



News from Around the Hive

WSU to Have New Honeybee Research Facility in Othello

By Scott Weybright

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Washington State University's Honey Bee and Pollinator Research and Education program has a new permanent home. The university has signed a purchase agreement on a facility located near Othello, Wash. where scientists will have room and equipment to continue building one of the world's best programs help save the bees.

The sale includes a 60-day inspection period, so WSU can do a full environmental inspection of the existing facility and land. If that goes well, WSU will close on the deal at the end of that period. The nearly 50-acre plot of land and buildings was formerly used by Monsanto for research and corn growing operations.

"This facility will really help upgrade the work we do," said Steve Sheppard, P. F. Thurber Endowed Professor of Pollinator Ecology in WSU's Department of Entomology. "We've been in 'temporary quarters' since 2000. We've got great people and equipment but we're spread out around campus, which limits collaboration. While some of our bee breeding work will continue in Pullman, due to the presence of isolated mating areas and USDA approved quarantine apiaries, the new bee facility near Othello will greatly expand our capacity."

Saving the bees

Following the inspection period, Sheppard, Assistant Professor Brandon Hopkins and their teams will start relocating their equipment, which includes the world's first honey bee genetic repository. They will also create lists of other equipment that they'll need to keep building their program.

"We are excited for our honey bee program to get moved in and working at this new facility," said André-Denis Wright, dean of WSU's College of Agricultural, Human, and Natural Resource Sciences. "The support we've had from individuals and groups like the Washington State Beekeepers Association has made this possible, and we look forward to continuing the relationships our scientists have as they work to help save the bees."

The \$2.5 million purchase of the facility was authorized by the WSU Board of Regents in June, when \$1.8 million in donations had been raised for a building.

The location near Othello should be beneficial to the beekeeping industry, as it's much closer to pollinator-dependent agriculture of central Washington than WSU's Pullman campus.

"This facility will increase collaboration and allow for enhanced short courses, demonstrations, and classes for beekeepers—which will directly help the agricultural industry since honey bees are vital to our food supply," Sheppard said.

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President's Message

By Kevin Oldenburg

Last month I wrote about how making a couple of seemingly simple changes in how you are keeping your bees can lead to dramatic changes in hive survival. This month, I really want to go out on a limb with some radical proposals.

Varroa mites probably co-evolved with the Asian Honey bee and are found widely in that bee population. In the 1940's, through the movement of European Honey bees into and out of Asia, varroa were introduced into that population of bees and quickly spread throughout Europe and Africa. Varroa was first discovered in the US in about 1987 and has spread widely throughout North America since then.

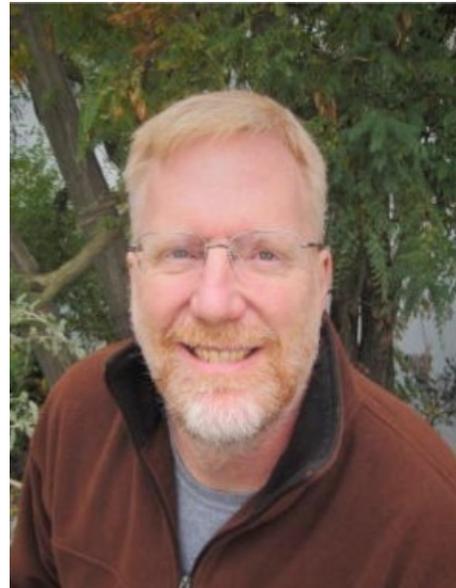
Varroa mites don't seem to cause too many problems in the Asian Honey bee, probably because the mite coevolved with that bee species. Any parasite, like the varroa, does not want to kill its host because that is detrimental to its own survival. Rather, it wants to keep its host alive so that it too can continue to flourish. However, when the varroa was introduced to the European Honey bee, this bee species had no experience with the varroa parasite and consequently, the varroa mite caused this species to be weakened to such an extent that colonies died much too frequently.

I recently heard a report on NPR where an entomologist from New York State was looking at honey bee colonies in the state and comparing

them to feral colonies. What he claimed, and I haven't read the actual science, is that there are more feral colonies in New York than managed hives and that the feral colonies had very low mite counts. We know that Africanized honey bees don't have a problem with varroa mites, probably due at least in part to their high level of swarming behavior. However, bees in New York simply can't have that same behavior because it's just too cold. So what could be the explanation, and better yet, how do I get some of these bees?

The answer to the first question is probably rather simple. In any animal population, when a serious disease goes through that population, upwards of 99% of the population may die out, but the remaining 1% will be naturally resistant to the disease. So, what if in the case of the feral hives in New York State, many hives went feral, but just one had the ability to reduce varroa to a level that could be tolerated and maybe even thrive? That one or maybe a few resistant hives would then start to colonize the area because they could survive where others could not.

What would happen if the same thing were to occur in our geographic locations in Washington State. Think about this scenario. We ban all importation of honey bees into our geographic location and immediately stop all treatments for varroa. In the next 1-2



years our honey bee population would collapse to the point where we would have less than 1% of the colonies that we currently have. However, any hives that did survive would have some really desirable genetics. First, they would almost certainly be resistant to varroa mites and if we never treated for varroa again, they would maintain that resistance because any hives that lost the varroa resistance would die. Second, the bees would be acclimated to our geographic location. Currently, when you get a package with a new queen, that queen was probably produced in Hawaii or some other warm climate. What are the odds that that queen will become acclimatized to Washington State?

Banning importation of Honey Bees and stopping varroa treatments is neither practical nor economical for our state. If

you think about it, for Washington where we have such a huge fruit growing industry, it's just a really bad idea. However, it does point out that through selective breeding, we should be able to produce a honey bee that is resistant to varroa and has the genetics to survive in our region. With the expansion of the honey bee research program at WSU and through continuing research at other Universities, we should be able to have a solution to this problem in the next decade. Maybe sooner if I can figure out how to get some of those feral New York colonies!

Cheers,
Kevin

WASBA Education News

By Ellen Miller

Beginning August 1st WASBA is assessing new prices for the four certification levels. Additionally, sponsoring clubs or organizations can choose to print the manual themselves, or order the already-printed manual from WASBA.

The Beginning, Apprentice, and Journeyman level courses all include additional material for instructors such as PowerPoint slides with notes that can be edited by the instructor for each chapter and questions/answers for each chapter from which instructors can select their test questions.

For each student in the **Beginning Beekeeper** course the cost is \$25 which includes the manual, an annual membership in WASBA, and upon successful completion of the course a Beginning Beekeeper certificate. If the local association offering the class is printing the manual themselves, the cost to the student is \$20 payable to WASBA. All other benefits apply.

For each student in the **Apprentice Beekeeper** course the cost is \$35 which includes the manual, an annual membership in WASBA, and upon successful completion of the course, an Apprentice Beekeeper certificate and patch. If the local association offering the class is printing the manual themselves, the cost to the student is \$25 payable to WASBA. All other benefits apply.

For each student in the **Journeyman Beekeeper** course, the cost is \$50 which includes the manual, an annual membership in WASBA, and upon successful completion of the course and all other requirements for Journeyman level, a Journeyman Beekeeper certificate and patch. If the local association offering the class is printing the manual themselves, the cost to the student is \$35 payable to WASBA. All other benefits apply.

For each student in the **Master**



Beekeeper program the price is still the same, \$50 if successfully completing a pre-approved research-oriented program. The other option is to successfully complete the University of Montana, Master Level Beekeeping Course. WASBA is offering reciprocal recognition to successful students of that program granting Master Beekeeper certificate and patch upon payment of \$20 to WASBA.

Please contact either [Jennifer Priest](#) or [Ellen Miller](#) if you have any questions.



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The Art and Science of Beekeeping

By Jenifer Priest

As a veterinarian, Dr. Jennifer Short brings a lot of science to her beekeeping on Camano Island. “We diagnose, we treat, we check up, we reassess....but we never just let something sit out there and languish – we’re very driven to protect animals against neglect and suffering.” But she also has appreciation for the art of beekeeping as well.

“We as beekeepers are an eclectic lot. We embrace the science of keeping bees, but I find that most of us spend many more hours doing what would be defined as the “art” of beekeeping. In that category are decisions and activities that aren’t based in data and scientific information so much, but information that is just as important.”

Still, Dr. Short believes beekeeping would benefit from more science. She shares an

example involving cows, “We’ve spent years and billions of dollars investigating and experimenting to get just the right diet for a Holstein cow in peak production, we’re nowhere near that stage in beekeeping and it’s fundamentally the same game. We could use a lot more information in the areas of nutrition (both what the bee needs and what’s available in the forages they utilize), virology and immunology (how bees fight diseases and how they mount an immune response), and my personal favorite, the reproductive cycle of the varroa mite and control modulators for that process.”

Like most beekeepers, Dr. Short is on a continuous quest for improvement in her beekeeping. She also brings along her medical insights and root-cause training to her beekeeping and most importantly makes decisions based on data.

Dr. Short used these tools this year for swarm control. As she’s been ramping up her beekeeping activities in order to create a full-time beekeeping business venture she knew she needed to be more proactive so as not to lose too many bees to swarming. So, she, “learned a lot from the bees and the triggers for the reproductive impulse as well as research papers on what makes the colony flip that switch. By implementing some of the preemptive strategies like checkerboarding and swarm cell control and every 10 day inspections to monitor frame filling, I kept my swarm events to less than 5%.”

It’s important to keep sharing information, but ultimately it’s the knowledge we gain after collecting the data that will bring beekeepers the most success.



Dr. Short is a veterinarian & alum of Washington State University. 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. She is on the WASBA Board of Directions and is also the board secretary of the Skagit Valley Beekeeper’s Association. Dr. Short has been a full time beekeeper for the last three years on Camano Island, WA with 140 colonies in 10 yards.

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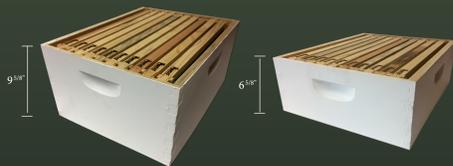
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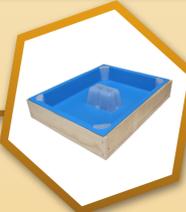


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Legislative Update

By Tim Hiatt

Do you have a suggestion to improve beekeeping in Washington state?

Our latest success, House Bill 1133, sponsored by Rep. Strom Peterson (D-Edmonds), protects beekeepers from liability when they register with the state department of agriculture (<https://agr.wa.gov/departments/insects-pests-and-weeds/insects/apiary>) and observe the local zoning laws which apply to beekeeping in their area. This new law, found at RCW 15.60.250 (<https://app.leg.wa.gov/RCW/default.aspx?cite=15.60.250>), says

A person who owns or operates an apiary, is a registered apiarist under RCW 15.60.021, and conforms to all applicable city, town, or county ordinances regarding beekeeping, is not liable for any civil damages for acts or omissions in connection with the keeping and maintaining of bees, bee

equipment, queen breeding equipment, apiaries, and appliances, unless such acts or omissions constitute gross negligence or willful misconduct.

All laws should be this short and understandable. Commercial and migratory beekeepers already had protection from liability as part of the general "right-to-farm" law at RCW 7.48.300 and onward (<https://app.leg.wa.gov/RCW/default.aspx?cite=7.48.300>). This new law protects beekeepers whether or not you're involved in agricultural production. So if you register with the state and have a hive in your backyard and keeping it there isn't against city or county zoning rules, you are protected. The legislature recognized the need for urban pollination and passed this new law to protect urban beekeepers. In addition to Rep. Peterson, Representatives Griffey, Irwin, McCaslin, Lekanoff, Shea, Goodman, and

Stanford also co-sponsored the bill.

The idea for this law came from a Puget Sound beekeeper who was concerned about keeping bees near his neighbors in an urban area. With a lot of work on our part, and two legislative sessions to iron out the language and build support from legislators, it became law. And it all started with an idea from a local beekeeper! And so I return to the question at the beginning of this article: do you have a suggestion? If so, let me know!

Tim Hiatt, Legislative Chair

legislativechair@wasba.org



Tim lives in Ephrata when he's not following his migratory hives as a second generation beekeeper. He and his brothers pollinate tree fruit in Washington, almonds in California and produce honey in the Midwest.

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WSU to Have New Honeybee Facility in Othello

Continued

Current research

The WSU bee program has several different avenues to attack the loss of bees around the world:

- A genetic repository containing frozen germplasm from original source populations of honey bees from Europe and Asia is being used as part of a breeding program to increase genetic diversity in US honey bees.
- WSU scientists are also using mushroom mycelium extracts to combat viruses and microbial diseases, which early tests have shown is very promising.

- *Metarhizium* fungus is being studied as a possible biological control for *Vарroa* mites, one of the largest problems faced by beekeepers around the country.
- Controlled atmosphere storage for over-wintering and for mite management. The new facility will give the research team enough room to do commercial-scale experiments. They will be able to measure the effectiveness of controlled atmosphere storage and dial in the best way for beekeepers to use it to help their bees.

The WSU bee program plans to host a grand opening event in the spring to allow industry members come and see their facility and get more details on the work they're doing.

In the meantime, WSU is still raising money to help acquire the necessary equipment the scientists will need to do their work.

Learn more at <http://bees.wsu.edu/>.



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Beekeeping Behind Bars

By Bethany Shepler, Green Track Coordinator for Sustainability in Prisons Project

The Washington State Penitentiary (WSP) in Walla Walla, WA hosts one of the oldest and best-established beekeeping programs in Washington State Department of Corrections.

They have built a professional-size apiary, certified 44 incarcerated men as beekeepers, and participated in a National Honey Bee Pest Survey by

the USDA, hosted a professional beekeeper (Mona Chambers, founder of See the Bees).

They are about to finish a Journeyman Beekeeper course, putting them on the path to classes led by incarcerated beekeepers!

Jonathan Fischer is a Classification Counselor and also the bee program liaison. He had this to say: “we had a stellar year, with 8 honey supers ready for harvest. These 8 boxes will produce about 270-300 pounds of honey.”



Inspecting hives at WSP in Walla Walla



Adding the supers!

Powder River Correctional Facility in Baker City Oregon Harvests 7 Gallons of Honey for Use in Inmate Population Meals





If you don't already participate in a beekeeping club, check out one of the 27 clubs around Washington. They are a great place to learn and share your information too!@

<https://wasba.org/local-beekeeping-organizations/>

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