

WAS Journal



Journal of the Western Apicultural Society of North America

Volume 42 Number 2

May 2019



2019 WAS Conference | Decoding the Songs of Bees | Proposed WAS Bylaw Changes
State of WAS Bees | Georgia Prison Beekeeping | Beekeeping Behind Bars—Idaho



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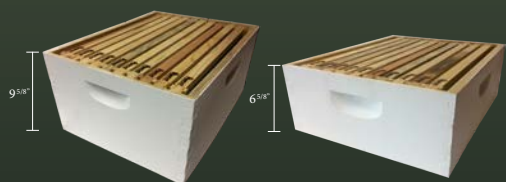
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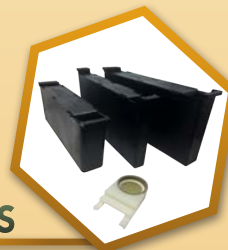
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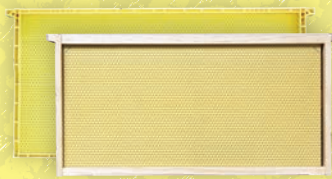
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James Smith Memorial Scholarship Fund

The Western Apicultural Society has established a scholarship fund in Jim Smith's honor as a lifetime learner and teacher/mentor. Scholarship funds will be used to send students who wouldn't otherwise have the resources to a WAS conference to learn more about one of Jim's passions: BEES!

This scholarship is available for currently enrolled, full-time students. We will require you to show your student ID and proof of full-time enrollment at the registration desk when you pick up your badge.

The scholarship is for the full conference registration. Accommodations, transportation, and "add-ons and adventures" will be the student's responsibility. We also ask that recipients submit a blog on their experience for the *WAS Journal*.

To submit an application, go to:
westernapiculturalsociety.org/2019-was-conference-scholarship

For more information, contact Cyndi Smith at:
onthegocgs@comcast.net

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President's Message

Spring 2019

What do you want from your beekeeping conference? What do you want from the Western Apicultural Society? These have been the pervasive questions that I've been posing to people in the beekeeping community for the past half of a decade. Especially the last two years while transitioning into the role of president and conceptualizing this conference.

First, the conference. I received feedback from what people have loved about other conference experiences, what they want to see more of in the future, and what they would like to see go away, as well. I've also been to (at this point) nearly 100 conferences, as a speaker and an attendee, and I've got the badge collection to prove it!!

There have been three main themes:

- People want more time to process the speakers' words and concepts. Suggestions were for longer breaks between sessions to take a breather and let the messages percolate in, or through organized networking events to debrief with friends.
- People don't want to hear the same thing from the same speakers over and over again—i.e., if there are five speakers, only one of them needs to drill home Varroa mite management.
- People want to feel like they are coming away from the conference inspired and empowered with the right tools to make a positive difference. That difference is scalable: some want to know how to keep their one hive from dying this winter, others want to gain an idea to improve habitat on a whole city block, and some people want to understand how to affect state or nationwide legislation.

Your conference organizers (the WAS board, staff, contractors, and collaborators, and Bee Girl staff and board) are rising to these hopes and pulling off a conference that is not your average beekeeping event! We have designed a three-day spread (with preconference adventure options) that we know will keep you engaged and leave you inspired. I will list a few of the highlights we have arranged for you here, and we encourage you to check out our very detailed and comprehensive website for more information.

Preconference (page 20), **July 11:** Rafting the Rogue, Oregon Shakespeare Festival.

Friday, July 12:

Live-streamed conference opening by Dr. Marla Spivak, opening keynote from Katrina Klett

(who just presented at SXSW), keynote by Hilary Kearney, Happbee Hour (free beer!), #beekeeperfail storytelling hour.

Saturday, July 13: Bee-themed sunrise yoga, keynote by Dr. Meghan Milbrath, Roundtable Speed Swarm (swarm over and sit a spell with your favorite bee world experts), keynote by Dr. Judy Wu-Smart, workshops on apitherapy, art, pesticides, queen breeding, social media management, and native bee habitat, Happbee Hour, Community Waggle Dance Table Top Show (come see what amazing projects your fellow beeks have been working on), farm-to-table banquet and awards.

Sunday, July 14: WAS Annual Business Meeting, last keynote by Katrina Klett and myself, self-guided farm and bee-habitat tour of 30 farms in the Rogue Valley (collaboration with the Ashland and Medford Food Co-ops), and FlowHive demonstration and bee-habitat workshop by Stuart Anderson, FlowHive co-inventor, at The Farm at SOU, along with hands-on beekeeping workshops by Dr. Wu-Smart* and Dr. Milbrath*, a bumble bee workshop on Mt. Ashland with Dr. Jamie Strange*, and a bee-friendly vineyard tour and wine tasting at Irvine & Roberts Vineyard*.

Every aspect of this weekend has been designed with the conference theme in mind, "Hive Mind for the Greater Good." You are guaranteed to come away knowing new friends and feeling refreshed and inspired.

Second, the potential of WAS! This topic isn't quite as clear, as WAS is now in its 42nd year and has meant so many things to so many people over the years. Let's just be honest, many have had great experiences, others have



*Additional fees apply; online registration only.

found the dynamics more than challenging. For the last few years, I've been holding "town hall" type meetings at WAS and in other arenas to listen to beekeepers about what they need. I meet with "next gen" beekeepers to define issues in the beekeeping world, brainstorm solutions, and develop action items for positive change. I've hosted about a dozen meetings from coast to coast, and from small, rural towns to great big cities. One thing is for certain, every group's needs are different. Every person's needs are different. But there is one resounding theme, people love being brought together (in a friendly atmosphere) to talk about what is important to them, and leaving the room feeling like they have a fresh set of ideas on how to leave a legacy of making their world a better place. So, this is what I would like the Western Apicultural Society to do for the beekeeping community.

Myself and the WAS executive board have been working hard to envision what this means. I know I speak for all when I say, thank you for being members of WAS and for electing us to these offices and trusting us to guide the organization forward! None of us takes this task lightly, and we have devoted countless hours thinking about, discussing, and taking action on the future potential and sustainability of this organization!

Among the current benefits that WAS offers to the beekeeping community are: an annual conference, a scholarship fund for full-time students to attend the conference, a research fund, the *WAS Journal*, a website full of great resources, and social media and newsletter platforms for WAS beekeepers to share their innovations and ideas.

Going into the future, we would like to keep all of what we do, especially continuing the conference, and also work to build capacity by getting our individual states more involved through organizing small community events and expert panels, supporting state directors working on legislation, offering a directory for you to

connect with each other, and more!

However, this vision is not possible without additional support in the form of staff. We have come to the realization that (even to carry the conference forward) the organization needs leadership consistency from year-to-year by individuals who are compensated for their hard work.

In the upcoming weeks, the board will be discussing fundraising strategies, including a membership fee increase. I hope you will join me in feeling great about supporting this organization to continue our work and to build even more capacity, for the price of a fancy cup of coffee per month!

Speaking of changes, please do take a look at the proposed changes to the WAS bylaws on page 25. Your bylaws committee members are a diligent and eagle-eyed group of individuals who have put countless hours into making this document comprehensive. Thank you, team!

I'd also like to draw your attention to the WAS website to learn about one of my favorite things, food! There you will find menus of the food that is included in your conference registration (and the list of farmers, ranchers, and fishermen who produced it).

I worked diligently for weeks with our conference venue to ensure the chef sources food from local, sustainable producers to create a menu that supports bee-friendly practices. We feel that we can make a positive difference in our community by supporting the local food system with an event of this magnitude, so thank you for being a part of this event and helping to create positive change!

You'll be treated to some seriously good eats in Ashland, and we can't wait to lift a glass with you.

I'm looking forward to seeing you this summer.

Carol F. Dahl-Land

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2019 WAS Conference Preview

July 12



Marla Spivak

Welcome to WAS!

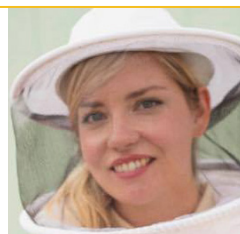
Marla will live-stream to the conference from her lab in Minnesota to give a welcome to the attendees and an introduction to the significance of the conference theme, “Hive Mind for the Greater Good.”



Katrina Klett

Beekeeping in the Mountains

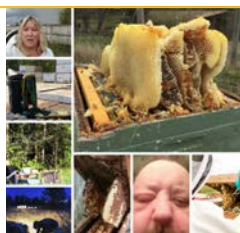
Beekeeping can be an amazing option for rural people. Katrina will tell her story from Western China and the triumphs and tragedies faced in the building of a beekeeping operation that serves as a means of employment for people living very rurally. Beekeeping as a job for rural people is relevant outside of developing countries.



Hilary Kearney

Broadcasting your Beeswax

The Business of Storytelling – Hilary (Girl Next Door Honey) shares her adventures and misadventures in both beekeeping and business. Learn how storytelling has shaped her success and how you can use it drive yours.

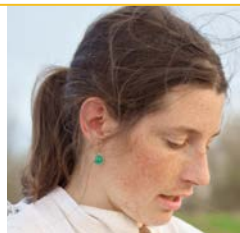


Cosmos Ballroom

#beekeeperfail Storytelling Hour

Let's share in the comedy that is beekeeping. Remember that one time you made your dad move hives with you at 1:00 AM, that one time you watched a whole box of bees roll down a hill, or how your best friend got stung 50 times because . . . ? This is a time to get it all out and forewarn others in the good company of friendly beekeepers.

July 13



Meghan Milbrath

Toward Treatment-Free Beekeeping

Every beekeeper wants to be treatment free, but many beekeepers who are trying to reduce chemical inputs end up losing lots of bees. Meghan will discuss the philosophy of treatment-free beekeeping and the theory behind some of the common practices. She'll discuss a plan that allows you to keep bees with minimum inputs that doesn't put your bees at risk.



Aquarius & Andromeda

Roundtable Speaker Speed Swarming

Sit with conference speakers in a small group, introduce yourself, and ask any questions you have—from protecting bees from pesticides to charges for honey to planting for the bees to making bee art to enhancing social media presence to . . . We will sound *The Flight of the Bumble Bee* every 20 minutes to signal you to move to the next expert.

2019 WAS Conference Preview

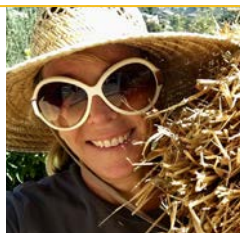
July 13
continued



Judy Wu-Smart

Making Sense of Bee Research and What it Means for Me

Science can often provide overwhelming amounts of information. While knowledge is key to success, too much knowledge can hinder our ability to make good management decisions. Judy will highlight recent honey bee research and relate how this information can be utilized in our apiaries and management practices.



Robin Jones

Creating Buzz with Social Media (Concurrent I)

Robin's interactive, how-to workshop with Q&A will empower your presentation, personality, or brand on social media. Leave with a clearly defined brand mission and insights on: Strategy, Campaigning/Best Practices, Brand Personality, Content Development, Art Direction/Photography, Beating the Algorithms, Keeping Up, Making it Measurable.



Anna Gieselmann

The Art of Bees (Concurrent I)

Anna, of Bee Amour Jewelry, offers a unique workshop about creating art with bees. She will briefly talk about how she uses her designs, such as jewelry and sculpture, to teach and inspire people about bees. She then will give a live demo showing how to create jewelry using resin, bees, and flowers.



Ann Ketter

Bees and Pesticides and Plants and Us (Concurrent I)

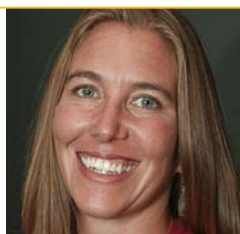
Ann will focus on three topics during her presentation: the realities of neonic pesticides, the coexistence of emerging industries (bees, marijuana, and hemp), the pathways to communicate with the state about bee kills, drift issues, and questions you may have.



Katrina Klett

Queen Breeding (Concurrent II)

Katrina's workshop is for those who have been beekeeping for at least a few years. She will use the double screen method to show how to create a cell builder and finishing colony in one! If time, participants will practice building the colony and grafting. Katrina will talk about the most important things to remember to begin doing this by yourself.



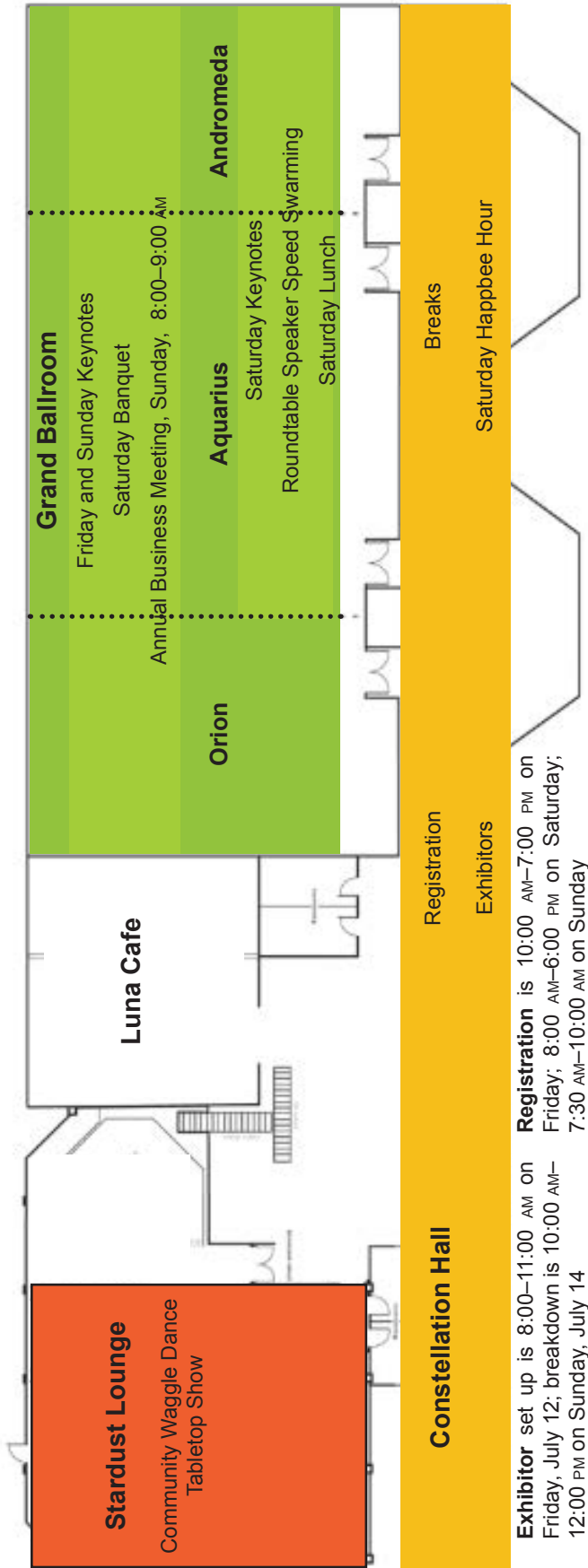
Molly Romero

Health Through Honey Bees (Concurrent II)

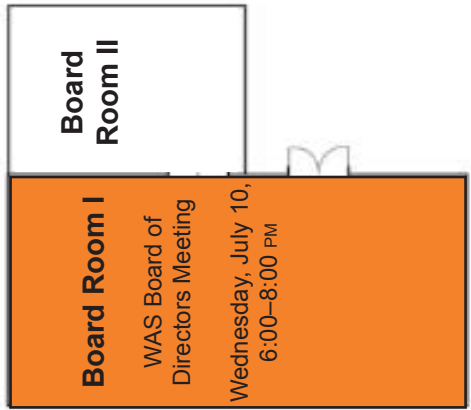
Propolis, honey, wax, pollen, royal jelly, and the bees themselves can all be used to have a healthier life. A variety of benefits can be obtained simply by incorporating these products into your daily life. Molly is thrilled to be able to share the many, many, many elements of health through your hives.

2019 WAS Conference Site Floor Plan

ASHLAND HILLS & SUITES AND CONVENTION CENTER MAIN LEVEL



UPPER LEVEL



LOWER LEVEL



Conference Venue

Ashland Hills Hotel & Suites and Convention Center
2525 Ashland Street
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Note: Add-On Workshops and Tours will take place at off-site locations in the area.

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Jim Tew talks about all the old authors

L. L. Langstroth talks about My Hive

A. I. Root talks about the beginnings of the beekeeping industry

Wyatt Mangum displays and discusses early beekeeping equipment

Tammy Horn Potter looks at the history of women in Beekeeping

Gerry Hayes looks the history of the industry organizations, groups, movements

Gabe Dadant talks about the history of the Dadant Company

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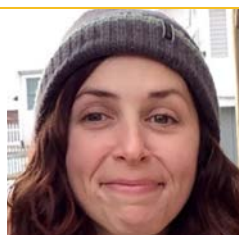
Join us in the conference room at 640 W. Liberty, Medina, OH

Registration begins May 1 and space is limited so don't wait!

Register Now!
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2019 WAS Conference Preview

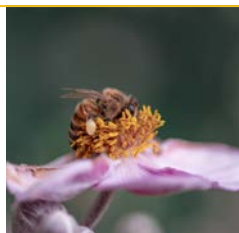
July 13
continued



Kathryn Prince

Designing Native Bee Habitat on Farms *(Concurrent II)*

We will meet the native bees of North America and learn about how they contribute to pollination. We will also dive into how to farm for bees, including lessons learned from the Xerces Society's work in the western US. Participants will come away with the knowledge necessary to plan and incorporate pollinator habitat into farmland.



Stardust Lounge

Community Waggle Dance Tabletop Show

During this session, participants are invited to visit tabletops set up with a range of projects, ideas, and innovations that are original, relevant, and hold potential (current or imagined) for service to the bee community—both human and hymenopteran (including honey bees, bumble bees, and solitary bees).



Grand Ballroom

WAS Annual Banquet

Our banquet program will be kept to 15 minutes, enough time to recognize a few of our hard-working beekeepers who emulate our theme of "Hive Mind for the Greater Good." Then the night is all yours to savor your meal, and connect and reflect with those around you. Choose from three main courses with salad and Ganache Cake.

July 14



Klett & Red-Laird

Annual Meeting | Designing Spaces for Bees and Butterflies

Annual Business Meeting (Be There!) followed by a look at a movement going on in the United States and elsewhere to begin planting for pollinators and in the process designing beautiful and functional urban, small town, and rural spaces. Katrina and Sarah will highlight some inspiring examples and tell how you can get involved right now.



Local Farms

Rogue Valley Farm Tour

This free family event brings you directly to the farmers, land, and animals that produce the delicious local food we enjoy in our fertile valley. Visit multiple local farms and vineyards around the Rogue Valley, participate in a variety of activities from tastings to field tours, and learn about the abundance of our local food system.



Anderson & Red-Laird

Flow Hive Demonstration and "Seeds for Pollinators" Project Tour

Experience a live Flow honey harvest and tasting with discussion about the invention of the Flow Frame technology and where it is being used around the world. Then join Stuart and Sarah on a tour of the "Seeds for Pollinators" project that is on-site at The Farm. This multi-year project will culminate in creating new organic seed mixes.



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- ~Gains in Research

and more!

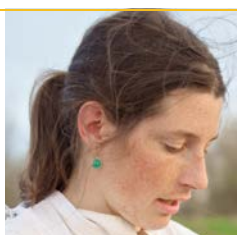
www.AHPAnet.com



2019 WAS Conference Event Preview

July 14

Add-On
Classes



Meghan Milbrath

Never Buy Bees Again*

In this hands-on class, Meghan will discuss options for making late-season splits. Late-season nucs and splits are not only a way to make increases but also can be used as a way to introduce desirable genetics and perform mite control. There are many ways to make splits so you can improve your chances of overwinter success and backups for spring.



Judy Wu-Smart

Troubleshooting Hive Problems*

Identifying a failing colony isn't difficult, but figuring out the cause can be. Come learn how to thoroughly inspect and rule out potential stressors from queen failures, brood diseases, pesticide exposure, poor nutrition, Varroa, and more. Learn to diagnose hive issues in order to boost strength, maintain productivity, and mitigate further decline.



Jamie Strange & the
USDA Logan Lab Team

Introduction to Bumble Bee Diversity*

We will use insect nets to capture bees, then learn how to chill the bees so that they can be safely handled, identified to species, then released back into the wild. There are 15 species of bumble bees that can be found on Mount Ashland, and we will learn to identify the most common species using a hand lens and an identification guide.



Irvine & Roberts
Winery

Wine Tasting and Bee Friendly Vineyard Tour*

Join us at the vineyard for a tour of our bee habitat project, and learn the steps Irvine & Roberts Vineyard is taking to be more bee friendly. Find out why this partnership is unique, special, and essential in the Rogue Valley. Take home pointers on how to work with your local vineyards or other land managers, to be a friend to the bees.

Daily



Krista Holland

Bee Yoga

Krista has dedicated much of her life to sharing her passion for yoga. Her teaching blends the wisdom of mindfulness and meditation with an in-depth knowledge of yogic alignment and biomechanics. Her teaching style has its base in traditional hatha yoga and honors both the solar and lunar aspects of yoga practice.

2019
T-Shirt



Conference T-Shirts

2019 WAS T-Shirts in two styles are available through conference registration for on-site pickup.

Reminder: Saturday Lunch and evening Banquet as well as conference Breaks and Happbee Hours are included with registration.

*Add-On Workshops and Tour require an additional fee for attendance. They are available through *online registration* only.

Getting to Ashland

By auto, Ashland is centrally located halfway between Portland, Oregon and San Francisco, California, about 15 miles north of the California border and easily accessed from Interstate 5, Exit 14, as well as other routes. Once you arrive, enjoy navigating Ashland as a driver, pedestrian, or cyclist. For trails and bike routes, request an Ashland Map Guide from: www.ashlandchamber.com.

By air, fly into the Rogue Valley International Airport (MFR), located in **Medford**, with commercial flights provided by: Alaska, Allegiant Air, American Airlines, Delta Connections, and United Express offered through SkyWest. (The airport in Ashland is a municipal airport.) From there, ground transportation to Ashland is available through shuttle and cab services.

- Crater Lake Taxi: 541.333.3333
- Cascade Airport Shuttle: 541.488.1998
- Yell Oh Taxi: 541.973.0800
- Super Saver Rent-a-Car: 541.482.2521

Rental car services include Alamo, Budget, Hertz, National and Enterprise.

By train, AmTrak's stations are 70 miles east of Ashland in Klamath Falls, Oregon, and 75 miles south in Dunsmuir, California. Daily bus service provided by Greyhound Trailways and The Shuttle, Inc/Southwest Point from Klamath Falls. See: www.amtrak.com or www.southwest-point.com; 541.883.2609.

Tickets for the Southwest Point shuttle must be purchased through Amtrak or at the station. The Southwest Point Shuttle does not take reservations.

If traveling **by bus**, the Rogue Valley Transportation District (RVTD) provides public transit service Monday–Saturday throughout Ashland and the Rogue Valley. For information, see: www.rvtd.org.

Staying in Ashland

Ashland Hills Hotel & Suites and Convention Center
2525 Ashland Street
Ashland, Oregon 97520

www.ashlandhillshotel.com

is a short drive from downtown Ashland. Venue for the 2019 WAS Conference, the hotel has kindly provided a *Courtesy Group Rate* extension for reservations until 30 days prior to the conference. (Thank you, Ashland Hills!) The deadline for reduced pricing on rooms is **June 10**.

To reserve your room, phone the Hotel directly at 541.482.8310 or toll free 855.482.8310. Take care to mention “Western Apicultural Society Conference group discount” in order to receive the reduced rate.

If you would like to stay at Ashland Hills Hotel & Suites, the reduced rate is: \$149 King Rooms; \$159 Queen-Queen and Premium King Rooms; \$169 King Suites and Double-Double Suites. The hotel is newly renovated with one-of-a-kind, retro-modern furnishings. It is located on a 14-acre property overlooking the hills of Ashland. Guests are invited to enjoy the following hotel amenities and services:

- Complimentary continental breakfast
- Free WiFi
- Outdoor pool and jacuzzi
- Two tennis courts
- Bikes for rent (fee)
- Fitness rooms
- On-site LUNA Café + Mercantile
- Business center access
- Shuttle to downtown (fee)

If you would like to stay off site, there are plenty of other options! For example, you may peruse local homes at:

airbnb.com

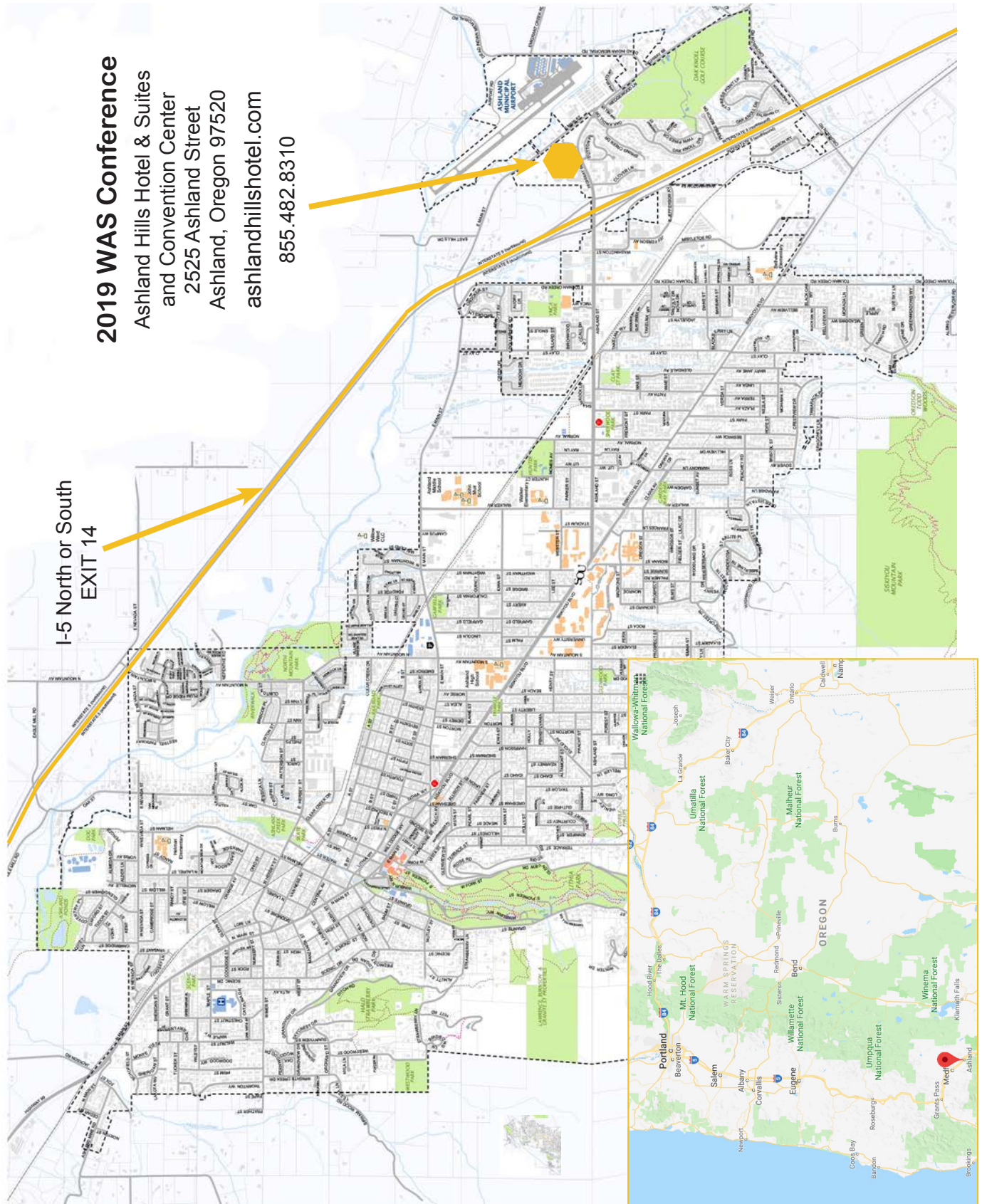


Conference Venue

Ashland Hills Hotel & Suites
and Convention Center

2019 WAS Conference Location

July 12–14, 2019 | Ashland, Oregon



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Apivar > The trusted strip



One single application,
up to 99% efficacy¹
long period of protection



Safe for honey
Safe composition of amitraz
and plastic strip only²



Not harmful
to brood and bees³



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leader
30+
countries



5+
million
colonies
treated
per year

varroa
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facebook.com/vetopharma

Contact: Frederick Proni, North America Area Manager
214-675-7464 or frederick.proni@vetopharma.com

1 - Efficacy tests: Anti-varroa treatments - FNOSAD (National Federation of Departmental Apian Health Organizations) 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015 and 2016 - France // 2 - Amitraz residue transfer into honey from Apis mellifera hives treated with Apivar® - Jeff Pettis, USDA-ARS, Beltsville, MD USA - 2013 // 3 - Apivar registration dossier (2015). Study 2026-2015 - Testapi

Vétô-pharma
Committed to apiculture

And you may find inns, bed and breakfasts, and additional hotels through travel sites and the Ashland Chamber of Commerce, which is at:

www.ashlandchamber.com

More options include the following:

Molly's Glampground

If you would like a fantastically fun, unique, and affordable stay, check out Molly's Air BnBs. These are less than a mile from the conference.

RV and Tent Camping

Emigrant Lake Recreation Area: Close to downtown Ashland and very convenient. First come first serve campgrounds and an RV park that takes reservations. Jackson County Parks – 541.774.8183

Glenyan RV Park and Campground: Also very close to downtown (just across the street from the entrance to Emigrant Lake). Very friendly and with beautiful grounds – 877.453.6926

Tree of Heaven Campground: A beautiful Forest Service site right on the Klamath River. It is located about 45 minutes from Ashland on the California side of the border – 530.493.2243

Conference Parking

Wherever you may plan to stay, please note that there is no parking fee for folks attending conference events.

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Vitamin B Healthy® - provides needed nutrients for bee health to build strong healthy colonies.

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Call: 866-542-0879 www.honeybhealthy.com



Dining in Ashland

As with lodging, we'll have numerous options for food while in Ashland—starting with the conference itself. Included with registration are . . .

- HappBee Hour on Friday with platters of cheese, antipasto, and fruit
- Saturday's Mediterranean Pasta Lunch Buffet
- HappBee Hour on Saturday with platters of grilled veggies and fruit
- The WAS Banquet on Saturday Eve, with main dish choices of Oregon Country Natural Flat Iron Steak, Oregon Coast Wild Caught Blackened Cod, and Polenta Ratatouille

The food is farm to table. Complete menus for all meals are posted at: www.westernapiculturalsociety.org

Although we will not be providing breakfast at the conference, a delicious morning meal is included for those who are staying at the Ashland Hills Hotel.

Among the dining options in Ashland are:

- Deli at Ashland Food Co-op
- Flip
- Larks Home Kitchen Cuisine
- Luna Cafe (in Ashland Hills Hotel)
- NW Raw
- Smithfields
- Standing Stone Brewing Company
- Taj

In addition, in nearby Medford, find:

- Common Block Brewing Company
- Larks Home Kitchen Cuisine

And in Jacksonville, consider:

- C St. Bistro
- Chef Kristen's Jefferson Farm Kitchen



PRECONFERENCE ADVENTURES

Rogue River Rafting

The Western Apicultural Society Trip will begin with a 9 AM pick-up at Ashland Hills and return at 2 PM. Cost is \$75 with lunch included.

Trip information: www.momentumriverexpeditions.com/trip/rogue-river-half-day

To sign up online: yourtrip.momentumriverexpeditions.com/reserve/res9023-western-apicultural-soc

To sign up by phone: Call 541.488.2525 and ask to join the **Western Apicultural Society** group.

Oregon Shakespeare Festival

2019 WAS Conference attendees receive a 10 percent discount on selected performances at the Oregon Shakespeare Festival on July 11 and 12, 2019.

July 11, 8:00 PM

Alice In Wonderland – Allen Elizabethan Theatre

As You Like It – Angus Bowmer Theatre

July 12, 8:00 PM

All's Well – Allen Elizabethan Theatre

Indecent – Angus Bowmer Theatre

The Promo Code will be sent on registration for the conference.

Information about the Oregon Shakespeare Festival and current performances: www.osfashland.org

To purchase tickets: www.osfashland.org

Please note that ticket sale(s) are final, with no refunds or exchanges.

More Fun in Ashland

For all who are attending the 2019 WAS Conference, in addition to the Pre-Conference Adventures, the Ashland area offers access to a wealth of opportunities for exploration and discovery, including the outdoors, trails, and parks, museums, and local wineries. Among area attractions are:

- Ashland Artisan Emporium
- Ashland Library
- Ashland Vineyards
- Belle Fiore Estate & Winery
- Bluebird Park
- Britt Music Festival
- Dana Campbell Vineyards
- Downtown Plaza
- Eliana Wines
- Emigrant Lake
- Gathering Glass Studio
- Grizzly Peak Trail
- Grizzly Peak Winery
- Hald/ Strawberry Park
- Historic Pinehurst Inn
- Irvine & Roberts Vineyards
- Lithia Park
- Long Walk Vineyard
- Mount Ashland
- North Mountain Park
- Oakleaf Studio
- Oregon Shakespeare Festival
- Paschal Winery
- Schneider Museum of Art
- The OSF Green Show
- Thomas Lee Gallery
- Trails for hiking and biking
- Valley View Orchards
- Weisinger Family Winery

Gems Along the Way . . .

- Crater Lake National Park
- Oregon Caves National Monument
- Oregon Coast
- Mt. Shasta
- Redwood National Park
- Smith River/Jedediah Smith State Park

Conference Deadlines

June 11 – Early-Bird Conference Registration (online submission or postmark)

June 27 – Postmark for Mail-In Conference Registration

July 8 – Online Registration (can register on site)

**No refunds for cancellations received after June 27
or for no shows**

Ashland, Oregon July 12-14, 2019
REGISTRATION FORM



***Required Please print clearly!**

*Name(s): _____
As desired on name tag(s)

Affiliation: _____

*We would like to make your name and affiliation available to others in conference materials on the website. Is this okay with you? _____yes _____no

*Mailing Address: _____
Street/Box Number

City: _____ State/Province: _____ Zip/Postal Code: _____

*Phone: _____ (cell/mobile) _____ (home) *e-mail: _____

*A signed copy of the Terms and Conditions for each person registering is enclosed. _____yes

Conference Rates ¹		Cost/Person	x Number	= Total
Full Registration before June 11/AFTER ²		\$200/\$225 US	x _____	= _____
Friday Registration before June 11/AFTER ²		\$75/\$85 US	x _____	= _____
Saturday Registration before June 11/AFTER ²		\$125/\$140 US	x _____	= _____
Full-Time Student Registration ³		\$95 US	x _____	= _____
Saturday Banquet Choice (please indicate choice below for each Saturday attendee)				
_____ OR Cntry Natl Flat Iron Steak _____ OR Coast Wild Caught Blacknd Cod _____ Polenta Ratatouille				
Women's T-Shirt ___S ___M ___L ___XL		\$20 US	x _____	= _____
Men's T-Shirt ___S ___M ___L ___XL ___XXL ___XXXL		\$20 US	x _____	= _____
Dues (from below)				= _____
TOTAL AMOUNT ENCLOSED ^{4,5}				\$ _____

Optional Membership in the Western Apicultural Society	Individual	\$20 US	_____	10 Year		
	Family	\$30 US	_____	Individual	\$200 US	_____
	Junior (<21 years)	\$15 US	_____	Family	\$300 US	_____
	Senior (≥65 years)	\$15 US	_____	Benefactor	\$500 US	_____
	Senior Family	\$20 US	_____	Patron	\$1,000 US	_____
	Association	\$20 US	_____	Print Journal	\$20 US	_____
	Business	\$100 US	_____	Digital Journal	—	_____

Total Dues (please add total to the above and include a Membership Form) \$ _____

¹ **Full Conference Registration** includes includes hors d'oeuvres on Friday and Saturday, as well as lunch and the banquet dinner on Saturday. Single-day registration includes respective meals.

² Early registration form and payment must be postmarked no later than **June 11, 2019**. Use higher option AFTER June 11. On-site registration fees are increased above these; register early!

³ Must present student ID, proof of full-time enrollment (tuition invoice, schedule, etc.) at registration.

⁴ Payments in US funds only with check or money order payable to **Western Apicultural Society** and postmarked no later than **June 27, 2019. Mail to:** WAS Treasurer, Sherry Olsen-Frank

PO Box 5274, Twin Falls ID 83303-5274

or **Register Online** at westernapiculturalalsociety.org through PayPal and with debit/credit card.

⁵ Full refund if cancellations are received by **June 27, 2019**. No refunds after that date or for no shows.

Decoding the Songs of Bees for Improved Colony Health

Jerry Bromenshenk, Robert Seccomb, Colin Henderson, and David Firth—Bee Alert Technology, Inc, Missoula, Montana

NPR 02/18/2019, Headline: Massive Loss of Thousands of Hives

This article underscores a fundamental problem. There isn't a system for early detection and rapid reporting of emerging colony health issues, when and where these occur, in the US, Canada, and most countries. Bees need the equivalent of the USA's CDC human influenza updates and mapping. This problem can be solved immediately by just one of the functions of *Bee Health Guru*—our app for smartphones, where the bees themselves are the guru, indicating colony health by the sounds that they produce.

For 12 years, we have been working towards providing a hand-held device for sensing, analyzing, and reporting colony condition. As with a Star Trek Tricorder™, our bee-sound recording and analysis system uses machine intelligence (AI) to analyze colony sounds. In 2012, we built several hand-held bee-recording devices that were big, expensive, and clumsy to use. Smaller, affordable, user-friendly devices with rapid processing and large storage capabilities were unattainable until 2018, when smartphones with facial recognition for security were marketed. Facial recognition uses AI, thus requiring fast processor speeds. It's a visual counterpart to our AI sound-recognition programs. Suddenly, our AI analyses that had taken several minutes on existing tablets, laptops, and earlier smartphones dropped to seconds!

The primary purpose of our Bee Health Guru app is to allow the bees themselves to communicate each colony's health status. Recordings of colony sounds are made using a smartphone's internal microphone or microphone port with a slender microphone. Analysis of a sound recording is immediately and automatically performed by our Bee Health Guru AI program. Our algorithms assign the probability that one of eight conditions is exhibited by the colony. A form then appears on the phone's screen that provides the user the option to visually inspect the colony to confirm its condition, and then save an inspection report.

These three actions, i.e., (1) recording colony sounds, (2) predicting the likelihood of specific diseases, and (3) reporting the outcome of colony inspection, provide data needed to fine-tune our AI modules and map occurrences of different colony problems. The latter will initially be based on visual inspection reports and eventually should

be based on the AI analysis reports alone—no inspection needed as the app's accuracy improves.

A Bee Health Guru recording takes 30 seconds. My Android 8+ phone analysis for all eight colony health factors takes 12 seconds. Filling out the inspection form takes less than a minute, but visually inspecting a colony does take more time. This last step, colony inspection, is critical during the early stages of app use. It's where app users can become citizen scientists and contribute to our ability to accurately decode colony sounds.

Following recording and generation of an analysis report by the app, the user is asked to visually inspect the colony to either confirm or reject the app's sound analysis. A click of a button reveals a simple drop-down inspection form. The report is filled out at-the-hive and takes only a few keystrokes to complete, and then a click of another button uploads the report, as well as any notes and photographs, to our Cloud-based data archive. The app automatically creates a copy of the recording, the AI colony health analysis report, and adds date, time, and GPS location. Resultant electronic records have safeguards for protecting data privacy, confidentiality, and security of beekeepers (i.e., names and hive or apiary locations) and the patients, bees who may be sick (e.g., locations).

Once all of this information is posted to our Cloud-based recording, analysis, and inspection data repository, we can accomplish two tasks: (1) refining, retraining, and upgrading the AI modules for each health factor analysis, and (2) mapping of colony health trends over time and geographical space to share with citizen scientists and anyone else interested in bee health.

Refining the App

Unlike other honey bee acoustic scanning and monitoring systems (mainly from Europe), our programs do far more than look for simple frequency markers of overall colony noise and do not rely on the user to interpret sonograms. Our custom AIs assess a broad and complex spectrum of sound attributes far faster and better than any person could accomplish. This standardizes the analysis. Results are comparable from colony to colony without observer inaccuracy or bias, and no training of the observer is required.

For example, if the app reports a high probability

that a colony lacks a laying queen, the inspection report should either prove or disprove that analysis result. By having hundreds or thousands of examples provided from users of our app, we can take all of the recordings that the app got wrong, all of the recordings that the app got right, and retrain the AI. It's an iterative process that we know will refine and improve app accuracy.

Mapping Health Trends

As soon as visual colony inspection information is secured, automated updates and posting of incident maps can be readily produced using off-the-shelf interactive data visualization software. Posted maps will provide sufficient resolution to identify, for example, an outbreak area of Varroa mites, but will not pinpoint the actual location of affected colonies.

To enact the health trend mapping part of our app, we need beekeepers with smartphones, Android or iPhone, to download our app, inspect colonies, and in a timely manner, post the reports to our Cloud site. Our app stores all recordings and reports on each phone until the reports can be uploaded. Cellular service in the bee yard is not necessary. Obviously, we hope that every user also records colony sounds so that we get recordings and AI analysis results, but just the colony inspection reports alone can be used to generate bee health maps.

The inspection and reporting part of our app, by itself, should revolutionize bee health protection—early alerts, based on visual inspections, as soon as the reports are uploaded. Any beekeeper with a smartphone, anywhere around the globe, will be enabled to submit reports or bee colony health problems as they are discovered. Initially, we have limited the health reports to eight major factors, such as Varroa mites, foulbrood, Nosema, queen status, and other aspects of overall colony condition.

All of this is based on relatively recent progress in insect and bee ethology (behavior). An excellent overview appears in *Insect Sounds and Communication* (Drosopoulus and Claridge, 2006). We now know that in addition to the well-known symbolic dance language, bees also communicate via sound, using both vibratory and airborne-sound signals.

We can record these signals by laying either a phone's built-in microphone or a slender, external microphone on the bottom board of the hive. Our discovery, formalized in acoustic monitoring and recording system patents, published in the US and Canada (Bromenshenk et al., 2015) was that we can decode bee-produced signals to identify colony exposures to hazardous and toxic

chemicals, including often the category of chemical, as well as discern a variety of colony health conditions, and even rank the level of infection or infestation of bee diseases and pests. Furthermore, bee sound or song repertoires are far more complex than can be perceived by the human ear, with frequencies beyond our audible range and additional components such as amplitude, pulses, shifts, and other related signals all contained in the airborne sound and vibratory spectrum.

Which raises the question: Can bees perceive these sounds and vibrations that they produce? Bees and many other insects have long been considered to be deaf to airborne sounds. Around 1940, Hansjochem Autrum and associates demonstrated that many insects perceive minute substrate vibrations and that some insects have hair-like structures can function as sound velocity and airborne sound receptors. But, it wasn't until the 1990s that scientists found evidence that flies and bees appear to be able to perceive airborne sounds through the Johnston's organ with movement of the flagellum of the antennae.

Modern capabilities for recording, manipulating, playing back, and analyzing the acoustic signals of honey bees and other insects have made acoustic behavior an advanced and active area of insect ethology. We are just now beginning to realize that the bee dance movements are only one part of a bee colony's communications. Communication processes of social bees that coordinate hundreds or thousands of individuals in a colony are fascinatingly complex. We have a means of tapping into colony communications.

Why do we need to fine-tune and calibrate?

When using high-end recorders and desktop computers, the accuracy of detection for the eight included factors ranged from 86 to 98 percent detection, based on over a decade of our own intensive research. Our AI programs learn and improve when we've got real recordings from colonies with specific visible health factors. We now need to know which phones provide an accurate recording and which do not. We've also learned the bees have accents. New Zealand bees produce somewhat different sounds than North American bees, and bees from the UK are different from either America or New Zealand.

When launched in the fall of 2017, we anticipated that it would take three months to produce and beta test our Bee Health Guru app. It took two years! It's not a finished product, but we are close to the finish line. That's where lots of beekeepers and bee colonies are needed. It's

WAS Presidents

- 1978 **Norman Gary** (California)
1979 **Lucien Alexander** (Oregon)
1980 **Randy Barker** (British Columbia)
1981 **Charles Duncan** (California)
1982 **William P Nye** (Utah)
1983 **John Edwards** (Washington)
1984 **Eric Mussen** (California)
1985 **Mike Burgett** (Oregon)
1986 **Doug McCutcheon** (British Columbia)
1987 **Tom Muncey** (Nevada)
1988 **Dan Mayer** (Washington)
1989 **Stan Williams** (California)
1990 **Mark Shelton** (California)
1991 **William P Nye** (Utah)
1992 **Mike Burgett** (Oregon)
1993 **Mark Winston** (British Columbia)
1994 **James Bach** (Washington)
1995 **Eric Mussen** (California)
1996 **Russell Messing** (Hawaii)
1997 **Eric Erickson** (Arizona)
1998 **Steve Sheppard** (Idaho)
1999 **Leonard Joy** (Nevada)
2000 **Fletcher Miller** (Alaska)
2001 **Mike Burgett** (Oregon)
2002 **Eric Mussen** (California)
2003 **Jaquie Bunse** (British Columbia)
2004 **Jerry Bromenshenk** (Montana)
2005 **Steve Sheppard** (Washington)
2006 **Adrian Wenner** (California)
2007 **Diana Sammataro** (Arizona)
2008 **Mark Pitcher** (British Columbia)
2009 **Eric Mussen** (California)
2010 **Dewey Caron** (Oregon)
2011 **Jenny Bach** (Hawaii)
2012 **James K Smith** (Washington)
2013 **Melanie Kirby** (New Mexico)
2014 **Jerry Bromenshenk** (Montana)
2015 **Beth Conrey** (Colorado)
2016 **Ethel Villalobos** (Hawaii)
2017 **Eric Mussen** (California)
2018 **Steve Sweet** (Idaho)
2019 **Sarah Red-Laird** (Oregon)

what we intend to do this summer—calibrate the sound and vibration signal decoding!

This spring (April) we will launch our app to the public on Kickstarter. We hope that every beekeeper in the world with a smartphone will support this launch and then download, use our app, and upload the results. That has the potential to generate a massive data set. To properly address that rich resource, we need to be able to have a team ready and willing to process the initial data, retrain the AIs, and enact regional bee health mapping—for the US, for Canada, for Europe, for New Zealand, for Australia—for any English-speaking nation. And then we need to produce versions of the app in other languages so as to truly go global.

Bromenshenk et al. 2015. Bees as Biosensors: Chemosensory Ability, Honey Bee Monitoring Systems, and Emergent Sensor Technologies Derived from the Pollinator Syndrome. *Biosensors* 5(4), 678–711; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4697140>.

Drosopoulos, S. and M.F. Claridge. Editors. 2006. *Insect Sounds and Communication: Physiology, Behaviour, Ecology and Evolution*. 32 Chapters. CRC Press, 553 pp.

Note: First Printed in *Bee Culture* magazine.

Follow Best-Management Practices When Planting Treated Seed

WASHINGTON (April 15, 2019) – An agricultural industry collaboration led by Growing Matters, a coalition committed to neonicotinoid product stewardship, today launched “BeSure!” – a stewardship-awareness campaign to promote best-management practices to farmers and applicators who use neonic products.

Powered by Growing Matters along with the American Seed Trade Association (ASTA) and the National Pesticide Safety Education Center (NPSEC), BeSure! is designed to strengthen awareness of stewardship practices to protect bees and other wildlife during the handling, planting and disposal of treated seeds, and from other neonic applications used throughout the growing season.

As farmers and applicators take to the field for planting, they’re reminded to do the following:

- Be sure to always read and follow the label when using treated seed
- Be sure to use the right amount of an appropriate seed lubricant to minimize dust
- Be sure to clean planters in nonsensitive areas and clean or cover up any seed spills

Go to **GrowingMatters.org** for tips and reminders.

Proposed Changes to WAS Bylaws

2019 Bylaws Committee—April 2019

The Bylaws Committee, composed of Sherry Olsen-Frank, Steve Sweet, Jerry Bromenshenk, and Jaylene Naylor met via conference call several times during the beginning of 2019 to propose changes to the WAS Bylaws. These changes are summarized here and the full document, including proposed changes, is available at:

westernapiculturalsociety.org/about-w-a-s/bylaws

The biggest proposed changes involve eliminating the offices of 1st and 2nd Vice President in favor of one Vice President and one Conference Chairperson. Additionally, the terms of the President, Past President and VP will be extended to two years in order to provide some measure of continuity. The thought is that the President will not be responsible for hosting and doing all the planning for the Annual Conference, and would then have much needed time to grow WAS. The Conference Chairperson will be selected two years in advance of the Annual Conference he/she will be hosting at their location. This should help greatly in developing a very well planned conference.

Article I - Name

We propose to move the incorporation of the organization from California to Idaho in order to reduce costs and the challenges associated with nonprofit status in California.

Article III - Membership

In order to simplify and to reduce confusion, we propose to eliminate family membership, replace junior member with student member, and eliminate 10-year membership.

Article V - Conduct of Business

Section 2. We propose to have the Executive Committee consist of the President, Vice President, Secretary, Treasurer, Past President, and Member-at-Large (who is elected by the Board of Directors). The Conference Chairperson and Editor are ex-officio members of the Executive Committee and are appointed by the Board of Directors.

Article VI - Officers

The main proposed changes here involve reference to a WAS Officers Job Description document, a draft of which will be written and available for inspection in the next few months.

Article VII - Board of Directors

Section 6. We propose to explicitly state that the Board of Directors may also approve a sum toward the lodging and meal expenses for Society business and registration fees for the Annual Business Meeting for the Editor.

Article X - Committees

We propose to add a section stating that the current listing of committees, including their members, will be posted on the WAS website.

Section 3. We propose that the location for the annual conference be selected a minimum of one year in advance.

Article XII - Finances

We propose that the Conference Chairperson and President will submit an annual budget that includes the annual conference expenses. Contractual agreements and expenditures outside of the approved budget will need to be approved by the Executive Committee.

Article XIII - Annual Conference

Section 1. Placed in italics to emphasize the importance of the Society's purpose to promote the art and science of beekeeping stated in Article II, Section 1.

Article XIV - Annual Business Meeting at Conference

We propose to clear up some of the possibly confusing language regarding the timeline of events at the annual business meeting.

The vote on the proposed changes to the WAS Bylaws will take place during the Annual Business Meeting at 8:00 AM on Sunday, July 14, at the WAS Conference in Ashland. Please take care to review ahead of time. Whether or not you are able to attend the conference, send comments to WAS Secretary Cyndi Smith, at: onthegocgs@comcast.net.



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of the Beekeepers
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Nationwide.*

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Beekeepers' Calendar

May 1: **Bay Area Bee Audacious.** Information: www.eventbrite.com/e/bee-audacious-bay-area-tickets-56534906427.

May 18–19: **Oregon Honey Festival.** Information: www.oregonhoneyfestival.com.

May 19: **Wonders of the Hive.** Hood River, Oregon. Information: <https://bg-bees.com/wonders-of-the-hive>.

June 11: Deadline for early-bird registration for the Western Apicultural Society Conference, July 12–14.

July 8–10: **Heartland Apicultural Society Annual Conference.** Bowling Green, Kentucky. Registration and details: heartlandbees.org.

July 12–14: **The Western Apicultural Society Annual Conference.** Ashland, Oregon. Information as it becomes available: www.westernapiculturalsociety.org.

July 15–19, 2019 **Eastern Apicultural Society Conference.** Greenville, South Carolina. Information: www.easternapiculture.org.

July 17–20: **2019 International Conference on Pollinator Biology, Health and Policy.** University of California-Davis. Information: honey.ucdavis.edu/pollinatorconference2019.

August 18–28: **21st Installment of The Bee Course.**

Southwestern Research Station. Portal, Arizona. Information, including instructions on how to apply: www.thebeecourse.org.

September 8–12: **46th Apimondia.** Montreal. Registration is now open: www.apimondia2019.com.

October 4, 5 and 6: **2019 BCHPA Annual General Meeting, Conference, and Tradeshow.** Prince George. Information: bchpaconference.ca.

October 22–24: **19th Annual North American Pollinator Protection Campaign (NAPPC) International Conference.** US DEPARTMENT OF THE INTERIOR, 1849 C STREET NW, WASHINGTON, DC. Abstract Submission is open: mailchi.mp/ucdavis/polcon2?e=7a50a21cb1.

October 25–27: **Oregon State Beekeepers Association Fall Conference.** Florence Event Center. Florence, Oregon. Information as it becomes available: orsba.org.

2020

January 8–11: **American Beekeeping Federation Conference & Expo.** Schaumburg, Illinois. Information: www.abfnet.org.

January 8–11: **American Honey Producers Association Conference.** Information: www.ahpanet.com/.

March 20–21: **HONEY Convention.** Information: honeyconvention.com.

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State of WAS Bees | Spring 2019

The WAS region is extensive and amazingly diverse. So, too, are the conditions for the bees and the options for those who care for them. Here we find Director Reports of some of the conditions this season. See upcoming area events in the Beekeepers' Calendar (page 27) and/or posted at: www.westernapiculturalsociety.org.

MONTANA—Jaylene Naylor

We had nearly record-breaking snowfall in western Montana during February, so we're all very glad to see warmer temperatures, and occasionally even the sun! In the Bitterroot Valley, I saw about 28 inches of snow



over a period of a few days in February at my place. It was certainly

a challenge to put on the snow pants and boots to trudge out to the hives to make sure the entrances weren't blocked with snow.

Our local bee association, Beekeepers of the Bitterroot, did an informal survey of meeting attendees in February and were dismayed to find that our small sample of beekeepers had experienced roughly 70 percent losses. This inspired us to create a simple colony loss survey including "autopsy results" with the generous help of Jerry Bromenshenk and our Montana State Entomologist Alyssa Piccolomini. We distributed the survey via the email lists of several of our local associations, as well as via various Facebook groups. The Montana Beekeeping Forum on Facebook has over 1,200 members, and there are other groups such as the Northwest Montana Beekeepers group and our own Beekeepers of the Bitterroot group. To date, we have received 106 responses, which is fabulous! We plan to make the full results available at our website, www.beekeepersofthebitterroot.org, shortly after April 15. Of the 106 respondents, we're seeing a 43.8 percent loss of colonies from around the entire state. More in-depth statistical analysis will allow us to provide details as to

whether these colonies were treated for mites and the state of the colony upon autopsy.

As of early April, we're finally seeing pollen being brought into the hives! Many of us are looking forward to taking delivery of nucs and packages in mid-April to mid-May. Our more experienced members are already working with our new beekeepers. Here's to a successful year of beekeeping and to continued learning!

NEVADA—Del Barber

Nevada's SB 389 has had angry beekeepers swarming in Nevada. The bill "Prohibits a person from owning an apiary within certain areas of the State." Senators were startled by the overwhelming response from the levers across Nevada. The Nevada Electronic Legislative Information System (NELIS) reported 1,315 opinions against and only eight opinions for this bill. When this bill was heard by the Community on Natural Resources, more than 100 citizens filled the rooms in Carson City and Las Vegas to speak out in opposition. With so many signed up to testify, citizens were limited to two minutes. Initial testimonies were all from the three local beekeeping organizations. Master beekeepers Jacki, Linda, and Del from Great Basin Beekeepers of Nevada led the testimonies and were followed by Debbie from Mason Valley Beekeepers and Jon, who is a member of all three local Nevada organizations. A Henderson city representative and the accused beekeeper testified by video conference in opposition. At this point, the bill has not moved forward. It is dead. The bottom line message here is that local beekeepers and Bee Keeping organizations banded together to block overreaching state control and criminalizing beekeepers.

In the face of all this legislative angst, we have continued our public education efforts. Randy Oliver presented at the Northern Nevada Beekeepers Association meeting. Members appreciated his willingness to share freely his years of research and his advice to stay calm, provide a clean dry space for the colony to live, treat for Varroa mite infestations, and provide feed if natural food sources are not available; the bees will take care of everything else (see: www.scientificbeekeeping.com).

On a cold blustery day in April, Great Basin Beekeepers of Nevada was part of the "Learn to Grow"

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day at the Foothill Gardens in Carson City. The community event was sponsored by Carson City Parks and Recreation and Open Spaces. We had an opportunity to share information about pollination and the importance of native and honey bees and home gardens. The Bee Hotel is being built on site to house leafcutter bees. Since Carson City became Bee City USA #76, the residents have become much more "Bee Informed"!



Great Basin Beekeepers of Nevada joined with Nevada Cooperative Extension to educate over 1,300 elementary students and their teachers and parents about honey bees, pollinators, and beekeeping. This event was surprised by having two queen bees and a drone in the same hive. Linda, Del, and Myrna shared information and interactive activities.

Note: Please send Events for posting to editor@westernapiculturalsociety.org!

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and More . . . !



October 25-27, 2019

SAVE THE DATE!

Georgia Prison Beekeeping Program

Jennifer Berry—University of Georgia Honey Bee Program

“One day an inmate may be your neighbor, so it’s important to give them the training necessary to not only be a good neighbor but stay your neighbor.”

Warden Angie Henry

After 20 years of beekeeping, it still amazes me to think about all the many ways honey bees help us humans! First and foremost, they are responsible for pollinating a great deal of the fruit, vegetables, and nuts we enjoy. They also produce honey (yep, that’s right!), which offers a natural alternative to sweeten our lives. There are the health benefits from pollen, royal jelly, and propolis that may help to alleviate allergies, wrinkles, stomach ailments, and even topical infections. And many swear by apitherapy, a growing medicinal alternative here in the US, for relief from arthritis discomfort.

These may be the most obvious ways that honey bees enrich our lives, but there are so many others. What about all the jobs associated with honey bees along with all the products that need to be built, designed, sold, and transported? What about the books, articles, and research about honey bees to educate and entertain? How about jobs such as mead makers to help us unwind, candle makers to light our way, and soap makers to cleanse our souls. What else? The list goes on and on.

Keeping bees may also help to keep us healthy, active, and mentally challenged. Beekeepers comment about how beekeeping can be physically challenging, but, while working bees, problems associated with life (stress, concerns, worries, angst, etc.) seem to fly away with each forager leaving the hive. Each box is a treasure chest of adventure just waiting to be explored. What will the next colony reveal? What problem will I need to address? What must I do to keep my bees alive?

Now, imagine being confined in a place where you would rather not be. A place most of us would fear. A place in which I pray to never live. What if this place was a prison and you were serving one year, two years, 10, 20, or life? Yet, what if, once a week, you were allowed to escape your imprisonment and be free for an hour. And what if this one-hour a week to take pause from your situation is the opportunity to spend time with honey bees? I imagine that each occasion would be a little taste of heaven. When I asked such an inmate what it was like to be with the bees, he said, “It’s a taste of home.”

The Georgia Prison Beekeeping Program officially began in 2014 at Smith State Prison after then inmate, Roy Nichols, finally con-

vinced the Warden about the importance of a beekeeping class behind bars. It only took two years, but, once the Warden realized the program was worth supporting, it quickly fell into place. A local bee association, along with Bear Kelley, then president of the Georgia Beekeeping Association, was enlisted to help. After Bear met with the Warden and students in the class, he too realized the importance of beekeeping behind bars. But just a certificate of participation didn’t seem enough. Bear along with Mrs. Henry, the Warden of Care and Treatment at that time, felt the students should be certified through the UGA Honey Bee Lab’s Georgia Master Beekeeper Program in order to add clout to their vocational record. Plus, involving the UGA Bee Lab would give the program added validity. I joined the mission in 2015 and helped Bear push the program forward by getting equipment donations from Brushy Mountain Bee Farm and Georgia beekeepers across the state.

Once the class was ready, myself along with the bee lab crew went to Smith State and administered the exam. When we entered the small, cement-block classroom, there sat fifteen very nervous but eager students. I could feel the tension in the air, and, as the exams were being handed out, one of the students blurted out loud how nervous he was. Everyone else nodded their heads in solidarity. After the written portion was completed, the tension in the room was somewhat decreased. Now it was time for the second portion of the exam, which was outside, in the apiary. To get there, we were led through a mazelike path through numerous locked steel doors and gates, pausing at each junction to pose for the cameras and wait to be buzzed in. After traversing a long green courtyard with tall gray walls, we finally entered the fenced-off apiary. This is where we administered the practical portion of the exam.

After several hours of administering and grading the



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Brad Pankratz, 2015 President, California State Beekeepers Association

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exam, I congratulated all fifteen students for passing not only both portions but also with an average score well into the 90 percent range. Yes, they had ample time to study; however, they were extremely committed, so much so, several of the students had to learn to read in order to take the exam. These fifteen students were the first to become Certified Beekeepers behind bars.

The Georgia Master Beekeeper Program is an intensive four-step program designed to educate students about all things dealing with bees and beekeeping. It allows participants not only to increase their knowledge but also to hopefully take that knowledge and teach others about beekeeping and the importance of pollinators. The four levels of beekeeper certification are Certified, Journeyman, Master, and Master Craftsman. These fifteen students/inmates just completed the first level, Certified Beekeeper within a Master Beekeeper program: something that had not yet been achieved behind bars in the US.

Since 2014, the Georgia Prison Beekeeper Program has blossomed. One prison teaching beekeeping behind bars has turned into seven with one more starting a program in 2019. Fifteen inmates certified have turned into 88. Along with Smith State, the other prisons involved are Dooly State Prison, Ware State Prison, Al Burrus State Prison, Lee Arrendale State Prison, Autry State Prison, and Wilcox State Prison. Hancock State Prison will be starting their program in 2019. Our job has been to assist with the program and personally administer the Georgia Master Beekeeper exams once the students have completed the program.

To date, there is no official agricultural position within the Georgia Department of Corrections. There are only a handful of teachers within the prisons who, among their other duties, help with the beekeeping classes. This has been an important part that has helped to keep the program alive. However, another huge part of the program's momentum is due to the hard work, kindness, and selfless sacrifices of those who volunteer. The ones who have taken countless hours out of their busy schedules, lives, and work, to tirelessly drive to the prisons to educate individuals who have had little to no opportunity to learn about bees. The ones who go through background checks and the same airport security measures (with even more scrutiny) so they can teach those so desperate for knowledge and a taste of the outside. The amazing volunteers who are making this all happen here in Georgia are Julia Mahood, Rick Moore, Brutz English, Virginia Webb, Broadus Williams, and Bear Kelley. These are the ones who have brightened so many lives over the years.

Talking with the students after they've received their certification is heartwarming. Most of these men and women have never been exposed to anything resembling "science." Most didn't even know honey bees existed or did so much for mankind. Most believed they couldn't learn, because they were not smart enough. Most had not graduated from high school, hence were fearful of taking an exam because, in the past, they wouldn't pass. But now, most of the students are either moving forward to pursue the other levels of our Georgia Master Beekeeper Program (in fact we graduated five women into the ranks of Journeyman this past summer), while some are teaching the new students joining the class.

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And others are moving on to other vocational training with newfound confidence that they can do anything they choose! As you can see, it's amazing how these little, industrious insects can enter our lives, re-shape our world, and help out in so many different ways. Here's just one more example of how these creatures can lift our spirits and carry us to places we never thought we would or could go.

Note: Jennifer Berry, "Georgia Prison Beekeeping Program," and Marc von Huene, "Beekeeping Behind Bars—Idaho," presented their insights and experiences in educating beekeepers in prison situations during the 2018 WAS Conference in Boise, Idaho.

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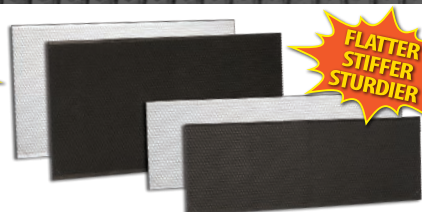
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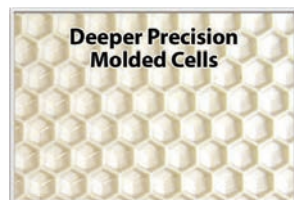
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Beekeeping Behind Bars—Idaho

Marc von Huene—Hewlett Packard



Before we get started, I want to make something clear. Many of us believe that people are in prison for a reason and they deserve whatever they get. So why should we be concerned about helping them? This work is not about the violent felons, but about that portion of the prison population that is in minimum detention. These are people you can feel safe handing your just-sharpened hive tool because they are not violent offenders.

And here's the kicker. They will be coming back into society in one to two years, and I can tell you I'd much rather help them find interests and vocations as they move back into our neighborhoods. They might not be your neighbor, but you will be with them in just about every public place you visit. So please, keep an open mind.

As the education chair for the Treasure Valley Bee Club, I get a lot of calls to make presentations. I'm sure many of you have given talks, especially around Earth Day. But I got an email from Nancy that was different, asking if I'd be willing to talk about bees with the inmates of the Snake River Correctional Institute.

My first reaction was to hesitate. It probably didn't help that "Law and Order" is one of my wife's favorite shows. Fear is great at stopping good intentions. But hey, if Johnny Cash could do it, so could I. So, I agreed.

Just to make a presentation required passing a background check. But it was a good idea to verify that I didn't belong in prison before I voluntarily walked in. And there were other rules. No blue jeans, leave your cell phones in your vehicle. Some of the rules didn't make sense, but I trusted they had been made for good reason or out of bad experiences.

I'd been told these guys were part of an Apprentice program through Washington State. They had ten hives in unknown condition. Their only source of information was their textbook. They had no Internet and no direct access to any instructor. My talk was an advanced

introduction to bees, with an emphasis on how to check and treat for Varroa.

Several things become obvious:

- These guys really wanted to learn – yes, it was a captive audience, but they really wanted to hear what I had to say.
- These guys had only book learning. No one knew how to do a mite count.
- Their hives were in trouble.



Let's take a quick look at the Snake River Correctional Institute. As you can see [image above], it's isolated. But even worse, it's surrounded by farmed fields. So, no wild flowers, no weeds, no gardens. Their source of nectar is completely dependent on what the farmers plant.

I ended the first trip without seeing the hives, but I knew I'd be back. In early July, I got my chance and took along three fellow beekeepers from my work club (HP Bee Club). We spent the entire time at the hives doing inspections with the inmates. For the most part, the hives were anemic—little comb, stores, and brood. The woodenware was built on site, and not quite to spec. They had internal feeders without tops or ladders, so they used floating pine needles to keep the bees from drowning. We left with serious doubts about any of the hives surviving. The only good news was that their mite counts were low.

In early September, we made a third trip. And we came with more equipment. Two-gallon internal feeders (with ladders), frame perches, popsicle sticks, hooks to put on the back of the hive bodies, and a luggage scale. Our objective was to prepare the hives for winter and to combine if necessary. We inspected all the hives before



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the inmates arrived, and were astounded at how much more honey and pollen the bees had accumulated. It was obvious the farm fields around the facility had been planted with some crop that made for good foraging. We were told it was pumpkins. When the inmates arrived, I spoke to them for about 15 minutes about how to help your hive survive a winter—low mite counts, adequate food stores, and proper ventilation. We spent the next hour going through the hives with them and weighing each one. We performed a few mite counts, and again nothing was above 1 percent. We made sure each hive had an entrance reducer and ventilation up top.

There were some obvious leaders in the group, and they would ask us the most questions, including questions from their last Apprentice test, the ones they weren't sure of. This time several inmates expressed that they planned to raise bees when they got out, and I felt our short time together was wholly inadequate to prepare them for success. I've been raising bees for six years and learn something new with every lecture I attend. These

guys had spent less than two hours working with us as mentors, so a part of me hoped they weren't going to be released too soon.

In early June of this year, I made another presentation at SRCI and had an overflow crowd. Before the presentation, we inspected the hives, and I'm glad to report that eight of nine hives made it through the winter. Despite not seeing a single familiar face, the previous inmates passed on enough knowledge to the new guys to keep the bees healthy. Every feeder was full, and they had made their own pollen patties.

So the cycle will continue, and I'll be making more visits each year. With this last visit, we put supers on all the hives. Hopefully this year they will have some honey to spin. And hopefully each successive group of inmates will build on the knowledge of those who came before, just like their bees will build on the previous comb.

In closing, I'd like to sum up with the following:

Before your bees can be calm, you need to be calm. We learn to trust our bees one interaction at a time. In the beginning, full armor. Eventually, no gloves and little smoke. The hive becomes something to nurture, and the occasional sting isn't always the bee's fault. We lose our fear, but never our respect. I can't think of any better therapy for someone who has lost their way and needs to rejoin society.



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Apimondia

Rod Scarlett—Executive Secretary, Apimondia 2019

In 1999, Vancouver played host to Apimondia, the world's largest beekeeping scientific symposium and trade fair. Up until that point, the event was large, attracting a couple thousand or so international visitors. But those involved with the Vancouver event strove to make things bigger and better, and so they did, attracting nearly 5,000 participants and setting the stage for larger Apimondia events. Spring forward twenty years and the Canadian Honey Council is proud to once again host Apimondia, this time in Montreal at the Palais des Congres, September 8–12, 2019.

Since winning the bid to host the event in 2015 in South Korea, thousands of hours have gone into preparation and planning of a world class event. The President of Apimondia 2019, Pierre Giovenazzo, is a renowned pro-

fessor at Laval University and has worked tirelessly at setting the groundwork. Dr. Stephen Pernal, an internationally well-respected researcher in his own right, is the Apimondia 2019 Science Co-ordinator, while at the same time, working at his day job as Officer in Charge of the Beaverlodge Research Station for the Government of Canada.

This core team has expanded, getting volunteers from across Canada to look after workshops, tours, publicity, volunteers, and science advisors. In addition, all the provincial associations have been asked to help out at various Apimondia contests. The Canadian Association of Professional Apiculturalists and the Board of the Canadian Honey Council are also playing key roles.

It's only February, but the keynote speakers have been confirmed, and it is an extraordinary lineup. Thomas Seeley is the Horace White Professor in Biology at Cornell University, has written five books on honey bees and has received numerous prestigious awards. Rufus Isaacs is Professor and Extension Specialist at Michigan State University and has done extensive work on sustainable management for pollinators. Gene Robinson is a faculty

member of the University Illinois and pioneered the application of genomics to the study of social behavior in honey bees. Finally, Peter Rosenkranz is a professor at the University of Tübingen in Southern Germany and has specialized his work in Varroa control and honey bee communication.

In addition to the four keynote speakers, there will be well over 100 researchers and scientists speaking on topics set forth by the seven Apimondia Commissions. To “Canadianize” the program, there will be eight beekeep-

ers from across Canada presenting on their operations, each with different specialties. Further to that, we have a number of evening workshops that, in part, supplement the science program. Sessions in apitherapy, honey tasting, and urban beekeep-



ing highlight these workshops.

The trade show will be the largest of its kind ever held in North America. At Api-Expo, it is expected that over 250 booths focusing on all aspect of the industry will be participating. There should be something there for everyone no matter what size your operation or even if you are just trying to get information on how to start.

There are numerous contests in such areas as honey, meads, bee art, wax, and literature. Don't be scared to enter! The pre- and post-event tours the will surely fill up quickly. The opening ceremonies will feature a Juno-nominated band from Iqaluit, the Jerry Cans. This will be sure to excite a few people as they do a mix of up-tempo roots-rock music and traditional Inuit throat singing.

Those in the beekeeping industry realize that early September may not be the most convenient time, but Apimondia 2019 will probably represent a once in a lifetime opportunity to see and hear world class activities in our own backyard. To register, to book accommodation, and to keep apprised of updated activities and events, check the Apimondia 2019 website at:

www.apimondia2019.com

New Renewal

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Other area(s) of work/interest?

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Registration & Information at
www.westernapiculturalsociety.org



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