



Beekeeping  
Institute

Since 1992

Celebrating our

30<sup>TH</sup>  
YEAR



May 18-21, 2022 • Young Harris, Georgia

Young  
Harris  
COLLEGE

EST 1886



UNIVERSITY OF  
GEORGIA  
Honey Bee Program



## This marks the 30th year of the

Young Harris College/University of Georgia Beekeeping Institute! Since its inception in June 1992, the Institute has grown from a small local outreach event into one of the most well-known and distinctive beekeeping educational showpieces in the country. Drawing upon the tradition of its predecessor, the Beekeeping Shortcourse formerly held each year in Athens, the Institute has never wavered from its commitment to delivering science-based recommendations on all aspects of bee management. We offer classes and topics of interest for everybody, whether you are a beginner, side-liner, full-timer, or simply keep one or two bee hives for their ecologic and pollination benefits. We achieve this breadth of coverage by drawing on a core

of committed and experienced volunteer instructors along with an annually changing retinue of guest speakers representing industry leaders and the most prestigious bee scientists in the English-speaking world.

Along with the normal lectures and workshops, the Institute offers optional training and certification opportunities, the popular

**Announcing new optional training opportunity: Georgia Certified Honey Bee Control and Removal Operator**

Georgia Master Beekeeper and Welsh Honey Judge Certification programs. This year we unveil a third! Beginning in 2022, we are offering training for a newly-created state certification – Honey Bee Control and Removal Operator. Details for these optional programs are included in this announcement.

The Institute proper, which takes place Thursday-Saturday, consists of lectures and workshops covering a wide range of beekeeping topics. Wednesday, May 18 is dedicated to training and examinations for the Honey Bee Control and Removal certification, Welsh Honey Judge certification, and 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 and Friday, and classes recommended for Certified candidates are highlighted in blue. Classes are held in the Maxwell Science Center and Rollins Campus Center.

One of the most rewarding opportunities at the Institute is the competitive Honey Show. Along with honey, the Honey Show accepts entries in photography, art, candles, section comb honey, mead, and beekeeping gadgets. This year Senior Honey Judge, Michael Young, will be assisting in the judging. We urge students to participate in the Honey Show, even if you've never competed before, because this is an excellent opportunity to learn from one of the world's best honey judges. It costs nothing extra, and it's a fun way to see how your honey compares to others' AND there's \$1,000 in cash prizes! You can find the Honey Show rules in this announcement and on our website.

Friday night the UGA bee lab will be hosting a social and dinner at the Retreat at Hiawassee River. The event is included in your registration, so make plans to attend. This is a chance to enjoy the beauty of north Georgia, enjoy friends old and new, and mix with some of the most interesting people you'll ever meet. We are pulling out all the stops for this special year, so bring your dancing shoes.

We will end on Saturday by announcing the honey show awards and raffle winners. Plan to join us as we celebrate our 30th Young Harris Institute!



2022  
Beekeeping Institute  
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### Dr. Jay Evans

Jay is Research Entomologist at the USDA Bee Research Laboratory in Beltsville, Maryland. He grew up in the Pacific Northwest and from an early age wanted to pursue a career in marine biology. That interest led him to attend college on the east coast at Princeton, but events and opportunities conspired to push Jay to study terrestrial animals instead. His PhD and subsequent post-doc appointments (including one at the University of Georgia) focused on ants, including the red imported fire ant. It was his posting at the University of Arizona that finally introduced Jay to honey bees, and soon thereafter he joined the Beltsville lab then under the leadership of long-time friend of the beekeeping industry, Hachiro ("Shim") Shimanuki. At Beltsville, Jay has distinguished himself as a world leader in the complex field of honey bee viruses. Jay is an engaging speaker and "in demand" at conferences everywhere.



### Dr. Brock Harpur

Brock Harpur is an Assistant Professor in the Entomology Department of Purdue University. Brock arrived at Purdue after completing a National Science and Engineering Research Council Postdoctoral Fellow at the University of Toronto (Canada). Brock completed his Ph.D. on population genomics of honey bees at York University working under the distinguished scholar Amro Zayed. An evolutionary biologist, Brock's work focuses on understanding genetic connections among families of worker bees and how that affects colony-level survival and reproduction. His lectures will focus on the peculiarities of honey bee genetics and how beekeepers can most profitably use breeding as a tool for combatting Varroa and other problems. He's been a beekeeper for 15 years.

Brock Harpur is an Assistant Professor in the Entomology Department of Purdue University. Brock arrived at Purdue after completing a National Science and Engineering Research Council Postdoctoral Fellow at the University of Toronto (Canada). Brock completed his Ph.D. on population genomics of honey bees at York University working under the distinguished

### Dr. Margarita M. López-Urbe

Margarita is the Lorenzo L. Langstroth Early Career Professor and Assistant Professor of Entomology at Penn State University. She is also an extension specialist in pollinator health for Penn State Extension. Margarita received her BS in Biology from Universidad de los Andes (Colombia), her MS in Genetics and Evolution from Universidade Federal de São Carlos (Brazil), and her Ph.D. in Entomology from Cornell University (USA). She was an NSF postdoctoral research fellow at North Carolina State University before joining Penn State. Margarita was awarded the ESA Early Career Research Award in 2018 and most recently received an NSF CAREER award. As an evolutionary ecologist, she is broadly interested in understanding how artificial selection and management shape bee health and the long-term persistence of their populations in agricultural areas.



### Dr. Andony Melathopoulos

Andony Melathopoulos is an Assistant Professor of Pollinator Health Extension in the Department of Horticulture at Oregon State University. He has over 15 years of experience working together with commercial beekeepers and land managers to develop solutions for keeping bees healthy. Since 2016 he has been working within OSU and with Oregon Department of Agriculture, Oregon Department of Forestry to design, implement and evaluate a state-wide pollinator health program, the Oregon Bee Project. He also leads efforts to inventory the bees of Oregon, the Oregon Bee Atlas, does research on crop pollination, bees and pesticides and building habitat for bees, and hosts a weekly podcast about pollinator health, PolliNation. In 2018 Andony was recognized with the national Pollinator Advocate award by the North American Pollinator Protection Campaign.

### Michael Young

A long-time friend of the Institute, Michael lives in a Georgian Royal Village in Hillsborough, Northern Ireland. A Georgia Master Beekeeper and keeper of bees for over 35 years, he is chef emeritus at the Belfast Hilton. Inspired after his first visit to the Young Harris Institute and the States in 1999, the next year Michael founded the Institute of Northern Ireland Beekeepers to serve beekeepers in Northern Ireland and across the border in the Republic. A Senior Honey Judge and expert showman 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.



# STAFF & INSTRUCTORS



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



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



Jennifer Berry is Apicultural Research Coordinator and Apiary Manager at the University of Georgia. She is pursuing her PhD in entomology at UGA with a focus on native bees and controlling Varroa mites.



Bob Binnie is owner/operator of Blue Ridge Honey Company in Lakemont, Georgia, a regular research cooperator with UGA, and is widely known for his quality You Tube tutorials.



Bobby Chaisson has kept bees for over 12 years. He is a full time technician with Georgia Bee Removal and a Georgia Master Beekeeper. He is active in both MABA and currently serves as President of the Tri County Beekeepers.



Dr. Keith Delaplane is a co-founder of the Institute, Director of the UGA Honey Bee Program, and Professor in the UGA Department of Entomology.



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



Arthur "Brutz" English is a Georgia Master Beekeeper, Presiding Judge for Georgia and Alabama in the Welsh Honey Judge Program, and honey show chairman for the Georgia Beekeepers Association and Young Harris Institute.



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



Lonnie Funderburg is a Georgia Master Beekeeper and two-term president of the Alabama Beekeepers Association.



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



Jimmy Gatt is a Journeyman beekeeper and President of the Metro Atlanta Beekeepers Association. He is passionate about the impacts of horticulture and beekeeping on our environment.



Cindy Hodges is a Georgia Master Craftsman Beekeeper and President of Dunwoody Beekeepers Club.



Ali Ikner is the Certification, Training, and Licensing Program Manager for the Structural Pest Division of the Georgia Department of Agriculture.



Harold Lanier is owner of Lanier Bee Barn in Commerce, GA where he manages 50-250 colonies depending on the time of year. He is UGA Journeyman Beekeeper and active member in his local clubs.



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



Julia Mahood is a Georgia Master Beekeeper from Atlanta who has been keeping bees since 2004.



Dr. Joerg Mayer grew up in Germany. He is currently a Full Professor in Zoological Medicine at UGA, and lectures on all aspects of exotic animal medicine including honey bee medicine.



Wil Montgomery is a Georgia Master Beekeeper with over 40 years of experience keeping bees and rearing queens.



Karen Palmer has a commercial license for selling nucs and queens and is owner/operator of a bee removal service, Honey Please LLC.



Steve Page has over a decade of treatment-free beekeeping experience and manages 50 to 75 colonies, in Coweta County, Georgia.



Tim Taylor is the Compliance and Enforcement Program Manager of the Structural Pest Division for the Georgia Department of Agriculture.



# GEORGIA MASTER BEEKEEPER PROGRAM

**In 2022, the Georgia Master Beekeeper Program 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. Pay special attention to classes marked in blue.

The certified practical exam will also be available Wednesday if you wish to leave more time for classes on Thursday and Friday. The certified level requires one year's prior beekeeping experience, passing a written exam, and passing a practical exam.

If you are sitting for exams at the Journeyman level or higher, you need to attend the sessions on Wednesday.

### Important Notes

- Wednesday's emphasis is on lectures and exams for Journeyman, Master, and Master Craftsman 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 Wednesday lectures, audits and exams.
- Certified practical exams are offered by appointment Wednesday from 1-4 p.m., all day on Thursday, and Friday morning. There are THREE parts to the exams: inside practical, outside practical (both by appointment), and a written exam on Friday from 1:15-2:05 p.m.

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](#). Applicants at the Certified level must have had at least one year's beekeeping experience prior to the Institute and will be asked to sign an affidavit to that effect.

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. Recommended readings include Keith Delaplane's 2007 edition of *First Lessons in Beekeeping*; Mark Winston's *Biology of the Honey Bee*; Thomas Seeley's *Honeybee Democracy*; the 2015 edition of *The Hive and the Honey Bee*; and 2020 edition of *ABC & XYZ of Bee Culture*.



**The Welsh Bee Keepers Association (UK) partnered with the YHC-UGA Beekeeping Institute** beginning in the early 2000s to develop a uniquely North American version of the honey testing standards employed in the United Kingdom. Compared to American standards, the UK standards are more "sensory" than analytical. This was the first collaboration of its kind between the USA and the United Kingdom and is expanding into sister programs in Alabama and other states. 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.

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 [Brutz English](#).

### CERTIFICATION LEVELS

- Level I (Candidate)
- Level II (Judge)
- Level III (Senior Judge)

[CLICK HERE FOR THE FULL PROGRAM DESCRIPTION](#)



# WELSH HONEY JUDGE PROGRAM

### 2022 BEEKEEPING INSTITUTE HONEY SHOW

**CHAIRPERSON:** Brutz English, 770-843-2110, [brutzenglish@gmail.com](mailto:brutzenglish@gmail.com)

**ENTRY FEE:** Included in registration

**ARRIVAL TIME:** Thursday, May 19th from 4:00 PM until 5:00 PM; Friday, May 20th from 7:30 AM to 10:00 AM

**LOCATION:** Rollins Campus Center, 2nd floor

**JUDGING:** Friday, May 20, 2022, beginning 12:00 noon

**RELEASE TIME:** All entries will remain in the show area for public viewing after the judging. All entries will remain on display until 12:00 noon, Saturday, May 21st, after which exhibitors may pick up their entries.

General rules of the honey show, exhibition classes, and judging criteria can be found [on our website](#).



### \$1,000 in CASH Prizes

This year's Best in Show award winner and the Sweepstakes award winner will each receive \$500 in cash money! The Best in Show award goes to the exhibitor who presents the best individual exhibit overall across all exhibition classes. The Sweepstakes award goes to the exhibitor who wins the most prize points cumulatively across all exhibition classes. See the [honey show rules](#) for details.



**Effective 1 January 2023, companies and individuals providing honey bee control and removal services from structures in the State of Georgia must be certified and licensed under rules amended in 2021 under the Georgia Structural Pest Control Act.**

The new rule establishes minimum competency training standards and a state certification process. Training curriculum and exams have been prepared by representatives of industry, the Georgia Department of Agriculture, Georgia Structural Pest Control Commission, and the University of Georgia. The inaugural training for this certification will be offered on Wednesday, May 18 at this year's Young Harris Institute. Licensing to perform bee removals in Georgia will require each applicant to:

1. Attend 8 hours of approved training
2. Pass a written exam on required material at a score of 70% or higher
3. Sign a sworn affidavit describing at least three bee removal jobs previously performed
4. Pay operator certification fee directly to Georgia Department of Agriculture

The Young Harris Institute will be providing training only (#1 above); students will receive a certification of completion at the end of the day and be provided complete information for completing the rest of the requirements. The fee of \$45 collected here for the Wednesday training applies solely to the Institute and cannot be applied toward the state certification fee.

Details on the program and its requirements for licensing and recertification are available [here](#).



### **Are honey bees like chickens and native bees like polar bears?**

There is a growing antagonism between beekeepers and native bee enthusiasts over whether beekeeping has a negative impact on native bee populations. This lecture will review what is known in this emerging area of study.

### **Basic honey processing**

Everything a beginner needs to know for removing, uncapping, extracting, and bottling honey. A hands-on workshop.

### **Basics of statistics for beekeepers**

This class will overview the basic elements of sound research practice and alert beekeepers to common pitfalls in the execution of experiments and interpretation of results.

### **Beekeeping philosophy and the benefits of organic beekeeping management practices**

Research from Penn State has compared various honey bee management systems that align with beekeeping philosophies. Evidence shows that organic beekeeping management systems are desirable for both beekeepers and bees. This talk will present the foundation of beekeeping philosophies and the data supporting the advantage of using organic practices for beekeeping.

### **Beyond nectar: How planting for honey bees helps us and the environment**

What is the larger impact of planting for honey bees? Can the planting choices I make benefit me or the environment beyond my honey harvest? Are there plants that are a good "double duty" of goodness? How do I source and care for the trees I buy? This class is not just about "planting flowers;" it's about becoming more integrated stewards of the environment, our bees, and ourselves.

### **Biology of the colony**

Biology of the honey bee colony occurs at two levels – the individual bees and the colony of which they are a part. This section covers the overriding survival strategy of a colony over the course of 12 months.

### **Biology of individuals**

Biology of the honey bee colony occurs at two levels – the individual bees and the

colony of which they are a part. This section covers development, morphology, and behaviors of the three main bee types in a colony.

### **Building hive equipment**

A perennial favorite and hands-on demonstration of constructing the basic components of a bee hive.

### **Cell-punch method for queen rearing**

A perennial favorite at the Young Harris Institute – a how-to workshop on rearing queens without grafting.

### **Could genetic engineering be the end of Varroa**

Often invoked as a cure-all for the exotic Varroa mite, genetic engineering is full of promise and peril. This lecture will overview the feasibility of this application to honey bee health and the kinds of hurdles that would need to be overcome.

### **Drones for drones outdoor workshop**

Look for drone congregation areas using the other kind of drone (an unmanned aerial vehicle) on Young Harris Campus.

### **Feral honey bee biology, diseases and immunity**

Honey bee colonies can persist in the wild escaping the management conditions imposed by beekeepers. These wild conditions put different selective pressures on feral colonies affecting their biology, disease pressure, and immune responses. This talk will review the differences between managed and feral environments, and share some of the data learned from studies of pathogens and immunity in feral colonies.

### **Getting started: The principles**

The basic theory and knowledge behind acquiring and successfully establishing your first bee hive.

### **Getting started: The real thing**

A live demonstration of the methods for getting started with real bees and hives.

### **Holistic honey bee health**

Keeping colonies healthy and strong is more than keeping them fed, queenright, and treated for mites. This lecture takes a long view of the systemic ways beekeepers can manage their bees for optimum health.

### **Honey: The queen of elixirs**

This talk is a celebration of honey – its record in human history, laws governing it, its use in medicine, health and beauty, its presence in mythology and religion, its blends and flavors, and even poison honeys.

### **Honey bee biogeography and why it matters to beekeeping**

The origin of honey bees is up for debate with the most authoritative positions arguing for either Asia or Africa. This lecture will explain the state of our understanding and the implications of this natural history on modern beekeeping problems.

### **Honey bee genetics and disease resistance**

Honey bees and beekeepers have an arsenal of behavioral, physiological and chemical defenses against disease, but the causes of disease disregard these at times. How can genetics improve bee health?

### **Honey bee genetics: Then, now, and soon**

An overview of the peculiar genetics of honey bees and progress being made in classical breeding and genomics for marshalling the power of genes to resist parasites and pathogens.

### **Honey bee races**

Among the 25 or so races, subspecies, or biotypes of *Apis mellifera*, only a handful have been recruited into practical beekeeping. This lecture will overview these subspecies and their pros and cons for beekeeping.

### **How can I incorporate genetics into my beekeeping practice?**

Does it begin and stop with installing a “resistant” queen? This lecture will give hearers a solid grounding in the proper use of genetically selected stock for improving the health of their bees.

### **How do bees wash their hands? Hydrogen peroxide in the hive**

Honey bees are among a number of insect species that actively use hydrogen peroxide to “self medicate.” This lecture will overview promising research at UGA on this naturally occurring molecule and its benefits for bee health.

### **Lions and tigers and swarms, Oh My!**

This workshop will explain honey bee swarming and how to safely and effectively retrieve and hive a swarm.

### **Make-your-own beekeeping field toolbox**

Participants will assemble their own take-home beekeeping toolbox. At registration please mark your intention to attend this workshop and pay the additional \$35 materials fee.



### **Mead making**

Mead – honey wine – is an ancient beverage of kings and one of the most sublime of bee hive products. This workshop will overview the theory and practice of making your own mead from your own honey.

### **Movement of mites and viruses in colonies**

This lecture will describe key routes that parasites and pathogens use to gain entry into colonies and ways that beekeepers can make it easier for bees to defend themselves.

### **New treatments for bee disease**

From natural products to traditional miticides, safe, effective and beekeeper-ready treatments for key diseases and pests are an active area of research and development.

### **Overview of Welsh Honey Judge program for beginners**

Come learn the history of this program, the advantages of its uniquely British and sensory approach to judging honey and hive products, and how you could take the first steps toward “wearing the white coat.”

### **Oxalic acid research**

UGA is partnering with other individuals across the country to test the efficacy and safety of this new method for treating Varroa mites. Come hear the latest on this ongoing research.

### **Parasites**

A beginner’s overview of the major honey bee parasites and methods for management.

### **Pathogens**

A beginner’s overview of the major honey bee disease organisms and methods for management.

### **Queen Rearing: The principles**

Part of a 2-sequence workshop (see Queen Rearing: Hands-on techniques). This session overviews the biology and principles behind rearing queens.

### **Queen rearing: Hands-on techniques**

A follow-up to the workshop on Queen rearing principles. This class will cover the actual steps of grafting and rearing larvae into mated queens.

### **Removing honey bees from floors or ceilings**

An overview of the regulations and practices required for properly extracting wild bee colonies from structures.

### **Summer and fall management**

A relatively slow time in beekeeping, yet important for laying the groundwork for successful overwintering.

### **Sustainable beekeeping**

One successful beekeeper’s methods for keeping his bees alive and healthy for the long term.

### **Take a walk on the wild side, the weird and wonderful world of native bees**

As beekeepers we are well-positioned to learn about native bees. We have the basic anatomy down; we intuitively understand bee biology and behavior and we are always scanning flowers looking for bee visits. This talk fills in the gaps and is a sort of boot camp to get us up to speed with all that’s strange and wonderful about these bees.

### **The (considerable) obstacles to creating bee habitat**

Everybody recognizes the need for bee habitat but relatively few acres have found their way into right of way, farm headlands and rangeland. This talk will review what makes up high quality bee habitat and where the best opportunities are for boosting the amount of pasture available to our bees.

### **The ecological impacts of honey bees and the importance of beekeepers as stewards of the environment**

This talk highlights the role of honey bees as critical components of agricultural systems, how agricultural intensification has negatively impacted the beekeeping industry, and some of the unintended consequences that beekeeping has on natural ecological processes such as pollination.

### **The game of drones**

Honey bee drones are the Rodney Dangerfields of the bee world; they (often) get no respect! Learn all about the amazing drones and their mysterious drone congregation areas (and how to find them using the other kind of drone) at this informative talk.

### **The many uses of a double screen board**

This piece of beekeeping paraphernalia has many uses for a beekeeper at any size of operation, from making increase to raising queens and more.

### **The science behind apitherapy**

While Apitherapy or the use of honey bee byproducts has been used for thousands of years in human medicine, little is known about the mechanisms of actions. This is the reason why this exciting field in medicine is poorly accepted in western medicine and often considered “quackery.” This lecture aims to provide insights into the variety of mechanisms by which honey, venom and propolis have beneficial effects. Because the presenter is a practicing veterinarian, a few examples on how apitherapy is used in animal patients will be shown along with an overview of the kinds of research being conducted at UGA in this field.

### **Understanding pesticide risk to bees and how risk is regulated**

Over the last decade EPA has overhauled how it evaluates risk to honey bees. This talk will review these changes and what it means for how to keep bees safe from exposure to toxic pesticide residues.

### **Use of biosensors to assess the health of your colony**

Technologies used in precision livestock farming can now be applied to the management of the honey bee superorganism because of recent advances in information technology and sensor miniaturization and commercial access to low-cost hardware and software. Many devices are currently available for obtaining health data of a colony.

### **Veterinary feed directive rule and how it affects beekeepers**

In January 2017 the Food and Drug Administration implemented its Veterinary Feed Directive ruling which changes policy on the use of medically necessary antimicrobials on bees. Use of honey bee antibiotics now requires the oversight of a prescribing veterinarian, highlighting the need for incorporating bee health into the curricula of veterinary students. This lecture will introduce this policy to beekeepers and discuss how the UGA Veterinary Medical College is using the honey bee as a tool for teaching basic and advanced concepts of veterinary medicine.

### **Why propolis is good for your bees**

Long discouraged as a sticky nuisance in the hive, propolis is now recognized as an essential element in colony social immunity. This lecture will overview these benefits and teach beekeepers simple methods they can use to increase propolis collection by their bees.

### **Winter and spring management**

This is the time of the year to secure optimum colony strength and productivity. Come learn the priorities and pitfalls of this most busy of seasons.



## WEDNESDAY, MAY 18, 2022

Wednesday's emphasis is on lectures and exams for Journeyman, Master, Master Craftsmen, Welsh Honey Judge, and Honey Bee Control and Removal Candidates.

**Welsh Honey Judge Training levels I and II** are held from 8:00-12:30 and 1:30-5:45 in Rollins level 2, with instructors English and Young.

**Certified practical exams** are available by appointment from 1:00-5:00 in Maxwell 113, 114

	<b>JOURNEYMAN SCHEDULE</b> Maxwell 116	<b>MASTER SCHEDULE</b> 117 Maxwell	<b>HONEY BEE CONTROL AND REMOVAL OPERATOR TRAINING, Rollins Loft</b>
8:00-9:30	<i>Parasites and toxicology</i> Bartlett	<i>General review time</i> Delaplane	<i>Honey bee biology</i> Hodges
9:30-10:15	<i>General review time</i> Delaplane	<i>Toxicology</i> Dix	<i>Relevant state and federal laws, safety precautions</i> Ikner, Taylor
10:15-10:30	<b>BREAK</b>		
10:30-11:30	<i>Insect ID</i> Delaplane	<i>Pollination biology &amp; economics</i> Arnold	<i>Insect ID</i> Berry
11:30-12:30	<i>General review time</i> Delaplane	<i>Non-Apis bees and their conservation</i> Melathopoulos	<i>Types of honey bee removals and basic removal techniques</i> Palmer
12:30-1:30	<b>LUNCH</b>		
1:30-2:30	JOURNEYMAN PRACTICAL EXAMS Maxwell 109 • Dix, Garrison  JOURNEYMAN AUDITS Maxwell 106 • Hodges, Berry	MASTER & MASTER CRAFTSMAN AUDITS • Maxwell 116 Arnold, Delaplane	<i>Trap out techniques &amp; negative consequences of leaving honey, pollen and brood in a structure</i> Palmer
2:30-3:30	JOURNEYMAN PRACTICAL EXAMS Maxwell 109 • Dix, Garrison  JOURNEYMAN AUDITS Maxwell 106 • Hodges, Berry	MASTER & MASTER CRAFTSMAN AUDITS • Maxwell 116 Arnold, Delaplane	<i>Eradication vs. relocation including common insecticides &amp; pesticides applied to honey bees</i> Chaisson
3:30-3:45	<b>BREAK</b>		
3:45-4:45	JOURNEYMAN AND MASTER WRITTEN EXAMINATIONS Maxwell 117 • Garrison	MASTER & MASTER CRAFTSMAN AUDITS • Maxwell 116 Arnold, Delaplane	<i>Cut-out removal techniques including basic construction knowledge, recommended tools, finding and caging the queen, preventing future infestations, saving comb and hiving bees</i> Chaisson
4:45-5:45			

## THURSDAY MORNING, MAY 19, 2022

**Certified candidates** please note that while Thursday's lectures are open to everybody, candidates for the Certified written exam should pay special attention to classes highlighted in blue. Certified candidates must sit for two exams: a practical and written. The practical exam has two components – indoor and outdoor. The written exam is Friday at 1:15. Schedule your practical exam time at the registration desk.

**Honey show entries** will be accepted from 4:00 PM until 5:00 PM

**Certified practical exams** are offered by appointment Thursday during class sessions from 9:10-12:20, from 1:20-4:30, and Friday morning. *Please sign up for a time slot when you register.*

**Welsh Honey Judge training levels II and III** Sessions are held in the Rollins building on level 2. The morning session is from 9:15 to 12:20. After a break for lunch, the afternoon session is from 1:30 to 4:30.

7:00 - 6:00 **Registration** open in **Rollins lobby**

8:00- 8:15 **Welcome** and opening details, **Rollins Suber** • Delaplane

8:15- 9:05 **Plenary lecture: Movement of mites and viruses in colonies, Rollins Suber** • Evans

9:15- 10:05

- The (considerable) obstacles to creating bee habitat, Rollins Suber* • Melathopoulos
- Parasites, Rollins Hatcher* • Berry
- Getting started: the principles, Maxwell 106* • Chaisson
- Pathogens, Maxwell 117* • Arnold
- Winter and spring management, behind Maxwell* • Garrison
- The game of drones, Maxwell 107* • Mahood
- Sustainable Beekeeping, Maxwell 116* • Page

10:15- 11:05

- New treatments for bee disease, Rollins Suber* • Evans
- Parasites, Rollins Hatcher* • Berry
- Getting started: the principles, Maxwell 106* • Chaisson
- Pathogens, Maxwell 117* • Hodges
- Winter and spring management, behind Maxwell* • Dix
- Beyond nectar: How planting for honey bees helps us and the environment, Maxwell 113* • Gatt
- Queen rearing: The principles, Maxwell 116* • Long

11:15-12:05

- The (considerable) obstacles to creating bee habitat, Rollins Suber* • Melathopoulos
- Parasites, Rollins Hatcher* • Bartlett
- Getting started: the principles, Maxwell 106* • Fielder
- Pathogens, Maxwell 117* • Arnold
- Winter and spring management, behind Maxwell* • Garrison
- The game of drones, Maxwell 107* • Mahood
- Queen rearing: The principles, Maxwell 116* • Long





## THURSDAY AFTERNOON, MAY 19, 2022

**Lunch for general registrants**, Rollins cafeteria  
Advance ticket sales will be available in the Rollins lobby

12:05-1:15 **Invitational Master luncheon**, Rollins 3d floor student loft, open to sitting Master and Master Craftsman beekeepers only. Preregistration required. Open Q&A time with guest speakers – Bartlett, Berry, Delaplane, Evans, Harpur, López-Uribe, Melathopoulos, Young. Master Beekeepers are encouraged to wear their name badges.

1:15-2:05 **Plenary lecture: Understanding pesticide risk to bees and how risk is regulated**, **Rollins Suber** • Melathopoulos

*Feral honey bee biology, diseases and immunity*, **Rollins Suber** • López-Uribe

*Biology of individuals*, **Rollins Hatcher** • Bartlett

*Biology of the colony*, **Maxwell 117** • Delaplane

2:15-3:05 *Getting started: the real thing, behind Maxwell* • Dix

*The science behind apitherapy*, **Maxwell 106** • Mayer

*Beyond nectar: How planting for honey bees helps us and the environment*, **Maxwell 113** • Gatt

*Lions and tigers and swarms, Oh My!* **Maxwell 116** • Lanier

*Honey bee genetics and disease resistance*, **Rollins Suber** • Evans

*Biology of individuals*, **Rollins Hatcher** • Hodges

*Biology of the colony*, **Maxwell 117** • Delaplane

3:15-4:05 *Getting started: the real thing, behind Maxwell* • Garrison

*How can I incorporate genetics into my beekeeping practice*, **Maxwell 106** • Harpur

*Lions and tigers and swarms, Oh My!* **Maxwell 116** • Lanier

*Cell-punch method for queen rearing*, **Maxwell 108** • Montgomery

*Feral honey bee biology, diseases and immunity*, **Rollins Suber** • Lopez-Uribe

*Biology of individuals*, **Rollins Hatcher** • Hodges

*Biology of the colony*, **Maxwell 117** • Delaplane

4:15-5:05 *Getting started: the real thing, behind Maxwell* • Dix

*How can I incorporate genetics into my beekeeping practice*, **Maxwell 106** • Harpur

*Beyond nectar: How planting for honey bees helps us and the environment*, **Maxwell 113** • Gatt

*Cell-punch method for queen rearing*, **Maxwell 108** • Montgomery

5:15 **Rollins Suber** • Anniversary cake and ice cream social

## FRIDAY MORNING, MAY 20, 2022

**Certified candidates** please note that while Friday's lectures are open to everybody, candidates for the Certified written exam should pay special attention to classes highlighted in blue. Certified candidates must sit for two exams: a practical and written. The practical exam has two components – indoor and outdoor.

**Certified practical exams** are offered by appointment this morning during class sessions from 9:15-12:00. *Please sign up for a time slot when you check in. The Certified written exam will be administered at 1:15 in the Rollins level 3 loft.*

**Honey show entries** will be accepted from 7:30 AM until 10:00 AM

7:00 - 6:00 **Registration** open in **Rollins lobby**

8:00- 8:15 **Welcome** and opening details, **Rollins Suber** • Delaplane

8:15- 9:05 **Plenary lecture: The ecological impacts of honey bees and the importance of beekeepers as stewards of the environment**, **Rollins Suber** • López-Uribe

*Veterinary feed directive rule and how it affects beekeepers*, **Rollins Suber** • Mayer

*Honey: The queen of elixirs* , **Rollins Hatcher** • Young

*Building hive equipment*, **Maxwell 108** • Funderburg

9:15-10:05 *Summer and fall management, behind Maxwell* • Fielder

*Basic honey processing*, **Maxwell 117** • Dix

*Queen rearing: Hands-on techniques*, **Maxwell 109** • Long

*Honey bee races*, **Maxwell 116** • Hodges

*Overview of Welsh Honey Judge program for beginners*, **Rollins 258** • English

*Honey bee biogeography and why it matters to beekeeping*, **Rollins Suber** • Delaplane

*Oxalic acid research*, **Rollins Hatcher** • Berry

*Building hive equipment*, **Maxwell 108** • Funderburg

10:15- 11:05 *Summer and fall management, behind Maxwell* • Garrison

*Basic honey processing*, **Maxwell 117** • Dix

*Queen rearing: Hands-on techniques*, **Maxwell 109** • Long

*Basics of statistics for beekeepers*, **Maxwell 116** • Bartlett

*Overview of Welsh Honey Judge program for beginners*, **Rollins 258** • English

*Honey bee biogeography and why it matters to beekeeping*, **Rollins Suber** • Delaplane

*Honey: The queen of elixirs*, **Rollins Hatcher** • Young

*Building hive equipment*, **Maxwell 108** • Funderburg

11:15- 12:05 *Summer and fall management, behind Maxwell* • Fielder

*Basic honey processing*, **Maxwell 117** • Dix

*The science behind apitherapy*, **Maxwell 106** • Mayer

*Basics of statistics for beekeepers*, **Maxwell 116** • Bartlett

*Overview of Welsh Honey Judge program for beginners*, **Rollins 258** • English

12:05- 1:15 **Lunch**, Rollins cafeteria • Advance ticket sales will be available in the Rollins lobby



## FRIDAY AFTERNOON, MAY 20, 2022

1:15-2:05 **Plenary lecture: Could genetic engineering be the end of Varroa?** **Rollins Suber** • Harpur

1:15-2:05 **Certified written exam, Rollins level 3 loft** • Garrison

*Beekeeping philosophy and the benefits of organic beekeeping practices*, **Rollins Suber** • López-Uribe  
*Oxalic acid research*, **Rollins Hatcher** • Berry

*Removing bees from floors and ceilings*, **Maxwell 117** • Chaisson

2:15- 3:05 *Why propolis is good for your bees*, **Maxwell 116** • Hodges

*Use of biosensors to assess the health of your colony*, **Maxwell 106** • Mayer

*Mead making*, **Maxwell 113** • Young

*Drones for Drones outdoor workshop*, **Meet at registration desk** • Mahood

*Take a walk on the wild side, the weird and wonderful world of native bees*, **Rollins Suber** • Melathopoulos

*Holistic honey bee health*, **Rollins Hatcher** • Bartlett

*Removing bees from floors and ceilings*, **Maxwell 117** • Chaisson

3:15-4:05 *Make-your-own beekeeping field toolbox (\$35 materials fee due when registering)*, **Maxwell 108** • Long

*The many uses of a double screen board*, **Maxwell 107** • Binnie

*Mead making*, **Maxwell 113** • Young

*Drones for Drones outdoor workshop*, **Meet at registration desk** • Mahood

*Beekeeping philosophy and the benefits of organic beekeeping practices*, **Rollins Suber** • López-Uribe

*Holistic honey bee health*, **Rollins Hatcher** • Bartlett

*Use of biosensors to assess the health of your colony*, **Maxwell 106** • Mayer

4:15-5:05 *Make-your-own beekeeping field toolbox (\$35 materials fee due when registering)*, **Maxwell 108** • Long

*The many uses of a double screen board*, **Maxwell 107** • Binnie

*Mead making*, **Maxwell 113** • Young

*Why propolis is good for your bees*, **Maxwell 116** • Hodges

6:00 **Hiawasse River Retreat** • Group social & dinner, announcing new Certified, Journeyman, Master Beekeepers and Welsh Honey Judges

## SATURDAY, MAY 21, 2022

Today's plenary lectures are all in Rollins Suber and open to everybody.

7:00 – 10:30 **Registration** open in **Rollins lobby**

8:00-8:10 **Welcome** and opening details • Delaplane

8:10-9:00 *Honey bee genetics: Then, now, and soon* • Harpur

9:10-10:00 *Are honey bees like chickens and native bees like polar bears?* • Melathopoulos

10:00-10:10 Break

10:10-11:00 *How do bees wash their hands? Hydrogen peroxide in the hive* • Bartlett

11:00-12:00 Honey Show Awards • Raffle winners

Honey show entries ready for pick-up. Adjourn, safe journeys, and see you next year!

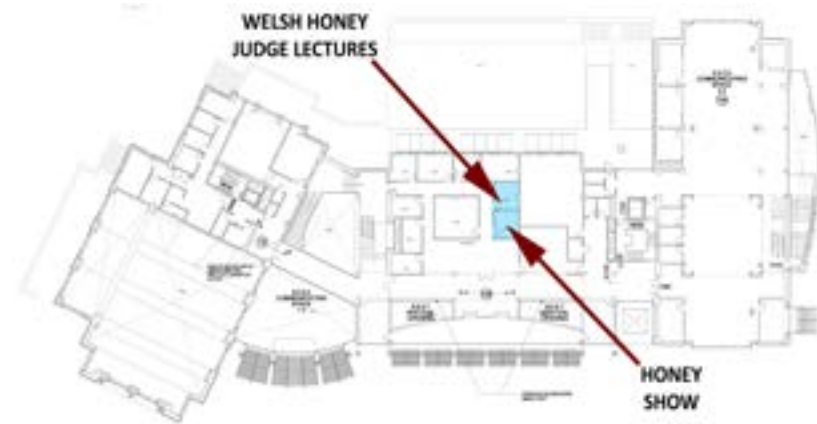
### Rollins

First Floor



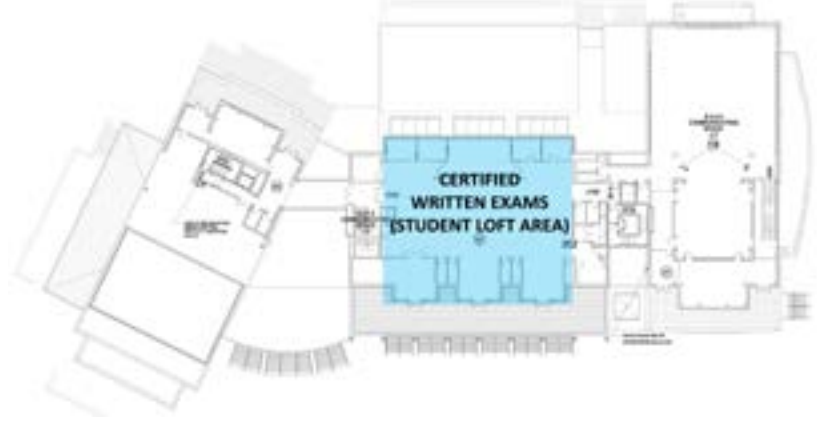
### Rollins

Second Floor



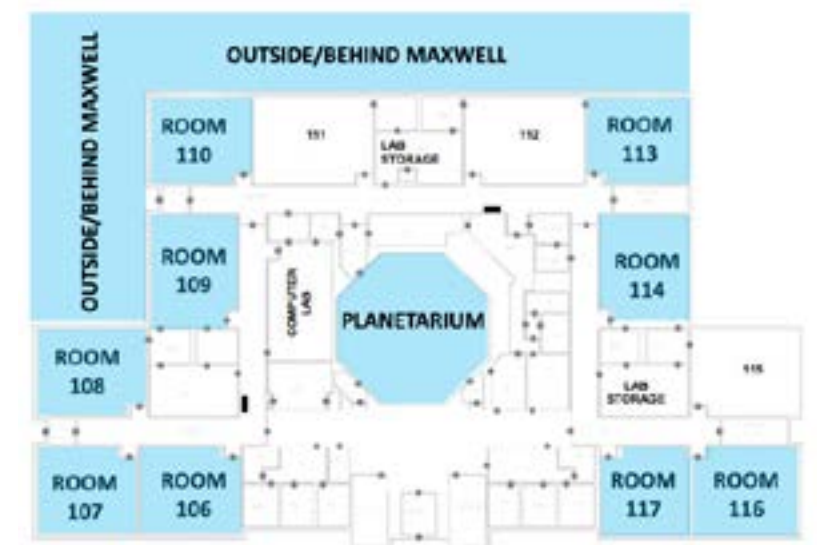
### Rollins

Third Floor



### Maxwell

First Floor



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