

LET THE BEES BE

PACIFIC NORTHWEST
BEEKEEPING
CONFERENCE



October 3 and 4, 2020
WASBA Virtual Conference

Introduction



Welcome to the Pacific Northwest
Beekeeping Conference of 2020!

Presented by the Washington State
Beekeepers Association (WASBA)

WASBA's Mission

WASBA was created specifically to serve Washington State
Beekeepers in the following areas:

- To help maintain vibrant local beekeeping organizations
- To assist the agricultural community
- To improve relations between beekeepers, government agencies,
and the public
- To promote beekeeping and bee products in the state of
Washington and abroad
- To promote and maintain industry connections at the state,
national, and international level
- To collectively represent all beekeepers of Washington state
- To promote and enhance academic research into beekeeping
practice in the state of Washington

For Members: **WASBA Annual Meeting**

Tuesday, October 6 at 7pm via Zoom

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KEYNOTE SPEAKER
RANDY OLIVER

Event Schedule



Recordings of sessions will be available to participants post-conference.

Saturday, October 3, 2020

9:00 AM to 9:30 AM - Opening Remarks & Introductions

Kevin Oldenburg, WASBA President

9:30 AM to 10:30 AM KEYNOTE ADDRESS

Re-evaluating Mite Monitoring Methods - Randy Oliver
(ScientificBeekeeping.com)

10:30 AM to 11:15 AM - WSU Bee Lab Remarks

WSU Breeding Program: Where Do We Go From Here? -
Dr. Steve Sheppard (Washington State University)

11:15 AM to 12:00 PM - Speaker Session #1

Spore, What's It Good For? Killing Varroa With Fungi -

Dr. Jennifer Han (Washington State University)

Working With Bees. Simple Ways to Make What You Need -

Dr. Jennifer Short (Camino Island Honey)



KEY



Science of Bees



Hobby Beekeeping

Event Schedule



Saturday, October 3, 2020

12:00 PM to 12:30 PM - Lunch

Grab some food & join an informal session with our speakers

12:30 PM to 1:15 PM - Speaker Session #2



How Does Temperature Stress Reduce Queen Quality? -

Dr. Alison McAfee (North Carolina State University)



The Oregon Bee Project: What Statewide Pollinator

Protection Looks Like on the Other Side of the Line -

Dr. Andony Melathopolous (Oregon State University)

1:15 PM to 2:00 PM - Speaker Session #3



Indoor Queen Banking to Improve Supply and Better Meet

Demand - Dr. Brandon Hopkins (Washington State

University)



Using Fungi to Create a Better Bee Feed - Dr. Nicholas

Naeger (Washington State University)

2:00 PM - 2:45 PM - Speaker Session #4



Varroa Update from OSU - Dr. Ramesh Sagili (Oregon State

University)



Opportunities and Challenges for Honey Bees in

Washington - Tim Hiatt (Hiatt Honey)

KEY



Science of Bees

Hobby Beekeeping

Event Schedule



Saturday, October 3, 2020

2:45 PM to 3:15 PM - Break

Another Opportunity to Chat Informally with Our Speakers

3:15 PM to 4:00 PM - Speaker Session #5



Continuing Losses of Washington Beekeepers: A 10-year Survey of Backyarders - Dr. Dewey Caron (University of Delaware/Oregon State University)



The Business End of Bees: Approaching Beekeeping from a Business Perspective - Dr. Jennifer Short (Camino Island Honey)

4:00 PM to 4:45 PM - Speaker Session #6



Toward a Pollinator-Friendly Agroecosystem - Dr. Tim Lawrence (Washington State University)



Methods in Requeening - Zac Lamas (University of Maryland)

5:15 PM to 6:30 PM - Tales from the Hive

Make a Drink and Join the Speakers for Their Personal Beekeeping Stories

KEY



Science of Bees



Hobby Beekeeping

Event Schedule



Sunday, October 4, 2020

9:00 AM - 9:45 AM - Speaker Session #7



Can We Do a Better Job of Diagnosing Queen Failure? - Dr. Alison McAfee (North Carolina State University)



Successfully Managing Various Queen Issues: Re-Queening, Introductions, Banking, Finding Virgins, Laying Workers, Assuring Quality Control, Seasonal Constraints, Etc.... - Susan Cobey (Washington State University)

9:45 AM to 10:30 AM - Speaker Session #8



A Test of Summer Mite Treatments - Randy Oliver (ScientificBeekeeping.com)



Honey Bee Nutrition: What We Need to Know - Dr. Ramesh Sagili (Oregon State University)

10:30 AM to 11:00 AM - Break

Another Chance to Chat with the Speakers

KEY



Science of Bees

Hobby Beekeeping

Event Schedule



Sunday October 4, 2020

11:00 AM to 11:45 AM - Speaker Session #9



The (Considerable) Obstacles to Increasing Bee Pasture in the Pacific Northwest - Dr. Andony Melathopolous (Oregon State University)



Reading the Hive - Are Your Bees Ready for Winter? - Dr. Dewey Caron (University of Delaware/Oregon State University)

11:45 AM to 12:30 PM - Speaker Session #



Asian Giant Hornet Update - Sven-Erik Spichiger (WSDA)



Winter Prep Beins MidSummer - Zac Lamas (University of Maryland)

12:30 PM - 1:00 PM - Closing Remarks

Recordings of sessions will be available to participants post-conference.

KEY



Science of Bees



Hobby Beekeeping

On-line Auction!!!

Limited Raffle: WIN AN ELECTRIC EXTRACTOR (value \$ 500)

20 tickets available for \$40/each

Drawing at Conference end - Sunday, October 3, 2020

Make sure you check out WASBA's online auction at:

<https://www.accelevents.com/e/WASBA2020PacificNorthwestBeekeepingConference#Auction>

Bid on items such as:

Hand-made, bee-themed quilt

A day at commercial beekeeper Tim Hiatt's apiary

Beautiful beeswax lantern

WSU wine and cheese packages,
with custom cheese board and coasters

Perhaps the most exciting item to ever appear in a beekeeping
auction:

2 instrumentally inseminated queens from WSU

(bidding starts at \$2000!)

A special auction feature is your ability to purchase items for the WSU Beekeeping program. WSU gave us a wish list of items needed for bee lab research. While these items appear in our online auction, you won't take anything home except the satisfaction of directly helping researchers tackle our biggest beekeeping challenges.

All conference proceeds benefit the WSU Bee Lab



Key Note Presenter

Randy Oliver - Re-evaluating Mite Monitoring



Scientific Track

Dr. Dewey Caron, U of Delaware, OSU

Continuing Losses of Washington Beekeepers - A 10-year Survey Record of Backyarders (Session #5)

Dr. Jennifer Han

Spore, What's It Good For? Killing *Varroa Destructor* With Fungi (Session #1)

Dr. Brandon Hopkins, WSU

Indoor Queen Banking to Improve Supply and Better Meet Demand (Session #3)

Dr. Tim Lawrence, WSU

Toward a Pollinator-Friendly AgroEcosystem (Session #6)

Dr. Alison McAfee, North Carolina State University

How Does Temperature Stress Reduce Queen Quality? (Session #2)

Can We Do a Better Job of Diagnosing Queen Failure? (Session #7)

Dr. Andony Melathopoulos, OSU

The (Considerable) Obstacles to Increasing Bee Pasture in the Pacific Northwest (Science Session #9)

Randy Oliver, ScientificBeekeeping.com

A Test of Summer Mite Treatments (Session #8)

Dr. Ramesh Sagili, OSU

Varroa Updates from OSU (Session #4)

Dr. W. Steven Sheppard, WSU

WSU Bee Breeding Program: Where Do We Go from Here? (Pre-session comments)

Sven-Erik Spichiger, WSDA

Update on Giant Asian Hornet in Washington (Session #10)



Hobbyist Track

Dr. Dewey Caron, U of Delaware, OSU

Reading the Hive: Are Your Bees Ready for Winter? (Session #9)

Susan Cobey, WSU

Successfully Managing Various Queen Issues: Re-Queening, Introductions, Banking, Finding Virgins, Laying Workers, Assuring Quality Control, Seasonal Constraints, Etc.... (Session #7)

Zac Lamas, U of Maryland

Methods in Requeening (Session #6)

Winter Prep Begins Mid-Summer (Session #10)

Tim Hiatt, Hiatt Honey

Opportunities and Challenges for Honey Bees in Washington (Session #4)

Dr. Andony Melathopoulos, OSU

The Oregon Bee Project: What Statewide Pollinator Protection Looks Like on the Other Side of the Line (Session #2)

Dr. Nicholas Naeger, WSU

Using Fungi to Create a Better Bee Feed (Session #3)

Dr. Ramesh Sagili, OSU

Honey Bee Nutrition: What We Need to Know (Session #8)

Dr. Jennifer Short, Camino Island Honey

Working with Bees: Simple Ways to Make What You Need (Session #1)

The Business End of Bees: Approaching Beekeeping from a Business Prospective (Session #5)

Speakers: Biographies

Keynote Presenter

Randy Oliver

Title: Re-evaluating Mite
Monitoring Methods
(Keynote)



Title: A Test of Summer
Mite Treatments (Science
Session #8)

Biography: Randy Oliver owns and operates a small commercial beekeeping enterprise in the foothills of Grass Valley in Northern California. He and his two sons manage around 1500 colonies for migratory pollination, and produce queens, nucs, and honey. He has over 50 years of practical beekeeping experience, plus holds B.S. and M.S. degrees in Biological Sciences. Randy analyzes and digests beekeeping information from all over the world, as well as performing field research of his own, in order to not only broaden his own depth of understanding and knowledge, but to develop practical solutions to many of today's beekeeping problems, which he then shares with other beekeepers through his various articles in bee magazines, his speaking engagements worldwide, and on his website: www.ScientificBeekeeping.com.

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Speakers: Biographies

Dr. Dewey Caron

Title: Continuing Losses of Washington Beekeepers - a 10-Year Survey Record of Backyarders (Science Session #5)

Title: Reading the Hive: Are Your Bees Ready for Winter? (Hobby Session #9)



Biography: Dr. Dewey M. Caron is Emeritus Professor of Entomology & Wildlife Ecology, Univ of Delaware, & Affiliate Professor, Dept Horticulture, Oregon State University. He retired from the University of Delaware in 2009 and moved to Portland, OR to be closer to grandkids. Dewey remains active in bee education, writing for newsletters, giving Bee Short Courses, assisting in several Master beekeeper programs and giving presentations to local, state and regional bee clubs. Dewey represents WAS on Honey Bee Health Coalition and is principal author of HBHC Tools for Varroa Management and BMPs. He is also author of Honey Bee Biology & Beekeeping, major textbook used in University and Association bee courses and has a new bee book The Complete Bee Handbook from Rockridge Press this year..

Speakers: Biographies

Susan Cobey

Title: Successfully Managing Various Queen Issues: Re-Queening, Introductions, Banking, Finding Virgins, Laying Workers, Assuring Quality Control, Seasonal Constraints, Etc....
(Hobby Session #7)



Biography: Susan Cobey's focus is honey bee breeding and instrumental insemination. She established and manages the New World Carniolan closed population breeding program, now in its 38th generation. Her experience includes management of Honey Bee Research Laboratories at the Ohio University State and the University of California, Davis, providing honey bee stock and assisting researchers, and students in their various honey bee research projects..

Currently she operates Honey Bee Insemination Service and holds a 50% appointment with Washington State University. Her focus is enhancement of honey bee stocks and improvement of colony health through breeding and incorporation of germplasm, collected from honey bees in their native European range, to enhance the U.S. gene pool. She provides training in instrumental insemination and information in presentations, publications and instructional material for both scientific and public audiences, worldwide to promote honey bee stock improvement.

Speakers: Biographies

Dr. Jennifer Han

Title: Spore, What Is It Good For? Killing Varroa with Fungi
(Science Session #1)



Biography: Dr. Jennifer Han is a post-doctoral researcher at Washington State University in Pullman. A former landscape architect, she left that profession to pursue her scientific interests. She earned her PhD in plant biology studying genetics to improve plant breeding. This has translated to her work at WSU where she is currently researching the efficacy of *Metarhizium*, a fungus that kills arthropods, as a biocontrol agent against varroa mites. She is working to improve the thermotolerance and virulence of the fungus using directed evolution techniques. She hopes to develop fungal strains that are hypervirulent towards varroa with minimal negative impacts to honey bees and the surrounding environment.

Speakers: Biographies

Tim Hiatt

Title: Opportunities and
Challenges for Honey
Bees in Washington
(Hobby Session #4)



Biography: Tim Hiatt is the legislative chair of WASBA, the Washington State Beekeepers Association. He lives in Ephrata and was four years old when his father started keeping bees. He and his brothers follow the bees as they pollinate tree fruit in Washington, almonds in California, and produce honey in the Midwest..

Speakers: Biographies

Dr. Brandon Hopkins

Title: Indoor Queen Banking
to Improve Supply and
Better Meet Demand
(Science Session #3)



Biography: Dr. Brandon Hopkins is an Assistant Research Professor at Washington State University in the Department of Entomology. Initially working on the development of cryopreservation of honey bee germplasm for breeding and conservation, work that enabled the establishment of the world's first honey bee germplasm repository at WSU and inclusion of honey bee semen in the USDA National Animal Germplasm Program. He also administers the WSU Disease and Diagnostic Laboratory, a facility that provides beekeepers with timely information on the health of their colonies. His research efforts have been focused on developing practical solutions for the beekeeping industry ranging from bee breeding to varroa control.

Speakers: Biographies

Zac Lamas

Title: Methods in Requeening
(Hobby Session #6)

Title: Winter Prep Begins
MidSummer (Hobby
Session #10)



Biography: Zac Lamas is a PhD candidate in the Hawthorne Lab at the University of Maryland. Zac comes up with creative ways to ask simple questions about the honey bee-varroa relationship. He mainly studies virus transmission and varroa feeding behavior. He formerly ran a queen rearing and nuc operation between the coast of North Carolina and upstate New York, and for years worked for Michael Palmer of French Hill Apiaries in Saint Albans, Vermont. Zac was awarded the PAm-Costco Fellowship in 2019.

Speakers: Biographies

Dr. Tim Lawrence

Title: Toward a Pollinator
Friendly AgroEcosystem
(Science Session #6)



Biography: Dr. Tim Lawrence is an Associate Professor and the Washington State University Extension director in Island County, Washington. He has his Ph.D. from The Ohio State University in environmental sciences with a focus on human dimensions. He has more than 30 years of Extension experience in both community development and agricultural and natural resources. Tim has been keeping bees for nearly 60 years. He holds a bachelor's degree in apiculture and pomology, a master of science in agricultural economics and rural sociology, and was a commercial beekeeper for more than 20 years. He has an adjunct appointment with the WSU entomology department and is part of the WSU Honey Bee Health Program. He enjoys outdoor activities, meeting new people, and taking on new challenges..

Speakers: Biographies

Dr. Alison McAfee

Title: How Does
Temperature Stress
Reduce Queen Quality?
(Science Session #2)



Title: Can We Do a Better Job of
Diagnosing Causes of Queen
Failure? (Science Session #7)

Biography: Dr. Alison McAfee completed her Ph.D. in Genome Science and Technology at the University of British Columbia, where she studied molecular mechanisms of hygienic behavior. Now, she is studying queen quality and reproductive health as a postdoctoral fellow at North Carolina State University. Alison writes a monthly column, "Science Insider" for the [American Bee Journal](#) and her own research has been reported in [New Scientist](#), [Scientific American](#), and [National Geographic](#). She also enjoys catching huge, ugly fish, steep hikes, and breaking speed limits on her bicycle.

Dr. Andony Melathopoulos

Title: The Oregon Bee Project:
What Statewide Pollinator
Protection Looks Like on the
Other Side of the Line
(Hobby Session #2)

Title: The (Considerable)
Obstacles to Increasing Bee
Pasture in the Pacific
Northwest
(Science Session #9)



Biography: Dr. Andony Melathopoulos is an Assistant Professor in Pollinator Health Extension in the Department of Horticulture at Oregon State University, which was the first such position in the US. He also sits on the Steering Committee of the Oregon Bee Project, which coordinates pollinator health work across state agencies, leads the Oregon Bee Atlas and hosts a weekly podcast called PolliNation. In 2018, Andony was recognized with the national Pollinator Advocate award by the North American Pollinator Protection Campaign.

Speakers: Biographies

Dr. Ramesh Sagili

Title: Varroa Update from
OSU (Science Session #4)

Title: Honey Bee Nutrition:
What We Need to Know
(Hobby Session #8)



Biography: Dr. Ramesh Sagili is an Associate Professor in the Department of Horticulture at Oregon State University. He obtained his PhD in Entomology from Texas A&M University in 2007 specializing in honey bee research. His primary research focus is honey bee health, nutrition and pollination. Ramesh initiated the creation of Oregon Master Beekeeper Program and chaired the Oregon Governor's Task Force on Pollinator Health. His research program addresses both basic and applied questions to improve honey bee health and nutrition, and hence majority of his research projects are collaborative efforts involving stakeholders. He has authored several important research and extension publications and has received several awards including the Entomological Society of America's Pacific Branch Research Award, Eastern Apicultural Society's Outstanding Research Award and OSU Outreach and Engagement Award.

Speakers: Biographies

Dr. Steve Sheppard

Title: WSU Bee Breeding Program -
Where Do We Go from Here? (Pre-
conference Comments)



Biography: Dr. Steve Sheppard is the Thurber Professor of Apiculture of the WSU Department of Entomology. Steve's graduate research at the University of Illinois was on pollination biology, population genetics and evolution in honey bees. Before joining the WSU faculty, Steve was a research scientist for USDA-ARS, conducting studies on Africanized honey bees and the genetic processes accompanying insect range expansions.

Since 1996, Steve, his students, postdocs and research collaborators at WSU have conducted basic work on honey bee genetics and evolution, a long-term breeding program to select honey bees for northern conditions, and novel approaches to improve honey bee health. He and colleagues have researched the use of fungi as a biological control agent for parasitic mites, on the use of fungal extracts to potentially improve immune function in honey bees, and the use of controlled atmosphere storage for indoor wintering and mite control.

In collaboration with US queen producers, the WSU bee team has been involved in the importation and distribution of honey bee genetics from Old World source populations. Release of honey bee germplasm to commercial queen producers resulted in a significant increase in overall genetic diversity of US honey bee populations..

Speakers: Biographies

Dr. Jennifer Short

Title: Working with the Bees - Simple Ways to Make What You Need Thru the Season (Hobby Session #1)

Title: The Business End of Bees - Approaching Beekeeping from a Business Perspective.
(Hobby Session #5)



Biography: Dr. Jennifer Short is a veterinarian and a WSU alum. She has taught at both Colorado State University and Texas A&M, presenting a diverse range of topics from integrated production medicine to veterinary pathology. She also owned and operated both a veterinary private practice, specializing in large animal intensive production management, as well as an organic dairy farm in Colorado where she honed her homeopathic skills in treating disease. Her overarching passion is sustainable agriculture, individual self-sufficiency, and environmental awareness. Dr. Short is currently on the Washington State Beekeepers Association board of directors and also sits on the Washington State Pollinator Protection Task Force. She has been a full time beekeeper for the last four years on Camano Island, Washington, and owns and operates Camano Island Honey at Sanctuary Farms Apiary – an educational platform for pollinator awareness.

Speakers: Biographies

Sven-Erik Spichiger

Title: Update on the
Asian Giant Hornet
(Science Session #10)



Biography: Sven-Erik Spichiger is the managing entomologist for the Washington State Department of Agriculture pest program. He has a BS in Entomology from Penn State and a MS in Entomology from Clemson University. He spent 20 years as entomologist for the State of Pennsylvania, the last 11 as the State Entomologist for the PA Department of Agriculture. In 2018, he retired from the PADA and moved west where he took the same job for the State of Washington. Proud owner of one Bee hive in the Olympic Rainforest.



Tales from the Hive - Drink Recipes

The Buzz

1 shot gin
1 honey stick of honey
1 tsp. fresh lemon juice
12 fl oz of Sprite or 7-up

Mix the honey, lemon juice and soda to dissolve the honey, then add the gin, shake on ice and strain into a chilled glass and garnish.



The Sting

2 shots whiskey
12 fl oz oz. grapefruit juice
2 honey sticks

Mix the honey and grapefruit juice to dissolve the honey, then add the whiskey, shake on ice and strain into a chilled glass and garnish.

Tales from the Hive - Drink Recipes

The Murder Hornet

1 shot whiskey
1 shot vodka
1 shot rum
1 honey stick
12 fl oz fresh orange juice

Mix the honey and orange juice to dissolve the honey, then add the whiskey, vodka, and rum. Shake on ice and strain into a chilled glass and garnish.

Cocktail Hour Sponsored By



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Contact Information

Washington State Beekeepers Association (WASBA)

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www.facebook.com/WASBA.ORG

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Margo Buckles

For Members: **WASBA Annual Meeting**

Tuesday, October 6 at 7pm via Zoom

Keynote Speaker 2021

Dr. Thomas Seeley



Notes:

Lined area for taking notes, consisting of multiple horizontal lines on a cream-colored background.



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Lined area for taking notes, consisting of multiple horizontal lines on a cream-colored background.

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