optionally available for those who want to save time on Thursday and Friday. Only those who have registered for one of these exams and have paid the appropriate fees may attend the lectures, audits and exams.

- Certified practical exams are offered by appointment Wednesday from 1-4 p.m., all day on Thursday and Friday morning. Candidates for the Certified Beekeeper certification must complete THREE parts to the exam: inside practical, outside practical (both by appointment), and a written exam on Friday from 1:15-2 p.m.
### Journeyman Lectures

**Maxwell 116**

- **8:00 a.m.** Basic toxicology  
  Geoff Williams
- **8:30 a.m.** Products of the hive and honey labeling  
  Nicholas Weaver
- **9:00 a.m.** Bees, near-bees and bee nest associates I  
  Keith Delaplane

### Master Lectures

**Maxwell 117**

- **8:00 a.m.** Valuating pollination  
  David Jenkins
- **8:30 a.m.** Varroa resistance mechanisms  
  Peter Neumann
- **9:00 a.m.** State of the art Varroa control  
  Jennifer Berry

### Journeymen Lectures

**Maxwell 116**

- **10:00 a.m.** Bees, near-bees and bee nest associates II  
  Keith Delaplane
- **10:30 a.m.** Disorders I  
  Jennifer Berry
- **11:00 a.m.** Disorders II  
  Jennifer Berry
- **11:30 a.m.** Highlights for the exam  
  Keith Delaplane

**Maxwell 117**

- **10:00 a.m.** Advanced pathology  
  Debbie Delaney
- **10:30 a.m.** Advanced toxicology  
  Geoff Williams
- **11:00 a.m.** Drivers of bee decline  
  Debbie Delaney
- **11:30 a.m.** Conservation ecology  
  David Jenkins

### Certified Practical Exams

**Maxwell 113, 114**

Available by appointment*  
Staff

### Journeyman Audits

**Maxwell 106**

- **Bill Owens**
- **Jennifer Berry**

### Welsh Honey Judge Examinations

**Rollins level 2**

- **Micahel Young**
- **Keith Fielder**
- **Robert Brewer**

### Journeymen and Master Written Examinations

**Maxwell 117**

- **Ben Rouse**

### Welsh Honey Judge Examination and Audits

**Rollins level 2**

- **Micahel Young**
- **Keith Fielder**
- **Robert Brewer**

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*color key:
- Journeyman activities
- Master activities
- Certified Practical Exams
- Journeyman & Master activities
- Welsh Honey Judge activities
CERTIFICATION LEVELS:
• Level I
• Level II (Senior)

WHERE TO FIND REQUIREMENTS:
www.ent.uga.edu/bees/young-harris/certifications.html

QUESTIONS/COMMENTS:
Keith Fielder at kfielder@uga.edu

The Welsh Bee Keepers Association (UK) partnered with the YHC-UGA Beekeeping Institute in the early 2000s to develop a unique North American version of the honey testing standards employed in the United Kingdom. Compared to American standards, the UK standards are strikingly more “sensory” than analytical. This was the first collaboration of its kind between the USA and the United Kingdom and has since expanded into a sister program with the University of Florida. One can become a certified Welsh Honey Judge (WHJ) in one year. It takes at least one additional year to achieve the rank of Senior WHJ, although candidates for both levels may proceed through the certification process at their own pace.

Please consult the full program description on our website (listed above). If you wish to sit for this training please indicate your intention on the registration form and include the appropriate fee. Questions may be addressed to program director Keith Fielder.
EXTRACTED HONEY
H1  Three jars Light Honey (see rules 4, 5 & 6)
H2  Three jars Medium Honey (see rules 4, 5 & 6)
H3  Three jars Dark Honey (see rules 4, 5 & 6)
H4  Three jars Chunk Honey (see rules 4, 5 & 7)
H5  Three Jars Creamed Honey (see rules 4, 5 & 8)
H6  Black jar (see rule 4 & 9)

COMB HONEY
H7  Three square sections of honey (see rule 11)

BEESWAX
H8  One piece, not patterned, at least 454g (1lb) weight and at least 25mm (1 inch) thick (see rule 12)
H9  Three matching plain Beeswax Candles, not patterned; all made by molding
H10 Three matching Beeswax Candles. All to be made by any method other than by molding
H11 Three matching Beeswax Candles; all made by molding
H12 Six 28g (1oz) Blocks, matching in all respects

CONFECTIONERY
H13 Six Small Honey Biscuits or Cookies – not in paper cases (see rule 14)

MEAD (see rule 13)
H14 Bottle of Sweet Mead
H15 Bottle of Dry Mead
H16 Metheglin or Melomel, etc. – Dry or Sweet (one bottle)

MISCELLANEOUS CLASSES
H17 Beekeeping Artistry – made by the exhibitor, relating to bees or beekeeping i.e. embroidery, honey pot, painting etc. (not a photograph) (see rule 17)
H18 Photograph of a beekeeping related subject (see rule 15)
H19 Beekeeping gadget (see rule 16)
1. All exhibits are to be staged between 8:00 a.m. - 11:45 a.m. Thursday. Judging commences at noon.

2. Staging of exhibits will be carried out exclusively by show stewards. Exhibitors are not allowed in the judging area until after the results are announced. Judges may only enter the judging area once judging has officially commenced.

3. Each individual will certify by a signed affidavit upon making an entry into the institute honey show that said entry was produced directly by the show entrant.

4. Do not label products in any way before arrival. Exhibitors must label every item with the Honey Show Identification Labels supplied. These labels must not be altered, and are to be fixed to honey jars approximately 10–15 mm (0.5”) above the bottom of the jar or mead bottle.

5. All honey and beeswax entries must have been produced by the exhibitor within the last 12 months. This restriction does not apply to entries in mead, photography, art and gadgets.

6. Extracted honey must be submitted in three standard one-pound queenline-type jars. Either plastic or glass is acceptable; jars with tamper-proof seals will be disqualified. All lids in entry must match.

7. Submit chunk honey in three standard one-pound chunk honey jars with wide mouths and straight sides. Insert only one piece of comb per jar.

8. Submit creamed honey in three standard one-pound chunk honey jars with wide mouths and straight sides.

9. Black jar entries must be submitted in a wide mouth 8 oz. Mason jar. The sole criterion in the black jar class is flavor. Black covers will be given out by the show secretaries upon submission.

10. Beeswax entries must be pure beeswax.

11. Cut comb must be shown in standard clear plastic containers with transparent snap-on lids. Two ID labels should be affixed in specific locations: one to the lid (in the bottom right-hand corner) and the other on the front (at the bottom right of the container).

12. Wax cakes should have two labels affixed in specific locations: one to the underside of the cake, and one to the top of a paper plate, which will be provided by show secretary upon submission.

13. Mead must be submitted in clear, colorless glass, punted bottles of approximately 750 ml capacity with rounded, not sloping, shoulders and without lettering of any kind. Bottles with shallow punts are acceptable. Only t-cork stoppers with plastic flanges are to be used. No alcohol may be added to metheglin or melomel, nor may alcohol or flavoring be added to mead. Additions such as acids, nutrients and tannin may be used. Metheglin is honey fermented with spices; Melomel is honey fermented with fruit or vegetable juice. Note: the bottles must bear a plain white adhesive label as supplied by the Entries Secretary which specifies the
All hive product entries must be a product of the exhibitors’ own bees. Artwork must be produced solely by the exhibitor. All entries will be tasted, burned or handled as applicable.

QUESTIONS/COMMENTS:
Nicholas Weaver at beekeeper14@gmail.com
**THURSDAY | MAY 11, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00-8:15 a.m.</td>
<td>Welcome and opening details</td>
<td>Keith Delaplane, Rollins Suber</td>
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<tr>
<td>8:15-9:00 a.m.</td>
<td>Regulation of worker labor in the honey bee colony</td>
<td>Peter Neumann, Rollins Suber</td>
</tr>
<tr>
<td>9:15-10:00 a.m.</td>
<td>Apis in North America</td>
<td>Debbie Delaney, Rollins Suber</td>
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<td></td>
<td>Parasites</td>
<td>Jennifer Berry, Rollins Hatcher</td>
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<td></td>
<td>Getting started: the principles</td>
<td>Lonnie Funderburg, Maxwell 106</td>
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<td></td>
<td>Pathogens</td>
<td>Paul Arnold, Maxwell 117</td>
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<td></td>
<td>Winter and spring management</td>
<td>Tom Watson, Behind Maxwell</td>
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<td></td>
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<td>Michael Young, Maxwell 109</td>
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<td>Promoting native bees in the Southeast</td>
<td>David Jenkins, Maxwell 116</td>
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<tr>
<td>10:15-11:00 a.m.</td>
<td>Honey plants of the Southeast</td>
<td>Keith Fielder, Rollins Suber</td>
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<td></td>
<td>Parasites</td>
<td>Lance Wilson, Rollins Hatcher</td>
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<td></td>
<td>Getting started: the principles</td>
<td>Will Dix, Maxwell 106</td>
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<td>Pathogens</td>
<td>Cindy Hodges, Maxwell 117</td>
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<td>Bill Owens, Behind Maxwell</td>
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<tr>
<td>11:15 a.m.-noon</td>
<td>Honey plants of the Southeast</td>
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<td></td>
<td>Creating Monarch habitats (bees love it too!)</td>
<td>Kim Bailey, Maxwell 107</td>
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<td></td>
<td>Honey bee nutrition</td>
<td>Mary Cahill-Roberts, Maxwell 116</td>
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<tr>
<td>noon-1 p.m.</td>
<td>Lunch for General Registrants</td>
<td>Rollins Cafeteria</td>
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<td>Invitational Master Luncheon</td>
<td>Rollins third floor student loft</td>
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<td></td>
<td>Advance ticket sales will be available in the Rollins lobby.</td>
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<tr>
<td></td>
<td>Invitational Master Luncheon</td>
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<td>Open to sitting Master and Master Craftsman beekeepers only.</td>
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<td>Pre-registration required.</td>
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<td></td>
<td>Q&amp;A time with speakers</td>
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<td></td>
<td>Brosi, Delaney, Delaplane, Jenkins, Neumann, Williams, Young</td>
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<td></td>
<td>Rollins third floor student loft</td>
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**IMPORTANT NOTES**

- Registration is open Thursday and Friday from 7 a.m. until 6 p.m. and will be closed during lunch.
- Course descriptions can be found on pages 17-19.
- Courses highlighted in BLUE are recommended for beginning beekeepers and/or Certified Exam registrants. Please check your appointment time for practical exams.
- Honey show entries are due by 11:45 a.m. See pages 12-13 for more information.
- Please do not ask Institute instructors for copies of their digital presentations. There are many copyright and intellectual property difficulties.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>1:15-2:00 p.m.</td>
<td>What epidemiology can teach us about bee health</td>
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<td>Biology of individuals</td>
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<td>Biology of the colony</td>
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<td></td>
<td>Getting started: the real thing</td>
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<td></td>
<td>Virus and Varroa interactions in Georgia</td>
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<td></td>
<td>Creating Monarch habitats (bees love it too!)</td>
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<td>Honey bee nutrition</td>
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<td>Maxwell 113,114</td>
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<td>Maxwell 117</td>
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<td>Maxwell 106</td>
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<td>Maxwell 107</td>
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<td></td>
<td>Maxwell 116</td>
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<tr>
<td>2:15-3:00 p.m.</td>
<td>Apis in North America</td>
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<td></td>
<td>Biology of individuals</td>
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<td>Getting started: the real thing</td>
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<tr>
<td></td>
<td>Keeping bees alive</td>
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<td>Beyond honey: hive products for fun and profit</td>
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<td>Bee removal from structures</td>
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<td>Maxwell 107</td>
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<td>Maxwell 109</td>
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<td>Maxwell 106</td>
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<tr>
<td>3:15-4 p.m.</td>
<td>What epidemiology can teach us about bee health</td>
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<td>Biology of individuals</td>
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<td>Biology of the colony</td>
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<td>Maxwell 109</td>
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<td></td>
<td>Maxwell 106</td>
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<tr>
<td>4:15 p.m.</td>
<td>Honey Show Awards</td>
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<td>with ice cream social to immediately follow</td>
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<td></td>
<td>Rollins Suber</td>
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**GROUP ICE CREAM SOCIAL**

**LOCATION**
Rollins Suber
Immediately following the Honey Show Awards

**Color Key**
- Open sessions
- Certified Practical Exams
- Recommended for beginning beekeepers and/or Certified Exam registrants.

- Master activities
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
<th>Location(s)</th>
</tr>
</thead>
<tbody>
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<td>Welcome and opening details</td>
<td>Keith Delaplane</td>
<td>Rollins Suber</td>
</tr>
<tr>
<td>8:15–9:00 a.m.</td>
<td>Neonics, queens and drones</td>
<td>Geoff Williams</td>
<td>Rollins Suber</td>
</tr>
<tr>
<td>9:15–10:00 a.m.</td>
<td>Reproductive conflicts and what it means for beekeepers</td>
<td>Peter Neumann</td>
<td>Rollins Suber</td>
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<tr>
<td></td>
<td>All about oxalic</td>
<td>Jennifer Berry</td>
<td>Rollins Hatcher</td>
</tr>
<tr>
<td></td>
<td>Building hive equipment</td>
<td>Lonnie Funderburg</td>
<td>Maxwell 108</td>
</tr>
<tr>
<td></td>
<td>Summer and fall management</td>
<td>Nicholas Weaver</td>
<td>Behind Maxwell</td>
</tr>
<tr>
<td></td>
<td>Basic honey processing</td>
<td>Bill Owens</td>
<td>Maxwell 117</td>
</tr>
<tr>
<td></td>
<td>Ten mistakes new beekeepers make</td>
<td>Keith Fielder</td>
<td>Maxwell 116</td>
</tr>
<tr>
<td></td>
<td>Pollen analysis of honey</td>
<td>Paul Arnold</td>
<td>Maxwell 109</td>
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<tr>
<td></td>
<td>Varroa management through IPM</td>
<td>Lance Wilson</td>
<td>Maxwell 106</td>
</tr>
<tr>
<td>10:15–11:00 a.m.</td>
<td>The plight of bumble bees in North America</td>
<td>Berry Brosi</td>
<td>Rollins Suber</td>
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<tr>
<td></td>
<td>Preparing honey for the silver cup</td>
<td>Michael Young</td>
<td>Rollins Hatcher</td>
</tr>
<tr>
<td></td>
<td>Building hive equipment</td>
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<td>Behind Maxwell</td>
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<td></td>
<td>Basic honey processing</td>
<td>Bill Owens</td>
<td>Maxwell 117</td>
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<td></td>
<td>Ten mistakes new beekeepers make</td>
<td>Keith Fielder</td>
<td>Maxwell 116</td>
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<td></td>
<td>Pollen analysis of honey</td>
<td>Paul Arnold</td>
<td>Maxwell 109</td>
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<td></td>
<td>Oxalic acid demo</td>
<td>Jennifer Berry</td>
<td>Behind Maxwell</td>
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<td>Will Montgomery</td>
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<td>Behind Maxwell</td>
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<td></td>
<td>Varroa management through IPM</td>
<td>Lance Wilson</td>
<td>Maxwell 106</td>
</tr>
<tr>
<td>11:15 a.m.–noon</td>
<td>Colony collapse disorder in the tropics</td>
<td>David Jenkins</td>
<td>Rollins Suber</td>
</tr>
<tr>
<td></td>
<td>All about oxalic</td>
<td>Jennifer Berry</td>
<td>Rollins Hatcher</td>
</tr>
<tr>
<td></td>
<td>Building hive equipment</td>
<td>Lonnie Funderburg</td>
<td>Maxwell 108</td>
</tr>
<tr>
<td></td>
<td>Summer and fall management</td>
<td>Nicholas Weaver</td>
<td>Behind Maxwell</td>
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<tr>
<td></td>
<td>Basic honey processing</td>
<td>Bill Owens</td>
<td>Maxwell 117</td>
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<td></td>
<td>Varroa management through IPM</td>
<td>Lance Wilson</td>
<td>Maxwell 106</td>
</tr>
<tr>
<td>noon–12:15 p.m.</td>
<td>Group photo in front of Rollins</td>
<td></td>
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</tr>
<tr>
<td>12:15–1:15 p.m.</td>
<td>Lunch</td>
<td></td>
<td>Rollins Cafeteria</td>
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</table>

**Color Key**

- Open sessions
- Certified Practical Exams
- Recommended for beginning beekeepers and/or Certified Exam registrants.
## GROUP DINNER INFORMATION

### LOCATION
Hiawassee River Retreat  
15 Cabin Drive Hiawassee, GA 30546  
(706) 896–7400  
www.hiawasseecabins.com

### DRIVING DIRECTIONS FROM YOUNG HARRIS CAMPUS:
- Turn RIGHT onto GA–2 E/US–76 E/Main Street.  
- Drive straight for 10.8 miles  
- Turn RIGHT onto GA–75 S  
- Drive straight for 1.3 miles  
- Turn RIGHT onto Cabin Drive  
- Immediately turn left and follow signs. Park in the grass behind the pavilion.

If you are in need of additional directions or assistance, please stop by the registration desk before 5:30 p.m.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 a.m.-noon</td>
<td>Registration open</td>
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<tr>
<td></td>
<td>Rollins Lobby</td>
</tr>
<tr>
<td>8:00-8:15 a.m.</td>
<td>Welcome and Opening Details</td>
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<tr>
<td></td>
<td>Keith Delaplane Rollins Suber</td>
</tr>
<tr>
<td>8:15-9:00 a.m.</td>
<td>Take time to smell the roses</td>
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<tr>
<td></td>
<td>Debbie Delaney Rollins Suber</td>
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<tr>
<td>9:15-10:00 a.m.</td>
<td>Sustainable beekeeping, European style</td>
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<tr>
<td></td>
<td>Peter Neumann Rollins Suber</td>
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<tr>
<td>10:15-11:00 a.m.</td>
<td>Humans, forests and pollinators</td>
</tr>
<tr>
<td></td>
<td>David Jenkins Rollins Suber</td>
</tr>
<tr>
<td>11:15 a.m.-noon</td>
<td>Risk of zika abatement sprays on beekeeping in the Southeast</td>
</tr>
<tr>
<td></td>
<td>Lewis Bartlett Rollins Suber</td>
</tr>
<tr>
<td>noon</td>
<td>Adjourn, safe travels, and see you in 2018 for our 27th year!</td>
</tr>
</tbody>
</table>
COURSES ARE LISTED IN ALPHABETICAL ORDER.

ALL ABOUT OXALIC
Oxalic acid has been used for years in Europe as a Varroa control. Come learn about its efficacy and risks.

APIARY SAFETY PRACTICES
It’s 100 degrees, you’re miles from home, alone, and the bees are mad. What could possibly go wrong?

APIS IN NORTH AMERICA
A description of the importation history and current distribution of the genus Apis in North America.

BASIC HONEY PROCESSING
A live demonstration on processing honey from comb to bottle.

BEE REMOVAL FROM STRUCTURES
Removing bees from hollow walls requires a special skill set, but the rewards can be good. See if bee removal is for you.

BEEKEEPING GADGETS ANYBODY CAN MAKE AND USE
Beekeepers are an innovative lot. Check out these labor-saving gizmos you can make and quickly put to use.

BEYOND HONEY: HIVE PRODUCTS FOR FUN AND PROFIT
“Beeswax, royal jelly, propolis - the list is long, and these hive products can be sources of revenue.

BIOLOGY OF INDIVIDUALS
The life history of the three types of bee that occur in the nest

BIOLOGY OF THE COLONY
The life history of a honey bee colony over 12 months.

BUILDING HIVE EQUIPMENT
A perennial favorite workshop on basic hive assembly.

CELL-PUNCH METHOD FOR QUEEN REARING
Another perennial favorite - how to rear queens without grafting.

CERTIFIED NATURALLY GROWN (CNG)
What this registration could mean for your bottom line.

COLONY COLLAPSE DISORDER IN THE TROPICS
CCD is not just for the U.S. See what it looks like in lower latitudes.

COOKING WITH MICHAEL
Back by popular demand, professional chef Michael Young tells his secrets in the Young Harris cafeteria kitchen.

CREATING MONARCH HABITAT
Things you can do to improve the plight of butterflies (and bees) on your property.

CREATING NESTING SITES FOR NATIVE BEES
Wild bees need more than gardens. Simple nest sites you can provide for pollinators in your backyard.

EMERGENT PROPERTIES IN THE HONEY BEE COLONY
A nest of thousands is a fertile field for emergent order - ranging from dance language to hexagonal combs.

ENCAUSTIC PAINTING
An overview and demonstration of the ancient art form of painting with pigmented beeswax.

GETTING STARTED: THE PRINCIPLES
The necessary theoretic background to understanding beekeeping.

GETTING STARTED: THE REAL THING
A live demonstration on how to get a bee colony started in your backyard.

HONEY BEE NUTRITION
Hint: it’s more than sugar syrup.

Continued on next page
HONEY PLANTS OF THE SOUTHEAST
An overview of the most important honey plants of our region.

HOW TO BE A HONEY SHOW SECRETARY
The secret behind a successful honey show is a competent and prepared secretary.

HOW TO PROPAGATE POLLINATOR FRIENDLY FLOWERS FROM SEED
Taking pollinator gardens to the next generation.

HUMANS, FORESTS AND POLLINATORS
The unexpected linkages between humans, flora, and fauna – especially the bees.

KEEPING BEES ALIVE
Getting a hive started is one thing; keeping it alive and healthy is another.

MEAD MAKING
This is what Beowulf drank. Come learn how to make this most ancient of alcoholic libations.

NEONICS, QUEENS AND DRONES
The systemic neonicotinoid insecticides pose a variety of risks to honey bees and other pollinators.

OXALIC ACID DEMONSTRATION
A live outdoor demo on use of oxalic acid for Varroa control.

PACKAGING AND MARKETING YOUR HIVE PRODUCTS
After you extract it, now what? How to make a professional and appealing shelf-ready product.

PARASITES
A primer on the most important macroscopic pests of bees, especially Varroa mite and their treatment.

PATHOGENS
An overview of the chief disease agents of honey bees and their treatments.

PIECES AND PARTS OF A BEE HIVE
Advice from a commercial honey producer on what you need, and what you don’t, equipment-wise.

POLLEN ANALYSIS OF HONEY
Want to know what flowers your bees have been visiting? Bring a sample of your honey and check it out in this live lab demo.

PREPARING HONEY FOR THE SILVER CUP
Words from a master British honey judge how to compete at the very highest levels.

PROMOTING NATIVE BEES IN THE SOUTHEAST
Steps any property owner can take to improve wild bee habitat.

PROPOLIS: APPLYING IT TO BEE HEALTH
Long derided by beekeepers, propolis is enjoying a comeback for its health benefits to bees.

REGULATION OF WORKER LABOR IN THE HONEY BEE COLONY
Workers progress through a series of tasks as they age; how can beekeepers partner with this process?
REPRODUCTIVE CONFLICTS AND WHAT IT MEANS FOR BEEKEEPERS
It may not be as tranquil as it seems: What does it mean when workers try to reproduce?

RISK OF ZIKA ABATEMENT SPRAYS ON BEEKEEPING IN THE SOUTHEAST
Benefit: Risk analysis can be complicated and compromising. How to lower zika risk without damaging our pollinators.

SMALL SCALE COMMERCIAL BEEKEEPING
Small scale? Commercial? You have to start where you are. Let this trail-blazer tell you his secrets.

SUMMER AND FALL MANAGEMENT
Summer can be rich in nectar, or a dearth. Come learn what to watch out for and how to respond.

SUSTAINABLE BEEKEEPING, EUROPEAN STYLE
The U.S. does not have a monopoly on good hive management. Let’s here how our colleagues in Europe keep hives healthy.

TAKE TIME TO SMELL THE ROSES
A rhapsody on the joys of beekeeping - with some insights that will make you a better beekeeper.

TEN MISTAKES NEW BEEKEEPERS MAKE
Save yourself needless headache and disappointment and learn what simple mistakes to avoid.

THE PLIGHT OF THE BUMBLE BEE IN NORTH AMERICA
These charismatic native bees have their own set of health risks.

THINGS YOU NEED TO KNOW BEFORE PROCESSING HONEY
Words of advice from a professional honey producer and packer.

TOP-BAR HIVES
A simple hive design ideal for developing countries and gaining popularity in the US too

VARROA MANAGEMENT THROUGH IPM
Integrated Pest Management uses many means to control mites, not just chemicals.

VIRUS AND VARROA INTERACTIONS IN GEORGIA
Mites are just the beginning of the problem.

WHAT EPIDEMIOLOGY CAN TEACH US ABOUT BEE HEALTH
The science of disease spread and virulence can teach us much about colony health at a landscape scale.

WINTER AND SPRING MANAGEMENT
How to keep colonies strong and primed in anticipation of honey production.
Please note that there should be an electronic directional sign in the downstairs lobby of the Rollins Center to help you find the classrooms.