



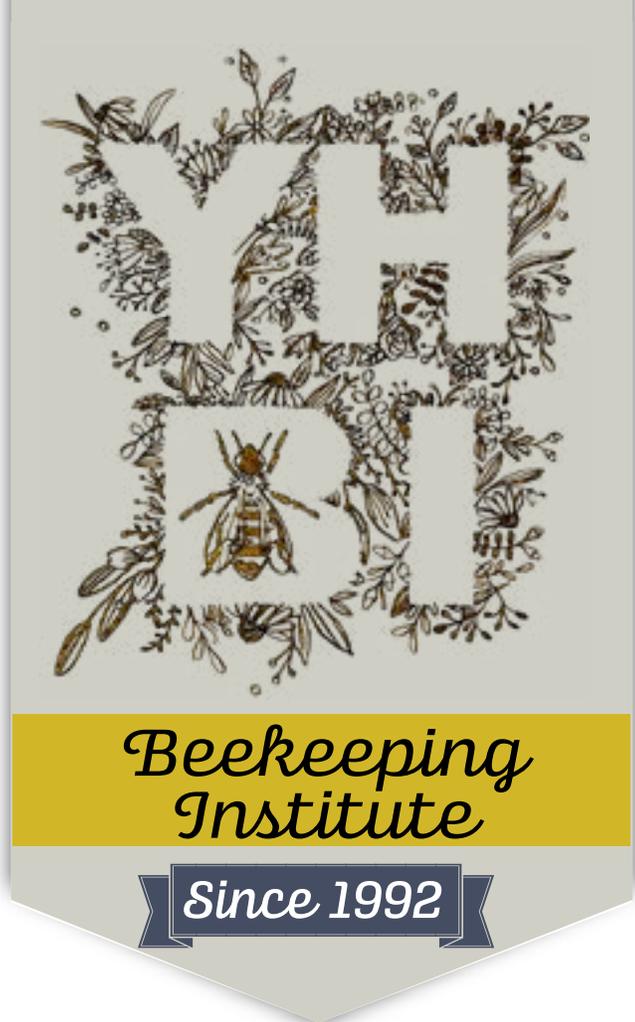
Young Harris College / University of Georgia

# Beekeeping Institute

2021



May 13-14, 2020 ♦ Online



## **This marks the 29th year of the Young Harris College/University of Georgia Beekeeping Institute.**

It's our goal to bring the best beekeeping educators and scientists in the English-speaking world within reach of our beekeeper clients in Georgia and beyond. Each year we strive to present an educational event that meets the needs of everyone, whether an experienced beekeeper or new beginner. The result is quite simply one of the best beekeeping educational events in North America.

Unfortunately, due to the virtual format, we will not be able to offer the Georgia Master Beekeeper and Welsh Honey Judge programs, or the annual Honey Show. However, both the [Metro Atlanta Beekeepers Association](#) and the [Tri County Beekeepers Association](#) will be offering the Certified level beekeeper written and practical exams. Tri County Beekeepers will hold their testing May 23rd, 2021 and Metro Beekeepers Association will hold their testing April 24th, 2021. Please contact them for more details and to sign up, since spots are limited.

The UGA Bee Lab will offer both the Journeyman and Master level testing at the [Georgia Beekeepers Association](#) Fall Meeting, September 23-25th. Details will be on the [UGA Bee Lab website](#).

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## GUEST SPEAKERS

### **Professor Robin Crewe**

For a period of ten years, (1986-1996) while Director of the Communication Biology Research Group of the University of Witwatersrand, Robin's work was focused on the study of honey bee chemical communication systems. He established the Social Insects Research Group at the University of Pretoria which continues with studies of social insects under the direction of Professor Christian Pirk. Professor Crewe has worked with honey bee research groups in France and Germany and has had a longstanding collaboration with Professor Robin Moritz of the University of Halle-Wittenberg in Germany.

Robin has published more than 140 articles in refereed journals, 15 articles in journals for beekeepers, 3 book chapters, and one book. He has made numerous contributions at scientific conferences. His current research is focused on chemical communication and social organization in honeybees and ants, particularly with respect to worker reproductive regulation.

Robin is a Fellow of the Royal Entomological Society of London, a Fellow of the Royal Society of South Africa, a Fellow of the World Academy of Sciences, a founding member of the Academy of Science of South Africa (ASSAf), a fellow of the African Academy of Science, and a Foreign Associate of Hassan II Academy of Science and Technology in Morocco. Professor Crewe was awarded the Gold Medal of the Zoological Society of South Africa and is an honorary life member of the Entomological Society of Southern Africa. The French Government granted him the Ordre National du Mérite with the rank of Chevalier in 2006. He was awarded the prestigious Harry Oppenheimer Fellowship for 2012 and the ASSAf Gold Medal for meritorious service in 2013. He is currently a Senior Research Fellow in the Centre for the Advancement of Scholarship at the University of Pretoria.



### **Dr. Kirsten Traynor**

Kirsten's interest in bees came quite by accident when a local beekeeper put colonies on her property. She loved the flavor of fresh honey but even more she enjoyed having the bees nearby. Then one night, the beekeeper quietly and without notice, removed the colonies and hence no more bees. But, but, but, this



couldn't happen because she was hooked. Kirsten decided to take matters in to her own hands this time and attended a beekeeping short course. While there, she won the raffle prize, a hive body. This was only the beginning, next she ordered bees and as with



most beekeepers, one hive becomes two, two becomes four, four becomes 40 and your life is completely immersed in the world of honey bees.

Kirsten wanted to combine her love of travel and her fascination with bees, so she decided to apply for the fellowship. She received the prestigious German Chancellor Scholarship from the Humboldt Foundation in 2006-2007, annually awarded to ten American leaders in their field. She drove over 50,000 miles throughout Western Europe to study the differences between European and American beekeeping, reporting her findings through 50+ published articles in national and international magazines. At the same time, she interviewed scientists and medical doctors, gathering information for her book: *Two Million Blossoms: Discovering the Medicinal Benefits of Honey*.

Fascinated with the social complexity of a honey bee colony, Kirsten earned her PhD in biology from Arizona State University. While a grad student, she spent almost a year in Avignon, France in the lab of Dr. Yves Le Conte as a Fulbright Fellow. She investigated how pesticides impact honey bee health as a post doc at the University of Maryland in the lab of Dr. vanEngelsdorp. From 2015-2017 she edited *Bee World*, published by the International Bee Research Association. Next, she edited *American Bee Journal*, Dadant's monthly magazine that has been published since 1861. In 2018-2019 she took on a fellowship at the Wissenschaftskolleg, in Berlin, Germany.

In 2020 Kirsten was a research associate at Arizona State University in the Global Biosocial Complexity Initiative. Her studies included honey bee communication, health and nutrition. While there she launched a new quarterly magazine *2 Million Blossoms*, which is all about protecting our pollinators. Recently, Kirsten has moved to Germany and is now the Director of the Institute of Bee Research Celle.

## Jerry Hayes

Since the beginning of time, or thereabouts, Jerry has immersed himself in the world of bees. Once he heard about this cool hobby called "beekeeping" he couldn't get enough. So much so, he decided to leave his job, take his wife and young child, and make the logical decision to go back to school. He received his MS degree under the direction of Dr. Jim Tew and hasn't looked back. He worked for a while for USDA identifying Africanized honey bees, but made his career move into the bee world when he took a job as a branch manager for Dadant. His job eventually morphed into more product development and testing which he enjoyed. While at Dadant's he started the Q&A column in *American Bee Journal* called "The Classroom." Jerry answered beekeeper's questions for 35 years, just retiring from the assignment in 2019.



Missing the South, he shifted careers and became Chief Apiary Inspector for the Florida Department of Agriculture and Consumer Services. During those years, he was introduced to RNAi which was an emerging new technology offering hope for controlling varroa. After nine years with the Florida Department of Ag, Monsanto came a calling and offered Jerry a position which he accepted. He took the job because he truly believed he could not only tear down barriers between the beekeeping industry and Monsanto but also help the bees. With the weight of Monsanto backing RNAi, there was a chance it could become reality. Unfortunately, delivering RNAi proved intractably difficult, and the project was abandoned. That's when he decided to move on and went to work for Vita Bee Health until a completely different offer came his way.

Kim Flottum, previous editor of *Bee Culture* magazine, had approached Jerry a few years ago about taking over as editor. He considered the position but figured there were way too many folks more qualified that would want the job. But when it came down to it, he was the one most qualified. Jerry has been at the helm as editor for over a year now, and so far, is loving his job.

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## STAFF & INSTRUCTORS



Dr. Paul Arnold is Professor of Biology at Young Harris College. He is co-founder and host of the Young Harris Institute.



Dr. Lewis J. Bartlett is an infectious disease biologist, entomologist, and evolutionary ecologist at the University of Georgia's Center for the Ecology of Infectious Diseases.



Jennifer Berry is Apicultural Research Coordinator and Apiary Manager at the University of Georgia.



Bob Binnie is owner/operator of Blue Ridge Honey Company.



Mary Cahill-Roberts is a pediatric nurse practitioner and Georgia Master Beekeeper.



Dr. Keith Delaplane is Professor of Entomology at the University of Georgia, Director of the UGA Honey Bee program, and co-founder of the Young Harris Institute.





Dr. Will Dix is a practicing physician in Athens, GA, a Fellow of the American College of Emergency Physicians, and a Georgia Master Beekeeper.



Keith Fielder is Putnam County Extension Director with the University of Georgia Cooperative Extension Service, life-long beekeeper, and widely recognized authority on bee management.



Jack Garrison is a Research Technician at the UGA Honey Bee Lab.



Jimmy Gatt is a Journeyman beekeeper and board member of Metro Atlanta Beekeepers Association. He partners with Trees Atlanta to promote summer-blooming, nectar-bearing trees.



Becky Griffin is UGA's Community and School Garden Coordinator. A passionate advocate for native bees, since 2018 she has been a part of the UGA Trees for Bees team. Becky is coordinator of the annual Great Georgia Pollinator Census.



Cindy Hodges is a Georgia Master Craftsman Beekeeper who has been active in the beekeeping community for over 16 years.



Dan Long is a Georgia Master Beekeeper, owner/operator of Brushwood Nurseries and Tallassee Highlands Apiary and President of the Eastern Piedmont Beekeepers Association.



Julia Mahood is a Georgia Master Beekeeper and creator of the citizen science project [mapmydca.com](http://mapmydca.com)



Amy Weeks is a queen breeder and producer from Louisiana and Georgia Master Craftsman Beekeeper.

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## CLASS DESCRIPTIONS

### **2 Million Blossoms: The beauty of our diverse pollinators**

Introducing a new magazine for pollinators and the people who love them.

### **Apitherapy**

An overview on the health benefits, biology, and application of bee hive products as an aid to human health and wound recovery

### **Bee breeding: problems and promises of Darwinian beekeeping**

Insights from an evolutionary biologist on the risks and rewards of trying to shape selection in our bees. When have we successfully changed our bee breeding before, and at what cost? What price might we pay for success in changing modern bee breeds again?"

### **Confirmation bias: the beekeeper's echo chamber**

It's a proven fact: we all prefer news sources that confirm our pre-existing opinions. Drawing from his decades of experience, Jerry Hayes talks about the pitfalls of this bias for beekeepers and bees.

### **Creating an industry, the Guyana way**

Georgia Master Craftsman Amy Weeks has been a force in the development of Guyana's nascent beekeeping industry. Come hear how to start an industry minus the resources western beekeepers take for granted.

### **Crowding and caravans: is industrial beekeeping bad for bees?**

Trucking bees thousands of miles and clumping them into holding yards of tens of thousands of hives can't be good for bee health, right? Experience an evidence-based analysis of this common practice.

### **Dark side of the feminine monarchy: individual behavior in honey bees**

In his classic 1609 text, *The Feminine Monarchie*, or *The Historie of Bees*, Charles Butler perpetuated the idea that the bee colony is an ideal model of hierarchical organization with the queen at the top dictating the labors of her workers below. This lecture will update Butler's interpretation with a distinctly 21st century understanding of colony organization.

### **Different races of honey bees**

The western honey bee *Apis mellifera* is divided into over 20 identifiable races, but American beekeepers are typically familiar with only a few. This overview will give students a taste of the amazing diversity of honey bees used by beekeepers in other parts of the world.

### **Fight the mite with a Varroa management strategy**

A digest of the latest's evidence based recommendations for keeping your bees healthy from varroa

### **Fossils, honey bee biodiversity and sustainable food production**

From the Dark Continent, ancestral home of *Apis mellifera*, Professor Crewe will enlighten us on the ancient history of honey bees and what that history teaches us about sustainable life on this planet in the 21st century.

### **Four seasons forage with forbs and exotics**

A tenet of bee conservation is installing plants that bloom year-round. This workshop will guide students in choosing plant assemblies that provide optimum nutrition for pollinators at all stages of their life cycle.



### **Honey bee nutrition**

And you thought it was just pollen and nectar? Time to hear the rest of the story about bee nutrition.

### **How many types of hives are there?**

The title says it all.

### **Queen rearing**

A Georgia Master Craftsman and commercial queen producer will teach the fundamentals of rearing queens.

### **Results from the great Georgia pollinator census**

In 2019, Georgians across the state joined together in a citizen science initiative documenting our pollinator populations. This class will discuss the results of the first Great Georgia Pollinator Census and tell how you can get involved in 2020.

### **The *capensis* calamity: The implications for apiculture**

The honey bee race *Apis mellifera capensis* has emerged as a social parasite of commercial honey bees and a serious pest of beekeeping in South Africa. Professor Crewe will describe this potential threat to North American beekeeping and offer advice for preventing its importation.

### **The game of drones**

Maligned as shiftless gadabouts, these guys actually have a well-hidden repertoire of interesting behaviors. You won't feel the same about drones after you take this class.



### **Tips for preparing show quality beeswax**

Few agricultural products can rival honey and beeswax for their beauty and aesthetically pleasing properties. This workshop will show you how to prepare prize-winning beeswax for show or sale.

### **Viruses, *Varroa* and virulence: What makes a bee parasite deadly**

Science has made it clear that the *Varroa* problem is a synergistic property of mites and the viruses they vector. Why is this combination so deadly? What can beekeepers do about it?

### **Want to keep your bees alive? Then do something!**

Among the major causes of honey bee decline, many of them are directly within a beekeeper's control. This workshop will showcase these "easily preventable" colony deaths and help you improve your colony's health and productivity.

### **What's in my pollen? The pesticides we find in bee bread.**

Summary description of the types and diversity of environmental toxins in your bee's pollen

### **Why beekeepers need licentious queens**

Queens that mate with many males will have colonies that are generally stronger and healthier. This lecture showcases research at UGA that delves deeply into the question why genetic variation improves colony performance.

### **Why is *Nosema* no longer *Nosema*?**

If it's true that science never stands still, the same holds true for scientific names. This class will bring students up to date on a new name for an old pest and what it means for honey bee health.

### **Why you want to rotate old comb**

Research has shown that colonies housed on old comb perform more poorly than colonies on new comb. This commercial beekeeper will explain how he applies this scientific principle to his multi-thousand colony operation.

# THURSDAY, MAY 13, 2021

9:00-9:15	<b>Welcome and Introduction</b> by Dr. Keith Delaplane
9:15- 10:00	<b>Plenary lecture:</b> The <i>Capensis</i> calamity: the implications for apiculture, Dr. Robin Crewe
10:00-10:15	<b>Live Q&amp;A</b> with Robin
10:15-10:20	<b>Break</b>
10:20-11:05	<b>Breakout Lectures</b> <ol style="list-style-type: none"><li>1. The dark side of the Feminine Monarchie: individual behavior in honey bees, Dr. Robin Crewe</li><li>2. The game of drones, Julia Mahood</li><li>3. Four seasons forage with forbs and exotics, Jimmy Gatt</li></ol>
11:05-11:20	<b>Live Q&amp;A</b> with Robin, Julia and Jimmy
11:20-11:30	<b>Break</b>
11:30-12:15	<b>Plenary lecture:</b> Fight the mite with a varroa management strategy, Dr. Kirsten Traynor
12:15 -12:30	<b>Live Q&amp;A</b> with Kirsten
12:30-1:15	<b>Lunch</b>
1:15-2:00	<b>Breakout Lectures</b> <ol style="list-style-type: none"><li>1. Why beekeepers need licentious queens, Dr. Keith Delaplane</li><li>2. Different races of honey bees, Cindy Hodges</li><li>3. 2 Million Blossoms: The beauty of our diverse pollinators, Dr. Kirsten Traynor</li></ol>
2:00-2:15	<b>Live Q&amp;A</b> with Keith, Cindy, and Kirsten
2:15-2:25	<b>Break</b>
2:25-3:10	<b>Breakout lectures</b> <ol style="list-style-type: none"><li>1. Queen rearing, Amy Weeks</li><li>2. How many different hives are there? Dan Long</li><li>3. Viruses, <i>Varroa</i>, and virulence: What makes bee parasites deadly, Dr. Lewis J. Bartlett</li></ol>
3:10-3:25	<b>Live Q&amp;A</b> with Amy, Dan and Lewis
3:25-4:10	<b>Plenary Lecture:</b> Confirmation Bias: how beekeeping echo chamber, Jerry Hayes
4:10-4:25	<b>Live Q&amp;A</b> with Jerry
4:25	<b>Thursday wrap-up</b>



# FRIDAY, MAY 14, 2021

9:00-9:15	<b>Welcome and Introduction</b> by Dr. Keith Delaplane
9:15- 10:00	<b>Plenary lecture:</b> Fossils, honey bee biodiversity and sustainable food production, Dr. Robin Crewe
10:00-10:15	<b>Live Q&amp;A</b> with Robin
10:15-10:20	<b>Break</b>
10:20- 1:05	<b>Breakout Lectures</b> <ol style="list-style-type: none"><li>1. The importance of nutrition, Jerry Hayes</li><li>2. Apitherapy, Mary Cahill-Roberts</li><li>3. Want to keep your bees alive? Then do something! Keith Fielder</li></ol>
11:05-11:20	<b>Live Q&amp;A</b> with Jerry, Mary, and Keith
11:20-11:30	<b>Break</b>
11:30-12:15	<b>Plenary lecture:</b> What's in my pollen? The pesticides we find in bee bread, Dr. Kirsten Traynor
12:15 -12:30	<b>Live Q&amp;A</b> with Kirsten
12:30-1:15	<b>Lunch</b>
1:15-2:00	<b>Breakout Lectures</b> <ol style="list-style-type: none"><li>1. Crowding &amp; caravans: Is industrial beekeeping bad for bees? Dr. Lewis J. Bartlett</li><li>2. Why you want to rotate old comb, Bob Binnie</li><li>3. Results from the great Georgia pollinator census, Becky Griffin</li></ol>
2:00-2:15	<b>Live Q&amp;A</b> with Lewis, Bob, and Becky
2:15-2:25	<b>Break</b>
2:25-3:10	<b>Breakout Lectures</b> <ol style="list-style-type: none"><li>1. Why is Nosema is no longer Nosema, Jerry Hayes</li><li>2. Creating an industry the Guyana way, Amy Weeks</li><li>3. Tips for preparing show quality beeswax, Keith Fielder</li></ol>
3:10-3:25	<b>Live Q&amp;A</b> with Jerry, Amy, and Keith
3:25-4:10	<b>Plenary lecture:</b> Bee Breeding: Problems and promises of Darwinian beekeeping, Dr. Lewis J. Bartlett
4:10-4:25	<b>Live Q&amp;A</b> with Lewis
4:25	<b>Concluding remarks</b> , and see you at the 2022 Young Harris Institute!