

[www.facebook.com/WesternApiculturalSociety](http://www.facebook.com/WesternApiculturalSociety)

<http://westernapiculturalsociety.org>

November 2015



**W.A.S.**

**Journal**

**Journal of the Western Apicultural Society of North America**



**PLEASE NOTE: AS OF  
JANUARY 1 2016  
PRINT COPIES OF THE  
JOURNAL REQUIRE AN  
ANNUAL SUBSCRIPTION  
FEE OF \$20 (See page 30)**



*Guess who was in Boulder, Colorado for WAS Conference 2015? Lots of important people! Some were camera shy; some less so (thank goodness!) Clockwise from top left: "Mr. Buzz" was right at home at the Bee Buzz Social; finally, a few minutes breather for hard-worked registrar John Hartley; royalty in attendance - American Honey Queen Gabrielle Hemesath; and a chance to meet ALL of the Niño family - Elina, Bernardo, Sebastian and baby Rafael.*



January 5-9, 2016

Sawgrass Marriott Golf Resort & Spa

Ponte Vedra Beach (Jacksonville), FL



Join hundreds of fellow beekeepers in Ponte Vedra Beach (Jacksonville, FL) for the 2016 American Beekeeping Federation (ABF) Conference & Tradeshow, January 5-9, 2016, featuring a buzzworthy list of networking events and educational sessions including:

- Keynote presentation led by TED Talk alum and top honey bee researcher Dr. Marla Spivak
- Thursday Night Social featuring dinner and dancing in the Range of the Jaguar at the Jacksonville Zoo\*
- Workshops and presentations for all levels of beekeeping led by industry experts
- Tradeshow highlighting valuable products and services in the beekeeping industry
- Opportunities to network with beekeepers, vendors and industry experts under one roof
- 2016 Honey Queen Coronation, Honey Show & Auction and more

\*Thursday Night Social tickets available at an extra charge in addition to registration.

Register today for the conference at [abfconference.com](http://abfconference.com) to secure your best registration rate by December 9, 2015.

Don't forget to book your hotel in advance to receive the special rate of \$125 (plus tax) at the Sawgrass Marriott Golf Resort & Spa!



**REGISTER TODAY!**

For additional information about the conference, please call 404.760.2875 or visit [abfconference.com](http://abfconference.com).



2 November 2015

# BEE COZY WINTER HIVE WRAP

## SMART WINTERING

Wrapping provides the insulating layer bees need to reduce the overall rate of heat loss from the hive while also supplying a wind break for breezy locations. By preparing your bees for winter, the colony is more likely to have a productive season and consume less feed during the winter months.



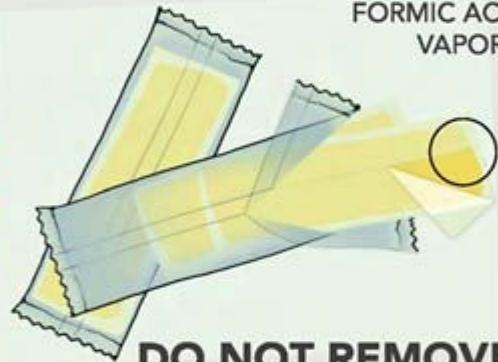
Find a distributor near you visit [NODGLOBAL.com](http://NODGLOBAL.com)

## MITE LEVELS IN A HIVE OVER THE BEEKEEPING SEASON

TREAT IN EARLY FALL WHILE THE LAST HONEY SUPER IS ON TO PROTECT WINTER BEES. TREAT IN THE SPRING TO BUILD UP BEES PRIOR TO THE MAIN HONEY FLOW.



MAQS IS A FORMIC ACID POLYSACCHARIDE GEL STRIP WRAPPED IN ECO-PAPER WHICH ACTS AS A WICK TO CONTROL THE RELEASE OF FORMIC ACID VAPORS.



**DO NOT REMOVE PAPER WRAPS**

**GET YOUR SEASONAL DISCOUNT CALL US NOW!**

**BOOK YOUR ORDER BEFORE DECEMBER 31ST**



**HEALTHY BEES. HEALTHY PLANET.**

To learn more call 866 483 2929 or visit [www.NODGLOBAL.com](http://www.NODGLOBAL.com)

# Western Apicultural Society of North America

## 2016 EXECUTIVE & BOARD OF DIRECTORS

<b>President</b>	Ethel M. Villalobos 3050 Maile Way, 310 Gilmore Hall Honolulu HI 96822 808-721-9070 <a href="mailto:emv@hawaii.edu">emv@hawaii.edu</a>	907-727-8200 <a href="mailto:dr.joecarson@gmail.com">dr.joecarson@gmail.com</a>
<b>Past President</b>	Beth Conrey 1617 White Water Ct. Berthoud CO 80513 970-213-3099 <a href="mailto:coconrey4@msn.com">coconrey4@msn.com</a>	<b>Arizona</b> Zack Funke 9 E. Redondo Dr, Tempe AZ 85282 480-399-1169 <a href="mailto:zackfunke@gmail.com">zackfunke@gmail.com</a>
<b>1st Vice President</b>	Lauren M. Rusert Apiary Associate, HI Dept of Ag/UH Pacific Co-operative Studies Unit 16 E Lanikaula St, Hilo HI 96720 808-352-3010	<b>California</b> Archie Mitchell 1520 N B Court, Lompoc CA 93436 805-291-3279 <a href="mailto:archibald_178@hotmail.com">archibald_178@hotmail.com</a>
<b>2nd Vice President</b>	Elina L. Niño Assistant Extension Entomologist University of California, Davis Dept. of Entomology & Nematology One Shields Ave, Davis CA 95618 530-500-APIS (500-2747) <a href="mailto:elnino@ucdavis.edu">elnino@ucdavis.edu</a>	<b>Colorado</b> Miles McGaughey (See At-large Executive Member)
<b>Secretary</b>	Cyndi Smith 19909 122nd St. E Bonney Lake WA 98391 253-891-0726/253-222-4906 <a href="mailto:onthegocgs@comcast.net">onthegocgs@comcast.net</a>	<b>Hawaii</b> TBA
<b>Treasurer</b>	Sherry Olsen-Frank PO Box 5274 Twin Falls ID 83303-5274 208-735-5353 <a href="mailto:magicvalleybees@gmail.com">magicvalleybees@gmail.com</a>	<b>Idaho</b> Steve Sweet 1720 Canova Dr, Boise ID 83706 208-850-3452 <a href="mailto:boisebeeman@gmail.com">boisebeeman@gmail.com</a>
<b>At-large Exec. Member</b>	Miles McGaughey 936 Alta, Longmont CO 80501 720-771-4304 <a href="mailto:mmcgaughey1@live.com">mmcgaughey1@live.com</a>	<b>Montana</b> Jerry Bromenshenk 200 Rimrock Way Missoula MT 59803 406-544-9007 <a href="mailto:beereseach@aol.com">beereseach@aol.com</a>
<b>DIRECTORS</b>		<b>Nevada</b> Debbie Gilmore 4 Cottonwood Lane Yerington, NV 89447 775-220-5567 <a href="mailto:dgilmore88@yahoo.com">dgilmore88@yahoo.com</a>
<b>Alberta</b>	Bob Keenan 11 Sunset Park Cochrane AB T4C 0N4 Canada 403-981-1657 <a href="mailto:keenanr@shaw.ca">keenanr@shaw.ca</a>	<b>New Mexico</b> Jessie Brown 101 Forrester Ave NW Albuquerque, NM 87102 505 710-3277 <a href="mailto:brownsdowntownbees@hotmail.com">brownsdowntownbees@hotmail.com</a>
<b>British Columbia</b>	Ian Farber 3249 Schubert Rd, Kamloops BC V2B 6Y4 Canada 250-579-8518 <a href="mailto:ian_farber@telus.net">ian_farber@telus.net</a>	<b>Oregon</b> TBA
<b>Saskatchewan</b>	Doreen Bradshaw 2812 Fleury St. Regina SK S4N 2M4 Canada 306-761-0995 <a href="mailto:dbradshaw@myaccess.ca">dbradshaw@myaccess.ca</a>	<b>Utah</b> Albert Chubak 5033 South Commerce Drive Murray, UT 84107 801-654-9700 <a href="mailto:albert@ecobeebox.com">albert@ecobeebox.com</a>
<b>Yukon</b>	VACANT	<b>Washington</b> James K. Smith 19909 122nd St. Bonney Lake WA 98391 253-222-4824 <a href="mailto:jksmithpe@comcast.net">jksmithpe@comcast.net</a>
<b>Alaska</b>	Dr. Joe Carson 7362 W. Parks Hwy #305 Wasilla AK 99623	<b>Wyoming</b> Catherine Wissner 620 County Road 146 Caprener WY 82054 307-649-2430 <a href="mailto:cwissner@uwyo.edu">cwissner@uwyo.edu</a>
		<b>Journal Editor/Historian:</b> Fran Bach PO Box 397 Selah WA 98942 509-573-4245 <a href="mailto:febach3@gmail.com">febach3@gmail.com</a>



HERE AT DADANT WE PRIDE OURSELVES ON PRODUCING TOP OF THE LINE HONEY BEE FEEDS TO FORTIFY COLONY HEALTH AND BUILD RESISTANCE TO THE PROBLEMS PREVALENT IN TODAY'S APIARIES.



**AP23<sup>®</sup>**  
Artificial Pollen 23  
**WINTER PATTIES**  
W7771 **HONEY-B-HEALTHY**

**M0016010PHW** –  
Ctn/ 10 patties / **\$22.80**

**M0016040PHW** –  
Ctn/ 40 patties / **\$48.30**

**AP23<sup>®</sup>**

**PATTIES**

**M0016010PH** – Ctn/ 10 patties

- 1 -3      **\$24.70**
- 4 -10     **\$22.70**
- 11 +      **\$19.95**

**M0016040PH** – Ctn/ 40 patties

- 1 - 20     **\$68.25**
- 21 - 39   **\$66.25**
- 40 - 159 **\$62.50**
- 160 +     **\$57.25**

**DRY FEED**

**M0016005** – 5 lb bag

- 1-10      **\$18.95 ea.**
- 11+      **\$18.50 ea..**

**M0016040** – 40 lb bag

- 1-3      **\$71.95 ea.**
- 4-10     **\$68.75 ea.**
- 11-39   **\$64.75 ea.**
- 40-159 **\$62.35 ea.**
- 160+    **\$59.50 ea.**



FEED **AP23** FOR A  
HEALTHY BEE!

**Brood Builder**

**PATTIES**

**M0014640HHN** – Brood Builder Patties with  
Honey-B-Healthy & Nozevit **\$73.60 / 40 lb. box**

**DRY FEED** – **M0014625** – 25 lb bag

- 1-5      **\$39.50 ea.**
- 6-10    **\$37.50 ea.**
- 11-up   **\$33.50 ea.**



Check your local branch for pricing

*www.dadant.com*



• 15 C. VALLEY CT., CHICO, CA 95973 • PH (877) 332-3268 FAX (530) 893-0922 •  
• 2765 S. GOLDEN STATE BLVD., FRESNO, CA 93725 • PH (877) 432-3268 FAX (559) 495-0232 •

## 2015 Conference Wrap

By Beth Conrey, Retiring WAS President

The Healthy Bee / Bee Healthy WAS conference was a wonderful success! This was by far the largest WAS conference ever held with over 160 full conference registrations and over 300 participants in some form or fashion. The first 2 days focused on Bee Health and the final day on Bees and Human (and Veterinary) Health. Just like a successful colony of bees, it takes many individuals performing many tasks to make a colony a success.

Thanks for this success goes out to a variety of folks. My core team of Leslie Ellis, Greta Olson and Josh Vaisman cannot be thanked enough or properly for the time and energy put forth in making this conference the success that it was. A more dedicated, upbeat and positive, creative and visionary team could not have been assembled. And they volunteered! I owe you!

I want to thank our **Major Sponsors: The National Honey Board, People and Pollinators Action Network (PPAN) and Mann Lake.** The National Honey Board sponsored Marla Spivak and PPAN sponsored Susan Kegley from Pesticide Research Institute. Mann Lake donated both the complete hive setup and the traveling tool kit for the silent auction.

All the rest of our **Sponsors** deserve mention, too. In alphabetical order: BBB Seed, Bee-Certain, Boulder's Natural Animal Hospital, Brushy Mountain, Butterfly Pavilion, Carrie's Honey N More store, Celestial Seasonings, EcoScape Environmental Design, Flower Bin, Green Ride Boulder, Harlequin's Gardens, Hive Tracks, Hudson Gardens, Hutchison Western, Insure my Honey!, Madhava, NRCS, Pheasants Forever, PVREA, Rice's Lucky Clover Honey, To Bee or Not to Bee, Western Bee, Western Power Group and Whole Foods.

Our **Vendors** also stepped up to the plate! **Bee-Certain** donated our grand prize of a hive monitoring system to all who successfully completed their vendor card. Thank you Bob! The lucky winner was Cathy Allen-Schinn—from right here in Colorado. Thank you so much to all of you who traveled from near and far to showcase your product. Vendors in alphabetical order: Amber Lights Candles, BBB Seed, Beaver Plastics, Bee Care Natura, Bee Line of CO, Bee Safe Boulder, Bee-Certain, Boulder Book Store, Boulder's Natural Animal Hospital, Brushy Mountain, Butterfly Pavilion, Carrie's Honey N More store, Celestial Seasonings, Complete Bee, Dakota Bees, Eco Bee Box, EcoScape Environmental Design, FieldWatch, Harlequin's Gardens, Healing Bees, Hive Tracks, Hudson Gardens, Insure my Honey!, NOD Apiary Products, NRCS, Pheasants Forever, Pollinator Stewardship Council, Strong Microbial, TGBTG Books, To Bee or Not to Bee, Tulipan Herbs and Western Bee.

**The folks that support us need to be supported, too! Please spend your bee dollars with them! Show them that their support is valuable and rewarding. Thanks!**

I would like to thank our **Speakers.** Many of our speakers traveled great lengths to come to Colorado to educate attendees on a variety of topics. Hats off to all of them for their preparation and delivery! Again in alphabetical order: Peter Loring Borst, Dr. Michael Breed (CU), Emily Brown (Arizona Queen Bees), Al Chubak (Eco Bee Box), Michele Colopy (Pollinator Stewardship Council), Steven Coy (Russian Queen Breeders Association), Dr. Whitney Cranshaw (CSU), Drs. Allen and Jane Dennison, Jim Doan, Leslie Ellis, Rachel Fahey (Bee Informed Partnership), Dr. Ron Fessenden, Julie Finley-Ridinger, Jason Goldman, Christi Heintz (Project Apis M), Gabrielle Hemesath (American Honey Queen), Kris Holthaus (CO Queen Honey Bee Testing Project), Dr. Don Hyder, Susan Kegley (Pesticide Research Institute), Melanie Kirby (ZIA Queen Bees), Sarah Red Laird, Margaret Lombard (National Honey Board), Jonathan Lundgren, Jerry Miller (Pheasants Forever), Matthew Mulica (Honey Bee Health Coalition), Elina Lastro Niño (UC-Davis), Lauren Springer Ogden, Greta Olson, Dr. Stephen Rankin, Karen Sadenwater (Backyard Hive), Tina Sebestyen (4 Corners Beekeepers), Jane Shellenberger, (CO Gardener), Dr. Dan Smeak (CSU Veterinary School), Dr. Valerie Solheim (Healing Bees), Dr. Marla Spivak (University of Minnesota), Josh Vaisman, Jamie Weiss (Audubon), David Wheeler (Bee Safe), James Wilkes (Hive Tracks) and Dr. Mark Winston (Simon Fraser University). What an all-star line-up! Thank you all for coming! (The presentations of those who agreed to share will be on the CSBA and WAS websites soon.)

There were lots of local folks who helped, too. Lucy and Joe Thies with Longmont Printing donated our banner and table cards. Rein Designs printed our T-shirts and bags. Stadia Labels donated the stickers on our swag bags. (John does a really nice job on honey labels, too.) Swag bag contents were donated by Carrie's Honey N More store, BBB Seed, National Honey Board and David Newquist's Honeyku,





9" One-Piece Frames

Snap-In Foundations



Drone Frames

6" One-Piece Frames



Call us today!

**(800) 233.2662**

Visit us online at

**pierco.com**

Pierco Inc. • 10309 Regis Court • Rancho Cucamonga CA • 91730 • USA

## WAS Presidents to date

- 1978 Norman Gary (California)
- 1979 Lucien Alexander (Oregon)
- 1980 Randy Barker (Br. 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 (Br. 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)

Last but not least, pat yourself on the back if **you** attended the conference. It was your enthusiasm and appreciation that made it all possible. I hope that you learned a lot. I hope you met new people. I hope you share what you learned with your beekeeping friends and clubs. I hope it made you think of new ideas and new approaches to make bees and beekeeping more successful. Finally, I hope to see you at the WAS conference in Hawaii next year.

And with that, my term comes to a close. It has been a lot of work—but the work has proven to be gratifying. It has been a lot of fun. I worked with people that I profoundly enjoyed and appreciated. It has taken a lot of time—but I am going to head to sunny Mexico, to my favorite beach spot, and be fully recovered in time to start the holiday retail season! See you next year!



## Dr. Medhat Nasr Recipient of Roger A Morse Award

Dr. Medhat Nasr, the Alberta, Canada, Provincial Apiculturist, was recognized this past summer for his contributions to the beekeeping community in research, teaching and extension as Tech Transfer Apiculturist with the Ontario Beekeepers' Association, Extension Specialist at Rutgers University and most recently as Alberta's Provincial Apiculturist for 13 years. The Roger A. Morse Award is given out by the Eastern Apicultural Society of North America (EAS) to recognize individuals in teaching/extension and/or regulatory activity in the field of apiculture. EAS met in Guelph, Ontario in Aug.



## Bees as Biosensors: a Review

At the 2014 WAS Conference in Missoula, Montana, Jerry Bromenshenk and Frank Linton hosted the 2nd International Workshop on Hive and Bee Monitoring. The first workshop was two years earlier in Vermont at EAS. The first had a small number of presenters, the 2nd many more, and the principals have since located at least 30 companies entering the field.

After the Missoula conference, Bromenshenk and his team sat down to get a better fix on this emerging area of technology that is posed to change bee research and management. After a year-long effort, a historical review, and 116 references, is it complete - no! The topic is an escalating and moving target. New things are showing up all the time. But it's a reasonable start, and importantly, they have tried to credit the original innovators before they are forgotten.

The review was published recently in *BIOSENSORS*, an ONLINE Journal, so that everyone can access it (<http://www.mdpi.com/2079-6374/5/4/678>).

**8 November 2015**



# Betterbee<sup>®</sup>

## Beekeepers Serving Beekeepers™

2016 Catalog Available  
Mid-November  
Call for a free copy!

customizable beekeeping kits · 7/8" woodenware · education & support · double nuc box  
queen rearing supplies · glass & plastic containers · honey candy & straws  
over 50 different candle molds · soap making & skin care supplies · over 1500 products  
AND great customer service!

also check out our line of...

### LYSON Polystyrene Hives

#### Features Include:

- Latches adjust to hold cover securely in place
- 1-5/8" walls provide more insulating protection than wood (1" thick walls on nuc)
- Vented bottom board and cover allow you to adjust airflow
- Reinforced hard plastic edges between boxes
- Integrated frame rest
- Extra deeps and mediums available (10 frame hive) and extra deep super available for nucs
- 10 frame hive comes with outer cover, two deep hive bodies and bottom board

**Lyson 6 Frame Nuc**  
\* Comes unassembled  
\* Frames not included

**Lyson Complete Hive**  
\* Comes assembled or  
unassembled  
\* Frames not included

Reinforced hard plastic on  
top edge of box.  
Increased durability!

#### Introducing a new line of silicone candle molds!

- Softer material yields greater detail.
- Smaller candles make great gifts and make for quick impulse sales at the market!
- Wide variety of seasonal and bee themed molds!

**WWW.BETTERBEE.COM • 1-800-632-3379**

## A Sea of Change: Hawaii's bees now and then

By Dr. Ethel Villalobos, University of Hawaii at Manoa, 2016 WAS President



The bee-team from the University of Hawaii Honeybee Project is excited to host the 39th annual WAS conference to be held in Honolulu, on the island of Oahu in 2016.

The appeal of Hawaii as an exotic destination is undeniable. With its warm climate and white sand beaches the islands offer much to the visitors, and for many years, it was also a great place to be a beekeeper. The geographic isolation meant the islands were a "pest free" paradise for honey bees. Thus, queen production and the artisan honey industries thrived. Growers of fruits, vegetables, and tropical nut crops also had access to abundant pollination services by feral bees.

The arrival of the varroa mite in 2007, followed by the arrival and spread of the small hive beetle in 2010, changed the nature of beekeeping and farming

in Hawaii and we soon found ourselves looking for connections to mainland knowledge, sometimes learning from past mistakes, and sometimes adopting newly found strategies that suited our climates and unique needs. But perhaps the silver lining to these unpleasant changes is that we have all gained a greater appreciation for honey bees, and a deep awareness of the need for insect pollinators.

The theme for the 2016 conference is **"Beekeeping in Hawaii: New Insights into Old Questions"**. The recent introduction of bee pests to Hawaii has led to much research and significant contributions to our understanding of bee viruses and the pollinator community. The distinct islands, each with their own set of pests and parasites, provided the researchers with natural laboratories in which to study the effects of the mite on colony health. The work conducted in Hawaii has opened the doors to new perspectives with respect to virus evolution, varroa's impact, and colony management.

Bee health, varroa management, honey bee queen quality, small hive beetle control, pesticide risks for pollinators, conservation of native bees, are all questions that scientists, beekeepers, and growers in Hawaii have had to address recently, and with great urgency. Our experience, although tropical and unique, does provide insights about global challenges and hopefully global solutions.

As we prepare to host the 2016 conference, I realize that it will be hard to follow in the footsteps of such a dynamic president and conference coordinator as Beth Conrey, but I am happy that I have her, and the whole board to provide support and advice as we move ahead with planning. I would also like to introduce to you the new Vice-President: Ms. Lauren Rusert. Lauren is a beekeeper and a scientist; she is an Apiary Associate with the Hawaii Department of Agriculture/UH Pacific Cooperative Studies Unit. Lauren is based in Hilo, on the Big Island of Hawaii, where most of the queens are produced and where bees play a major role in the pollination of macadamia nuts.

The 39th WAS conference will be held in Honolulu, on the island of Oahu, October 13th to 15th. Details about the conference will be provided at a later date, but plan to pack summer clothing and a bathing suit for Fall 2016!

Hope to see you here. Aloha!

*Ethel M. Villalobos, Ph.D.*

Director of the University of Hawaii Honeybee Project

College of Tropical Agriculture and Human Resources

University of Hawaii at Manoa

3050 Maile Way,

310 Gilmore Hall

Honolulu, HI. 9682

Email: [emv@hawaii.edu](mailto:emv@hawaii.edu)

Lab: 808 956 2445

Websites: [uhbeeproject.com](http://uhbeeproject.com)

<http://www.uhbeeproject.com>

[hawaiiipollinator.com](http://hawaiiipollinator.com)

<http://hawaiiipollinator.com>



*Dr. Villalobos is originally from Costa Rica but has lived in Hawaii for a long time. She completed her undergraduate work at the Universidad de Costa Rica and went on to obtain her Ph.D. in biology from UCLA. She oversees the Honeybee Project at the University of Hawaii at Manoa.*



IN YOUR HIVES.  
OFF YOUR MIND.

In order to get the longest life out of *Varroa* control products, rotation is essential. Mite resistance can develop in a short period of time and that is why it is key to rotate your control materials with products like Apistan®. Rotating on an annual or semi-annual basis with products that have different modes of action will help manage mite resistance. Start your rotation program with Apistan®.

Always read and follow label directions. Wellmark International, Schaumburg, IL. Apistan and the Apistan logo are registered trademarks of Wellmark International. ©2009 Wellmark International.



# Western Apicultural Society

## PRE-CONFERENCE DIRECTORS AND DELEGATES' MEETING

SEPTEMBER 30, 2015, MILLENNIUM HOTELS AND RESORTS, BOULDER, CO

In attendance were Betty Farber, Ian Farber, Debbie Gilmore, Miles McGaughy, Albert Chubak, Jessie Brown, Rachel Fahey, Dewey Caron, Joe Carson, Bob Keenan, Jim Smith, Cyndi Smith, Fran Bach, Ethel Villalobos, Beth Conrey, Sherry Olsen-Frank, Kevin French and Jerry Bromenshenk (via telephone).

President Beth Conrey called the meeting to order at 2:45 p.m.

Secretary's Report: Betty Farber read highlights from the 2014 Directors and Delegates' meeting.

Moved Sherry Olsen-Frank/Beth Conrey to strike "or Secretary/Treasurer" from Article IV, section 2. Carried.

Moved Sherry Olsen-Frank/Beth Conrey to accept minutes as corrected. Carried.

Treasurer's Report: Treasurer Sherry Olsen-Frank presented a seven page report which included a statement of activities from January through December 2014, a profit and loss by class- 2014 conference, a statement of financial position as of June 30, 2015, a statement of activities from April through June 2015, a statement of financial position as of September 30, 2015, a statement of activities from January through September 2015 and a profit and loss by class – 2015 conference.

Treasurer Sherry Olsen-Frank reported that State Farm Insurance in Idaho wants two signatures on cheques or would like the duties of cheque signing and responsibility for the books split between two people. Sherry will do more checking into this and will also consult with Eric Mussen.

Moved Betty Farber/Miles McGaughy that the treasurer's report be accepted. Carried.

Editor/Historian's Report: Fran Bach reported that the WAS Journal is operating with a profit. Advertising rates have not changed since 2003. Fran suggested that an advertising rate change is needed. She would like to see more color on print copies. The cost of a print copy is approximately \$4.40 per copy to be printed and mailed. The on-line cost is \$0.50 per member. Discussion was held on increasing the advertising rate from \$150 for a full page to \$200. Discussion was also held on including a print subscription fee of \$20 per year for those members who wished to receive a print copy.

Moved Sherry Olsen-Frank/Debbie Gilmore that a line be added to the membership form for those members who wish to receive a print copy. An extra \$20.00 would be charged to cover the cost of printing and mailing. Carried.

Moved Sherry Olsen-Frank/Dewey Caron to increase the advertising rates per issue to \$200 for a full page, \$125 for half page, \$75 for a quarter page, and \$35 for a business card size. These rates would be effective January 3, 2016. Carried.

Nominations Committee Report: The following members were nominated for 2016.

Idaho: Steve Sweet or Sherry Olsen-Frank

California: Archie Mitchell (to be confirmed at a later date)

Alaska: Joe Carson

Oregon: Oregon will appoint and confirm a rep. at the next Oregon state beekeepers meeting.

Wyoming: Will Robinson (to be confirmed at a later date)

# AMERICAN BEE JOURNAL

www.americanbeejournal.com  
Return to: American Bee Journal  
51 S. 2nd St., Hamilton, IL 62341



or Call 1-888-922-1293

### Association Member Subscription

(Rates listed below are 25% below regular rates.)

U.S.

- 1 Yr. \$21.00
- 2 Yr. \$39.75
- 3 Yr. \$56.25

New

Renewal

Prices good through  
Dec. 31, 2015

## The Beekeeper's Companion Since 1861

Don't let your beekeeping  
fall behind the times!

Published Monthly

Free sample copy upon request

Subscriber's Name \_\_\_\_\_  
Address \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Email \_\_\_\_\_

**MANN LAKE**  
WE KNOW BEES

An Employee Owned Company

# Beekeeping Supplies- We've Got You Covered!!



- Protein Patties
- Dry Feeds
- Frames & Foundation
- Extractors
- Hives & Tools
- Medications
- Containers & Labels
- Suits & Jackets



**800-880-7694**  
[www.mannlakeltd.com](http://www.mannlakeltd.com)

## Harvest The Best...

with **SUNDANCE™ POLLEN TRAPS** and **COMPLETE ROSS ROUND SUPERS.**



### SUNDANCE POLLEN TRAPS

Imagine the cleanest pollen available with no heavy lifting, chalkbrood mummies or risk of foulbrood scales. There is no substitute for the **Sundance Trap** quality and cleanliness. Leading experts from the USDA and universities as well as commercial beekeepers and hobbyists agree that **Sundance Traps** are the best pollen traps available.

### COMPLETE ROSS ROUND SUPER

Produce comb honey with no dripping from cut edges and no liquid honey in the consumer package with **Ross Rounds** equipment. Easily shipped or delivered, stocked on shelves, purchased and taken home without danger of leaking. Enjoy providing locally grown, unprocessed, all-natural honey with a complete **Ross Rounds Super**.

For more information visit [www.RossRounds.com](http://www.RossRounds.com).

For dealers near you please call 518-573-8246 or email [Lloyd@RossRounds.com](mailto:Lloyd@RossRounds.com).

**ROSS  
ROUNDS™**





**The Best Selling  
BEEKEEPING  
Magazine In  
AMERICA!**

- **12 Big Issues A Year**
- **The BEST Beekeeping Calendar**
- **The ONLY Urban Beekeeping Section**
- **The ONLY Kids & Bees Activity Page**
- **Information on Gardening and Also Chickens**
- **Paper & Digital Editions**

**Keeping Bees  
Helping Beekeepers  
For Over**

**141 Years**

**\$25**

**Save 40% Off  
The Newsstand  
Price!**

To Order Call TODAY!  
**800.289.7668**  
ext. 3220

Montana: Jerry Bromenshenk  
Hawaii: to be appointed by end of Nov.  
Washington: Jim Smith

For WAS secretary: Cyndi Smith

Sites Report: Hawaii 2016, U.C. Davis 2017, Oregon 2018.

Resolutions/Bylaws Committee:

Moved Beth Conrey/Miles McGaughey that the wording in Article VI, section 2 be changed from 'officers' to 'executive committee' and include the past president and one additional director. Carried. *Please note that this resolution got voted on twice (see 'Resolutions' below) and is not an error in the minutes. Fortunately the outcome of the vote was the same.*

Unfinished Business: Discussion was held on Fran Bach's "Items for beekeepers". The question being discussed was whether the WAS website wanted to archive this.

Moved Miles McGaughey/Debbie Gilmore that "Items for beekeepers" not be attached to the WAS website. Carried with one abstention.

Moved Dewey Caron/Sherry Olsen-Frank that WAS be held at UC Davis in 2017 with Dr. Elina Lastro Nino. Carried.

New Business: Rachel Fahey of Be Informed Partnership from U. of Maryland explained that beekeepers can participate in their program by sending in samples of bees and receive test results of Varroa loads and Nosema. The cost is \$180 per year per apiary.

Moved Ian Farber/Al Chubak that WAS allocate up to \$2700 to partner with Be Informed Partnership to the Real Time Disease Load Monitoring Program. Carried with 1 opposed.

Resolutions: Fran Bach, chair of the Resolutions Committee presented the following.

Resolution 1 to correct Bylaws: Be it resolved, that "Officers" and "Executive Committee" be once again understood to be synonymous and that Article VI, Section 2, be changed to read: The EXECUTIVE COMMITTEE of the Society shall be granted complimentary full membership for their term.

Resolution 2 to correct Bylaws: Be it resolved that RESOLUTIONS be restored as a standing committee of the Society, with responsibility for collating any resolutions received from the membership and preparing them for presentation to the Society business meeting. Similarly, to have oversight of the bylaws to expedite amendments, which may be proposed by members or the Committee.

Resolution 3 to create a 40th Anniversary Committee: Be it resolved that the new 2016 administration create a Special Committee to help plan the anniversary event headed by the 2nd vice president.

Moved Sherry Olsen-Frank/Miles McGaughey to accept the resolutions as presented by Fran Bach. Carried.

Resolution 4: Remove all references to the wording "Secretary/Treasurer".

Moved Miles McGaughey/Jessie Brown to remove all references to Secretary/Treasurer and replace it with Secretary and/or Treasurer. Carried.

Moved Beth Conrey/Al Chubak to adjourn the meeting. Carried. The meeting was adjourned at 5:30 p.m.

Betty Farber  
WAS Secretary

**14 November 2015**

# ACORN BEEKEEPING PRODUCT LINE 2015

The new standard of excellence in plastic frames and foundations



## Acorn One Piece Frames are:

- Sturdier, Flatter, Stiffer
- Redesigned Mega Strong Ears Last Forever
- PLASTIC SNAP-IN FOUNDATIONS fit well in all wooden frames

The Bees Love 'Em!



For information call:

**Nick Lissaman**  
18 years experience  
**877-255-6078**

info@acornbee.com  
www.acornbee.com

13818 Oaks Ave. Chino, Ca 91710

## FEATURES:

- Well Defined Precision Molded Cell Base
- Superbly Waxed - Standard, Heavy, Extra Heavy Available
- High Quality Bee's Wax Used
- Rigorously Field Tested
- Excellent Bee Acceptance



PROUDLY  
Made in USA

# NMBKA



New Mexico **Beekeepers**  
Association

## Education

Certified Beekeepers Program  
Backyard Beekeeping School  
info@nmbeekkeepers.org

## Beekeeper Professional Development

NM Beekeepers Association  
Annual Meeting  
Albuquerque, NM, February 5-6, 2016

## Outreach and Advocacy

## Resources

nmbeekkeepers.org

**Western Apicultural Society**  
**ANNUAL BUSINESS MEETING**

**October 01, 2015, Millennium Hotels and Resorts, Boulder, CO**

President Beth Conrey called the meeting to order at 11:30 a.m. 19 people were in attendance.

Moved Charles Bennett/Sherry Olsen-Frank that the minutes of the 2014 Annual Business Meeting be accepted as printed in the WAS Journal. Carried.

Treasurer's Report: Treasurer Sherry Olsen-Frank presented a seven page report which included a statement of activities from Jan. through Dec. 2014, a profit and loss by class – 2014 conference, a statement of financial position as of June 30, 2015, a statement of activities from April through June 2015, a statement of financial position as of Sept. 30, 2015, a statement of activities from Jan. through Sept. 2015 and a profit and loss by class – 2015 conference.

Treasurer Olsen-Frank reported that Paypal has worked well.

Moved Dewey Caron/Charles Bennett that the treasurer's report be accepted as presented. Carried.

Editor/Historian's Report: Fran Bach reported that the increase in advertising rates will be in the next Journal. There will be a \$20 subscription fee for those who want a print copy of the Journal.

Moved Sherry Olsen-Frank/Debbie Gilmore to approve the increased advertising rates. Carried

Moved Charles Bennett/Kari Hallopeter to include a subscription fee of \$20 for those members who wish to have a print copy of the WAS Journal. Carried.

Sites Report: Hawaii in 2016 and UC Davis campus in 2017.

Nominations Report: Dewey Caron reported the following nominations for 2016:

President: Ethel Villalobos

1st vice president: to be appointed

Secretary: Cyndi Smith

Directors for a 3 year term: Alaska - Joe Carson, California - Archie Mitchell, Idaho - Steve Sweet, Oregon - Sarah Red-Laird (pending confirmation at the Oregon annual meeting), Washington - Jim Smith, Montana - Jerry Bromenshenk, Hawaii - to be appointed by the new president, Wyoming - to be appointed by the new president, Yukon - vacant

Moved Dewey Caron/Sherry Olsen-Frank to accept the nominations as presented. Carried.

Bylaws and Resolutions Committee: Chair Fran Bach and member Sherry Olsen-Frank reported the following:

Resolution 1 to correct Bylaws: Be it resolved, that "Officers" and "Executive Committee" be once again understood to be synonymous and that Article VI, Section 2, be changed to read: The EXECUTIVE COMMITTEE of the Society shall be granted complimentary full membership for their term.

Moved Charles Bennett/Bob Keenan to accept resolution 1. Carried.

Resolution 2 to correct Bylaws: Be it resolved that RESOLUTIONS be restored as a standing committee of the Society, with responsibility for collating any resolutions received from the membership and preparing them for presentation to the Society business meeting. Similarly, to have oversight of the bylaws to expedite amendments, which may be proposed by members or the Committee.

Moved Kari Hallopeter/Debbie Gilmore to accept resolution 2. Carried.

Resolution 3, which is the creation of a 40th Anniversary Committee: Be it resolved that the new 2016 administration create a Special Committee to help plan the anniversary event headed by the 2nd vice president.

Moved Dewey Caron/Sherry Olsen-Frank to accept resolution 3 which would be headed by the 2nd vice president. Dewey Caron withdrew the motion.

Resolution 4 to remove all references to the wording Secretary/Treasurer.

Moved Charles Bennett/Jessie Brown to accept resolution 4. Carried.

Unfinished Business:

Moved Dewey Caron/Sherry Olsen-Frank to accept the by-law revisions as presented in the WAS Journal with modifications made previous to this vote in the Director's meeting. Carried.

Election of Officers:

Moved Charles Bennett/Ian Farber to accept the roster of nominations as presented by Dewey Caron. Carried.

Dates and Sites: Hawaii in 2016 and UC Davis in California in 2017.

**16 November 2015**



Moved Sherry Olsen-Frank/Fran Bach to accept sites and dates as presented. Carried.

Moved Dewey Caron/Sherry Olsen-Frank to ask the 2nd vice president to form a committee to help with the UC Davis conference in 2017. Carried.

Committee and Bills: Fran Bach will investigate how club memberships could be changed to reflect the actual number of members. Presently, clubs are one entity which hugely under-reports actual membership.

Moved Dewey Caron/Debbie Gilmore that WAS continue participation in the Honey Bee Health Coalition. In support, the incoming WAS president will appoint a WAS participant (Dewey Caron is the current representative of WAS) and WAS contribute \$2000 in support of the HBHC's continuous activities. Carried with 3 opposed.

Moved Ian Farber/Kevin French to form a committee to study and make recommendations for the funding of beekeeping related organizations and funding of WAS representatives to attend these meetings.

Moved Sherry Olsen-Frank/Charles Bennett to amend Ian Farber's motion. The amendment would be to make a report to WAS Board of Directors. Carried.

Moved Charles Bennett/Kevin French to adjourn the meeting. Carried. The meeting was adjourned at 12:50 p.m.

Betty Farber  
WAS Secretary

## Western Apicultural Society POST CONFERENCE MEETING

October 01, 2015, Millennium Hotels and Resorts, Boulder, CO.

In attendance were Betty Farber, Jim Smith, Cyndi Smith, Robert Keenan, Jacquie Keenan, Ian Farber, Kari Halloper, Fran Bach, Ethel Villalobos, Sherry Olsen-Frank, Jessie Brown, Miles McGaughey, Beth Conrey and Kevin French.

President Beth Conrey called the meeting to order. She introduced the 2016 president, Ethel Villalobos from Hawaii.

In-coming president Ethel Villalobos reported that 3 Hawaiian Islands are Varroa free. There are concerns in Hawaii about the movement of bees. She reported that the beekeeping situation in Hawaii is chaotic but getting better.

There was discussion about setting up the 2016 WAS conference in Oahu.

Discussion was held about setting up a committee for the UC Davis conference in 2017.

Moved Sherry Olsen-Frank/Ian Farber to have Miles McGaughey be the "representative at large" on the executive committee for one year. Carried.

Meeting was adjourned.

Betty Farber  
WAS Secretary

## New WAS Journal ad rates

For all advertising booked AFTER  
JANUARY 1ST, the following rates apply:

Full page \$200/issue: \$800/year

Half page \$125/issue: \$500/year

Quarter page \$75/issue: \$300/year

Business card \$35/issue: \$140/year

Please also note the new \$20/ year subscription fee for PRINT copies of the Journal. Additional revenues will be used to improve accessibility to electronic platforms, and improved appearance and delivery of the print version.

**We Buy Honey**  
*Serving Northwest Beekeepers for Over 40 Years*

- EQUIPMENT
- TOOLS
- BOOKS
- GIFTS
- HONEYSTIX

**GloryBee**  
FAMILY OWNED • SINCE 1975

Home of GloryBee Beekeeping  
GloryBee.com | Eugene Oregon | (800) 456-7923

## Protecting Our Pollinators

*Dr. Marla Spivak, University of Minnesota*

We are experiencing a pollinator landscape cultural revolution. The number of homeowners, businesses, non-profit organizations and government agencies wanting to plant flowers for bees in our urban, agricultural and natural landscapes is heartening. But what is the science behind this action? How does the simple act of planting flowers help bees?

One recent study (among many!) helps illustrate the benefit of good floral nutrition for bees. This study was conducted by Matthew Smart, a recent PhD in my lab. He asked the question: How do agricultural landscapes affect the health and survivorship of honey bee colonies? He collaborated with a commercial beekeeper in North Dakota and studied colonies distributed among six apiaries over three years. The colonies were transported to California for almond pollination every winter and were returned to North Dakota for honey production each summer. Each of the summer apiaries was surrounded mostly by corn and soybean fields, but also had varying degrees of uncultivated land along roadsides, ditches, and wetlands (quantified by USGS). Mites and diseases were controlled effectively by the beekeeper, and residue analysis of pesticides in bee pollen did not reveal an effect of pesticide exposure on colony survivorship. The most significant predictors of colony health and survivorship each year were related to nutrition. The apiary surrounded by the most floral forage had an average of 12% loss of colonies each year, while the apiary surrounded by the least forage had over 40% loss each year. The only difference between these apiaries was the availability of flowers. Greater forage led to greater honey production, but more importantly, more pollen collection. Abundant pollen collection by bees over the entire summer led to greater nutritional stores in individual bees (higher levels of storage protein vitellogenin and lipids), and lower immune system activation (a good thing because a highly activated immune system comes at a cost to colony health and survivorship). Because the effects of mites, disease and pesticides were ruled out in this particular study, Dr. Smart could show clearly how the presence of quality and abundant forage, particularly pollen, helped honey bee colonies thrive. When choosing apiary sites, it's all about location, location, location.

An important component of the above study was that the beekeeper effectively controlled *Varroa* mite levels in all colonies. If mites were not controlled, many more colonies would have succumbed to the effects of mites and the viruses they vector, in addition to being weakened due to poor nutrition. In recent years with the increase in backyard beekeeping in cities, I have noticed that many small-scale beekeepers prefer not to treat their colonies for mites. I wish all of our colonies could survive without having to give them any treatments.



---

**I am a strong advocate of reducing treatments in bee colonies when possible. But observing the extreme losses that backyard beekeepers are experiencing, and monitoring the very high mite levels in colonies in cities, I am starting to rethink the strategy of not treating colonies.**

---

Here is what happens in a city (or in a commercial beekeeping operation) when most colonies are not treated for mites. Colonies with lots of mites start to decline at the end of the season, and colonies that have been treated and have low mite levels remain strong. The strong colonies start robbing out from neighboring colonies (within 1-2 miles!) that are weak. The robbing bees carry home stored honey, and they also carry home mites from the weak colony. Soon, even previously treated and healthy colonies have high mite levels before winter, and then die off, leaving the beekeeper perplexed. If sufficient numbers of colonies in an area are treated, more colonies would be stronger going into fall, and robbing bees would not pick up as many mites. In other words, when more colonies are treated, horizontal transmission of mites would be reduced. This concept, of treating sufficient numbers of colonies, is similar to herd immunity in our livestock and human vaccinations. The goal of herd immunity is to bring pathogen (or mite) levels down sufficiently to

<sup>1</sup>*D. Smart's studies have been submitted for publication – stay tuned!*



Your First Choice for Healthy Bees

**A Reliable Partner  
For your IPM Strategy**

Our products are available at your favourite Bee Supply Dealer

**Medivet Pharmaceuticals Ltd.**

#4, 55 -9 Avenue SE  
High River, Alberta, T1V 1E6 Canada  
Tel. 403 652 4441 / Fax 403 652 3692  
[Info@medivet.ca](mailto:Info@medivet.ca) / [www.medivet.ca](http://www.medivet.ca)



DONT BEE BEHIND THIS SEASON



10 Frame Syrup Feeder  
#W621



Swarm Trap  
#M522



Canvas Gloves  
#M344

10 Frame Woodenware  
#W920C



1 lb Muth Jar  
#B540



4x7 & 4x10 Smoker  
#M927/M928



Hive Carrier  
#MS36



Manufacturer Of Quality  
Beekeeping Supplies Since 1976

[www.millerbeesupply.com](http://www.millerbeesupply.com)  
888-848-5184  
[info@millerbeesupply.com](mailto:info@millerbeesupply.com)

496 Yellow Banks Road  
North Wilkesboro, NC 28659

November 2015 19

reduce the spread of the problem and prevent the demise of the population. There are a number of organic and effective mite treatments available on the market. It is time to bring down the mite population in the U.S.

Another study that helps illustrate the benefit of good floral nutrition for bees comes from Dr. May Berenbaum's lab at the University of Illinois (Mao et al 2013 ). Pollen has particular plant-produced compounds, called phytochemicals, that directly benefit honey bee physiology, such as p-coumaric acid. P-coumaric acid, and other phytochemicals have the ability to upregulate (turn on) detoxification genes in the bee. P-coumaric acid can also be found in stored honey in the colony because there is always some pollen in nectar. The findings have important implications for bee health: compounds in pollen turn on certain genes to make

enzymes that metabolize (break down) pesticides in the bee. This means that natural pollen and honey help bees detox! Artificial feeds (pollen substitute, sugar and corn syrup) do not have these beneficial phytochemicals.

In summary, it is the responsibility of all beekeepers to keep their bees healthy, and one way to do that is to control Varroa. Another way to keep bees healthy is to locate them in areas where there are abundant sources of pollen throughout the growing season. Planting more floral sources of pollen and nectar in our agricultural, urban and natural landscapes will help bees store beneficial protein and lipids that help them thrive. If we plant good, clean flowers, honey bees and our extremely important native bees will tap into their natural physiological abilities to detoxify pesticides they encounter on other crops and flowers. Let's give bees a chance.

<sup>2</sup>Mao W Schuler M, Berenbaum MR. 2013. Honey constituents up-regulate detoxification and immunity genes in the western honey bee *Apis mellifera*. *Proceedings of the National Academy of Sciences* 110 (22): 8842-8846.



**'TIS THE SEASON...**  
**Bee creative this year.**  
**Beekeeping courses make great gifts!**

**UMT.EDU/BEE**

## CONFERENCE 2015 ....

### The Artistry of the Bees

Dr. Mark Winston, Simon Fraser University

There is much to learn about honeybees, and ourselves, through art that takes bees as subject and topic. Best described as inspiration, it's expressed in the way that the magical, mystical essence of the hive inspires our creativity and wonder. The most powerful translators of the marvels presented by bees may be artists, who provide distinctive insights through various media.

The ancient Greeks considered the muses to be nine goddesses who were the inspirations for creativity in science, literature, and art. "To muse" means to be absorbed in thought, to ponder and contemplate; art with and about bees invokes the gods and goddesses as we mortals meditate upon and attempt to express the wonder inspired by bees. Artists have found many outlets to express what many of us feel about bees, that



*The Glass Dress, by Canadian artist Aganetha Dyck, in the collection of The National Gallery of Canada, Ottawa*

*"Aganetha Dyck connects these realms through her art, consulting with the bees themselves who apply beeswax and build comb on and around the interlocking human objects that she has placed into their nests. Her art honours honey bees by evoking their self-produced imagery, yielding unique and complex statements that link the labour of the bees to our human sensibilities." Dr. Mark Winston*

they possess an essential spirit, one much more expansive than the sum of the isolated behaviors that so impress—behaviors that come together to make up the colony.

Art about bees traverses the range from the material to the spiritual, the practical to the sublime, and is particularly valuable for those of us in the sciences, we who dwell deeply in data and can lose sight of the imaginary. Life is best engaged in its full spectrum rather than having to choose between the emotional and intellectual sides of our nature. Science demands proof, whereas the artist works happily in ambiguity and feeling, but these different ways of being in the world too rarely coexist.

Because we routinely conduct business with bees, we often overlook the profound lessons they provide in spheres beyond data and commerce. Bees yield insights into the spiritual, religious, and philosophical realms for those who pause to view their message through art.



#### **Beaver Plastics** **Langstroth Honeybee Brood Box**

- Excellent insulation
- Will not expand or shrink due to moisture
- Light weight
- Discourages mold growth
- Provides years of service with proper care
- Readily accepted by honeybees
- No nails



Contact us today

Toll Free: 1-888-453-5961

Email: [growerinfo@beaverplastics.com](mailto:growerinfo@beaverplastics.com)



[bpgrower.com](http://bpgrower.com)  
BEAVER PLASTICS



## Creating a Sustainable and Beautiful Habitat Garden

*Lauren Springer Ogden*

### OUR GARDENS CAN HELP RESTORE DIVERSITY AND MAKE UP FOR LOST WILDLIFE HABITAT:

- increase diversity of plant types (trees, shrubs, grasses, perennials) and species
- plant many natives (OK to plant adapted well-behaved exotics too as many adult insect pollinators are generalists; larvae often need specific grasses, trees, natives)
- exclude aggressively spreading plants, exotic and native
- reduce lawn space and hardscape
- flowers and fruits attract pollinators and eaters (and gardeners incidentally)-- shapes, colors, sizes, smells, tastes for specific clients

### PLANT TREES & SHRUBS in groupings/hedges/rows, deciduous & evergreen

### PLANT NATIVE BUNCHGRASSES in a sunny open panel instead of lawn

### CREATE CONTRASTS—EDGES: open vs. dense, low vs. tall, grassy vs. woody

### LAYER PLANTINGS OF VARIED HEIGHTS to create multiple edges

### CREATE VARIED HABITATS IN A SMALL AREA USING MICROCLIMATES ON YOUR PROPERTY:

- southfacing—plants from desert/dryland, (hot, drier)
- northfacing—plants from woods, evergreen forest edge (cooler, moister)
- westfacing—plants from dry prairie, chaparral (sunny, hot, often exposed)
- eastfacing—plants from woods' edge, moist prairie, chaparral (most temperate)

### PROVIDE VARIED FOOD FOR INSECTS AND BIRDS OVER AS LONG A PERIOD AS POSSIBLE:

#### SOME EARLY FLOWERS:

**BULBS:** winter aconite (*Eranthis hyemalis*), snow crocus (*Crocus ancyrensis*, *C. chrysanthus*), snow iris (*Iris reticulata*, *Iris histrioides*), *Tulipa batalinii* and other species tulips, grape hyacinths (*Muscari*), daffodils (*Narcissus*)

**PERENNIALS:** woolly veronica (*Veronica pectinata*), mountain basket of gold (*Alyssum montanum*), cushion phlox (*Phlox subulata*), prairie smoke (*Geum triflorum*), pasqueflowers (*Pulsatilla*), sugarbowls (*Clematis hirsutissima*), golden banner (*Thermopsis*)

**CACTI:** green hedgehog (*Echinocereus viridiflorus*), snowball cactus (*Pediocactus simpsonii*)

#### THE FOLLOWING LISTS OF NATIVES AND NON-NATIVES FEED MANY POLLINATORS:

**NON-NATIVES:** poppies (*Papaver*), peonies (*Paeonia*) foxtail lilies (*Eremurus*), roses, catmint (*Nepeta*), yarrow (*Achillea*), love-in-a mist (*Nigella*), alliums, annual catchfly (*Silene armeria*), lavender, lemon drops (*Onosma*), sea hollies (*Eryngium*), veronica, butterfly bush (*Buddleia*), Amur maackia (*Maackia amurensis*)

**NATIVES:** penstemons, prickly pear cacti (*Opuntia* and *Cylindropuntia*), Indian blanket (*Gaillardia*), salvias (some are non-native), wild quinine (*Parthenium integrifolium*), phloxes, evening primroses (*Oenothera*), leadplant (*Amorpha canescens*), fernbush (*Chamaebatiaria millefolium*), purple prairie clover (*Dalea purpurea*), sneezeweed (*Helenium*), greenthread (*Thelaspisma*)

**PLANTS THAT CONTRIBUTE POLLEN AND NECTAR AS WELL AS EDIBLE SEED FOR BIRDS LATER:** beebalm (*Monarda*), coneflowers (*Echinacea*), gayfeather (*Liatris*), globe thistle (*Echinops*), compass plants (*Silphium*), cosmos, coreopsis, prairie coneflower *Ratibida*

**LATE FLORAL AND SEED FOOD:** broomweed (*Gutierrezia sarothrae*), asters (*Symphotrichum*), pearly everlasting (*Anaphalis*), grasses (bluestem *Andropogon*, Schizachyrium, grama *Bouteloua*) rabbitbrush (*Ericameria nauseosa*), sunflowers (*Helianthus*), black-eyed Susans (*Rudbeckia*), goldenrods (*Solidago*), calamint (*Calamintha nepeta*), pitcher sage (*Salvia azurea*), late torch lily (*Kniphofia triangularis*), border sedum (*Hylotelephium*), autumn crocus (*Crocus speciosus*)

**HONEY  
B  
HEALTHY**

*"Help Your Hives to Thrive."*

**Honey-B-Healthy® Products**

Original Honey-B-Healthy® Amino-B Booster®

Vitamin B Healthy™ **NEW! SUPER PLUS**

**Energize Your Hives With SUPER PLUS:**

**MAKES HONEY BEES MORE RECEPTIVE TO HIGHER CONCENTRATIONS OF ESSENTIAL OILS, PROTEINS AND VITAMINS SO THAT BENEFICIAL LEVELS OF THESE FEED ADDITIVES GET TO THE BROOD QUICKER.**

HONEY-B-HEALTHY PRODUCTS PROVIDE BEES A DIET RICH IN NATURAL INGREDIENTS THAT HELP RESORE AND MAINTAIN A STRONG IMMUNE SYSTEM WHICH IS VITAL IN TODAY'S STRESSFUL MAN-MADE AND NATURAL ENVIRONMENT. MANY COMMERCIAL BEEKEEPERS ARE ABLE TO MAINTAIN HEALTHY COLONIES YEAR AFTER YEAR USING THESE PRODUCTS.

Made in the USA by a Special Proprietary Process using Certified Ingredients in an FDA-Registered State-of-the-Art Facility.

Beware of Substitutes-Quality Control Makes the Difference!

Call: 866-542-0879 [www.honeybhealthy.com](http://www.honeybhealthy.com)



## ALSEA HIVE SCALE

REMOTELY MONITOR HONEY RESERVES  
REDUCE Colony Losses ~ INCREASE Honey Harvest



- WIFI
- EASY TO USE
- EASY TO INSTALL

Introductory Offer:

System Recorder: \$168/Apiary  
+ Scale: \$50/Hive (up to 20 hives)

Compatible with NEWPORT TEMPERATURE/HUMIDITY MONITORS  
See website for details

See us in the Vendor Area

[info@bee-certain.com](mailto:info@bee-certain.com) <http://bee-certain.com>

541-528-7800 15918 E. Alsea Hwy., Tidewater, Oregon 97390



# MAKING QUALITY EQUIPMENT AFFORDABLE

**FREE SHIPPING  
ON ORDERS OVER \$150\***

COME VISIT OUR **NEW** RETAIL STORE  
29600 SW Seely Ave Suite B  
Wilsonville, OR 97070

\*Some Restrictions Apply



**RUHL BEE SUPPLY**  
— a Division of —  
**Brushy Mountain Bee Farm**



[www.BrushyMountainBeeFarm.com](http://www.BrushyMountainBeeFarm.com)

1-800-233-7929

### FAVORITE MOTH PLANTS:

yuccas, purple rock cress (*Aubrieta*), pinks (*Dianthus*), catmint *Nepeta*, autumn sage (*Salvia greggii*, 'Ultra Violet'), soapwort (*Saponaria*), evening primrose (*Oenothera*), fragrant stonecress (*Aethionema schistosum*), Greek valerian (*Centranthus ruber*, especially the white form), Verbena, Gaura, candytuft (*Iberis*), sweet alyssum, phlox, desert four o'clock (*Mirabilis multiflora*), angel's trumpet (*Datura wrightii*), fragrant pale selections of petunia

### FAVORITE HUMMINGBIRD PLANTS: (hummers like warm, wind-free areas to feed)

penstemons (especially red, orange or deep pink species), pink and red coral bells (*Heuchera sanguinea* and hybrids), columbine, especially red/orange species like *Aquilegia canadensis*, *A. desertorum*, desert willow (*Chilopsis linearis*), *Di-chelostemma* 'Pink Diamond', scarlet betony (*Stachys coccinea*), golden currant (*Ribes aureum*, *R. odoratum*), claret cup cactus (*Echinocereus triglochidiatus*, *E. coccineus*), scarlet gilia (*Ipomopsis*), torch lily (*Kniphofia*), hummingbird mint (*Agastache*), coral vine (*Lonicera sempervirens*), trumpet creeper (*Campsis radicans*) hummingbird trumpet (*Zauschneria* aka *Epilobium*)

**BERRY, FRUIT, AND SEED PLANTS FOR BIRDS:** New Mexican olive (female plants, *Forestiera pubescens* ssp. *neomexicana*), serviceberry (*Amelanchier*), winter fat (*Krascheninnikovia lanata*), samaras of maples (*Acer ginnala*, *A. tataricum*, *A. glabrum*, *A. grandidentatum*), sand cherry (*Prunus besseyi*) and other cherries, currants (*Ribes*), grapes (*Vitis*), elderberry (*Sambucus*), raspberries (*Rubus*), sumacs (*Rhus*), *Viburnum*, *Juniperus* (female plants), crabapples (*Malus*), grape holly (*Mahonia*), hawthorns (*Crataegus*), Engleman ivy (*Parthenocissus inserta*), cotoneaster, mountain ash (*Sorbus*), barberry (*Berberis*), buckthorn (*Rhamnus*), sea buckthorn (*Hippophae rhamnoides*)

### CREATE SAFE HAVENS AND PROTECTED NESTING SPOTS:

shade from hot sun (big tree and/or trellis)

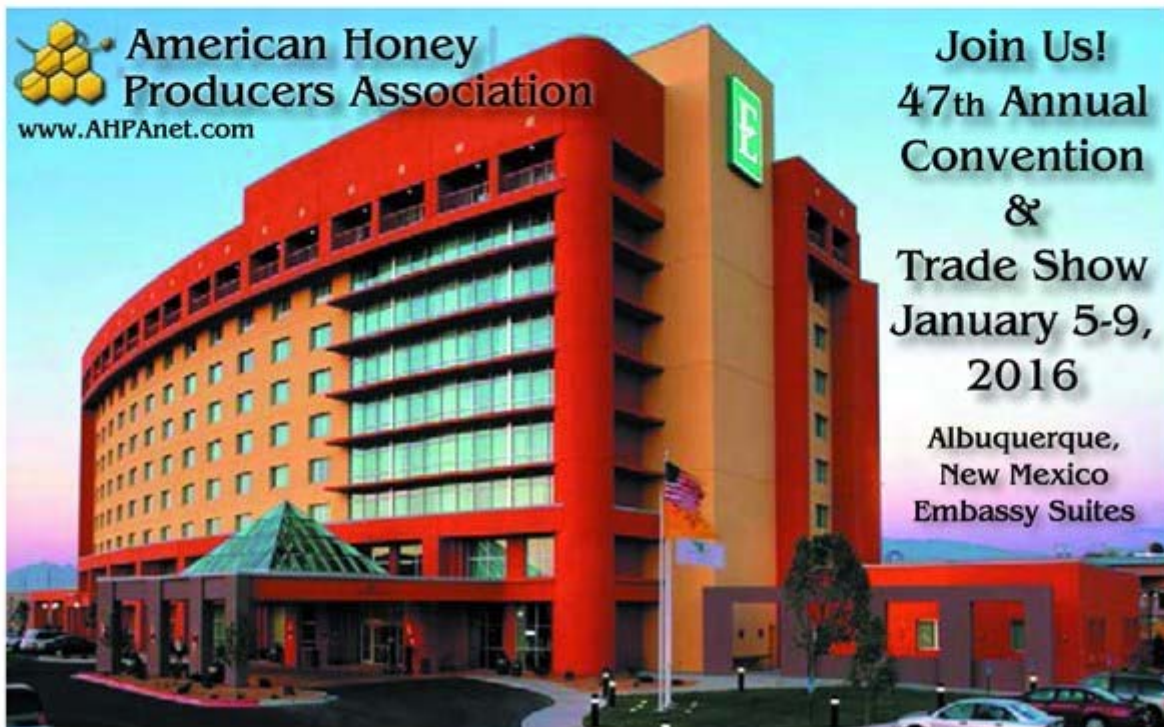
protection from predators (dense and/or thorny plants—hawthorns, barberries, grape hollies, roses)

shelter from wind and severe weather (shrubs, dense twiggy trees, semi-enclosed patio or covered trellis space, dense vines, evergreens: white fir (*Abies concolor*), bristlecone pine (*Pinus aristata*), lacebark pine (*Pinus bungeana*), ponderosa pine (*Pinus ponderosa*), Colorado spruce (*Picea pungens*)

### PROVIDE WATER

**IF DESIRED, SUPPLEMENTAL BIRD FOOD IN LATE FALL, WINTER, EARLY SPRING**

create a habitat garden to invite creatures, help them survive, and reconnect with the natural world.



**American Honey Producers Association**  
www.AHPAnet.com

**Join Us!**  
**47th Annual Convention & Trade Show**  
**January 5-9, 2016**  
**Albuquerque, New Mexico Embassy Suites**



## CONFERENCE 2015 ....

### Host Your Winter Hive Jacket Workshop (Excellent end-of-year bee club idea!)

By Leslie Ellis and Beth Conrey

BOULDER, CO--It was a gorgeous afternoon here on October 1 -- perfect autumn conditions for attendees of the 2015 HEALTHY BEE/BEE HEALTHY conference, put on by the Western Apicultural Society and the Colorado State Beekeeping Association. Picture three outdoor workstations, piled with the fixin's to assemble 40 reusable winter beehive jackets. And that's precisely what we did. You can, too! It's a great fourth quarter group activity for bee clubs.

What follows is a pattern, of sorts, pictures, and instructions on how to make your own, re-usable tarpaper hive jacket. Each jacket fits a stack of two deep Langstroth hive boxes.

Ingredients for 1 winter hive jacket:

ONE: 72"x18" length of tarpaper (weight: 15 lb., type: felt) (NOTE: This is why it's good to do this as a group -- tarpaper comes in 216 sf x 36" rolls. Which means that making one jacket leaves you with a lotta-lotta leftovers. Step 1 is to unroll the tar paper, cut it down the middle to make 18" strips, then cut those strips into 72" lengths.)

FOUR: 18-inch lengths of 1"x2" wood (cheap pine is just fine), TWO of them drilled with two holes. The holes are best placed about 2 inches from each end; they will house the screws that sandwich the tarpaper.

SIX: 1.25" screws

TWO: 8"-ish lengths of florist's wire (or any kind of wire you can easily wind around a 1.25" screw)

ONE: Cordless screwdriver. (Yeah! Power tools!)

Assembly Instructions:

1. On a long table, place one 72"x18" tarpaper rectangle. On either short end, sandwich the tarpaper in between two of the wood pieces -- one with pre-drilled holes, one without. (Ultimately, these are what make the jackets re-usable -- they're what you grab and close together, then wire shut on the ends, to encircle 2 deeps -- with a cushion of air between the exterior hive body and the inner side of the jacket. This matters to the ever-important component of air circulation.)

2. Grab that cordless screwdriver and four screws. Place the screws in the pre-drilled holes; commence to screwing all four in place. You should now have a 72-inch long tarpaper rectangle, with both short ends sandwiched in 1"x2" wooden strips.

3. On either end of the 1"x2" wood strips, screw in one screw. This is for the "wire shut" part -- it's where you'll wind the florist's wire, to close up the jacket.

4. Attach one 8"-ish length of florists wire to the screw on either end of the wooden "handle."

5. Roll it up, take it home, be ready for winter!



A re-usable winter hive jacket, covering two Langstroth deeps.

The Ingredient List: Tarpaper, wooden end pieces, screws, screwdriver, wire.



*Power tools! Sandwiching the tarpaper between the wooden end pieces.*

*Affixing the wire that holds the jacket shut, while providing a modicum of air circulation. Air circulation! Very important!*

# WESTERN BEE SUPPLIES, INC.

- #1 - BROOD CHAMBER SPECIAL** Includes: 2 Brood Chambers, 20 Frames and Plasticell, Pine Cover, Inner Cover and Bottom Board. All CM Grade. Nails and assembly instructions included.  
**\$110.00 Assembled (WWHOBBY2A) \$75.00 Unassembled (WWHOBBY2)**
- #2 - HONEY SUPER SPECIAL** Includes: 2 - 6 5/8 Supers, 20 Frames and Plasticell, one Plastic Queen Excluder. All CM Grade. Nails and assembly instructions included.  
**\$75.00 Assembled (WWHOBBY3A) \$50.00 Unassembled (WWHOBBY3)**
- #3 - ULTIMATE HOBBY KIT** Includes #1 and #2 above with a Wood-Bound Queen Excluder instead of plastic, Hooded Zipper Suit, Lightweight Leather Gloves, Hive Tool, Division Board Feeder, Smoker with shield and fuel, and First Lessons in Beekeeping Book. All CM Grade, nails and assembly instructions included.  
**\$350.00 Assembled (WWHOBBY4A) \$275.00 Unassembled (WWHOBBY4)**
- #4 - NEW! TRADITIONAL HOBBY KIT - ASSEMBLED ONLY**  
 Includes #1 and #2 above with a Wood-Bound Queen Excluder instead of plastic.  
**\$190.00 Assembled Only (WWHOBBY5A)**



**Call Toll-Free 1-800-548-8440**

Order Online! [www.westernbee.com](http://www.westernbee.com) Call for Freight Discounts!

ALL PRICES F.O.B. POLSON, MONTANA



Nov 6 - 8: Oregon State Beekeepers Conference, Oregon Gardens Convention Center, Silverton, OR. Info [www.orsba.org](http://www.orsba.org).

Nov 13 - 14: Beginners' Introduction to Mead Making, Honey and Pollination Center at the Robert Mondavi Institute, University of California, Davis, 392 Old Davis Rd., Davis, CA 95615-21234. FEE: \$575 - includes \$25 material fee. Info <http://honey.ucdavis.edu/events/introduction-to-mead-making>.

Nov 17 - 19: California State Beekeepers Association Annual Convention, Hilton Sacramento Arden West, Sacramento CA. Info [www.californiastatebeekeepers.com](http://www.californiastatebeekeepers.com).

Dec 3 - 4: Idaho Honey Industry Association 2015 Annual Meeting, Red Lion Downtowner, Boise, ID. For registration information and further information contact Cindy at [cindy@amgidaho.com](mailto:cindy@amgidaho.com) or call 208-888-0988.

Jan 5 - 8: American Beekeeping Federation Conference & Trade Show, Sawgrass Marriott Golf Resort & Spa, Ponte Vedra Beach (Jacksonville) Florida. Info 404.760.2875 or visit [abfconference.com](http://abfconference.com).

Jan 5 - 9: American Honey Producers 47th Annual Convention & Trade Show, Albuquerque Embassy Suites, Albuquerque, New Mexico. Info <http://www.ahpanet.com>.

Feb 5 - 6: New Mexico Beekeepers Association Annual Meeting, South Broadway Cultural Center, Albuquerque. Info [nmbeekeepers.org](http://nmbeekeepers.org)

Feb 26 - 27: Utah Beekeepers Convention, Best Western CottonTree Inn. Info [www.utahbeekeepers.org/convention](http://www.utahbeekeepers.org/convention).

Feb 26 - 27: 2016 Mason Valley Beekeepers Conference, Pioneer Crossing Convention Center, Yerington, Nevada. Speakers include Randy Oliver and Dr. Lawrence Connor. Info Debbie Gilmore, 775-463-2757 or [www.masonvalleybeekeepers.org](http://www.masonvalleybeekeepers.org).

**For more Beekeepers' Events items, visit the Global Beekeeping Calendar, courtesy of the Florida Beekeepers Association & Malcolm Sanford at [http://www.my.calendars.net/bee\\_culture](http://www.my.calendars.net/bee_culture)**

**TABER'S on the web ...**



**RUSSIAN QUEENS  
& PACKAGES**

Phone 707-449-0440

P.O. Box 1672

Vacaville CA 95696

[www.honeybeegenetics.com](http://www.honeybeegenetics.com)

**PACIFIC NORTHWEST BRED QUEENS**

**VSH / RUSSIAN / WILD  
SURVIVOR STOCK**

**OLYMPIC WILDERNESS APIARY**



**HYGIENIC · MITE RESISTANT**

**Selecting for Nosema Tolerance**

**Isolated Mating Yards**

**Hardy. Work@Cooler Temperatures**

**\_ No Package Bees \_**

Queens Available Summer and Fall Only

**866-204.3426 (toll free)**

**[www.wildernessbees.com](http://www.wildernessbees.com)**

**STRACHAN  
APIARIES INC.**

New World  
Carniolan  
Bees & Queens



We select for hygienic behavior, honey production, mite resistance, and gentleness.



2522 Tierra Buena Road (530) 674-3881  
Yuba City, CA Fax (530) 674-5802  
95993-9654 Orders only: (800) 368-3881  
[www.strachanbees.com](http://www.strachanbees.com) [orders@strachanbees.com](mailto:orders@strachanbees.com)

*"Honeybees are the backbone of agriculture"*

## Regional News



National Honey Bee Day 2015 arrived in Boise with the appearance of Nieves and Dewey Caron plus Oregon State Beekeepers Association members Jan Lohman and Heike Williams. The entourage kicked off a full slate of events beginning Thursday evening in Downtown

## National Honey Bee Weekend with Treasure Valley Bee Club, Boise, Idaho



Boise when they joined the Treasure Valley Beekeepers Club's (TVBC) annual Pub Swarm. Between swarmings, Dewey and the crew occupied Boise City Hall's front steps and hastily proclaimed that for the weekend Boise should change the City's official motto to "City of Trees" to "City of Bees."

Friday, Dewey, Jan and Heike administered both Lab and Field portions of the Oregon State Master Beekeepers Program Journeyman level practical exam at Boise City's James Hall Foothills Learning Center. Seven local beekeepers were tested and we are glad to say that everyone satisfactorily demonstrated proficiency in all tasks. TVBC then hosted a barbecue where Dewey hammed it up with his ever-present bee balloon.

Saturday morning, the TVBC staffed a booth at the annual Idaho Botanical Society "Bug Day," where parents and kids from throughout the Valley gathered to earn their certifications in "Bugology." Equipped with an observation hive, honey sticks, bee suits and billowing smokers, Dewey and the TVBC members captivated the curious throughout the event.

Later that afternoon, Dewey made two separate presentations to a full house assembled in Boise State University's Lookout Room. At the conclusion of his formal remarks, Dewey donned a wireless microphone and ventured into BSU's adjacent Roof Top Bee Yard. With the help of students, he dove into a number of hives and described what he was seeing, holding up frames for the audience to observe while they were safely behind full-height glass walls. This was a unique opportunity for both presenter and audience to observe inner hive workings and everyone enjoyed the activity immensely.

The Treasure Valley Beekeepers Club is grateful that Nieves, Dewey, Jan and Heike made the long trip to Boise to help the Club celebrate National Honey Bee Day. Seven more beekeepers advanced in their beekeeping education through the OMB Journeyman program, and the public was afforded the opportunity to interact on a personal basis with one of the foremost beekeeping authorities in the country. All in all, thanks to Dewey and entourage, this was a tremendously successful event for everyone concerned.



**6<sup>th</sup> Annual  
2016 Mason Valley  
Beekeepers Conference**

**February 26 & 27, 2016 - Yerington, Nevada**  
[www.masonvalleybeekeepers.org](http://www.masonvalleybeekeepers.org)  
Speakers include Randy Oliver & Dr. Lawrence Connor

For more info contact Debbie Gilmore at 775-463-2757  
*Supported by Yerington Room Tax Board*





the **Beez Neez**  
apiary  
supply



**Beekeeping Supplies**  
Local Raw Honey & Pollen  
Candlemaking Supplies  
Mason Bee Supplies, Gifts,  
& MORE!

Store hours:  
Tues-Fri 10am-6pm  
Sat 10am-4pm

 (360) 568-2191  
beezneez06@earthlink.net  
[www.beezneezapiary.com](http://www.beezneezapiary.com)  
403A Maple Ave. Snohomish, WA

Quality & Service Since 1907



C. F. **Koehnen** & Sons, Inc.

Queens Italian & Carniolan Packages F.O.B. all sized orders

www.koehnen.com / bees@koehnen.com  
3131 Highway 45 Glenn, CA 95943 (530) 891-5216

**Tate's Honey Farm**  
E8900 Maringo Drive  
Spokane, WA 99212

**Honey and Beekeeping Supplies**

Package Bees		Honey
Candle Making		Bees Wax
Queens Bees		Comb Honey
Pollination		Equipment

tateshoneyfarm.com      taccon105@icehouse.net  
Jerry Tate      509-924-6669      Rita Tate

**BEEKEEPER'S BEEHIVE BRANDER KIT**

**Prevent Theft!**




**Mark your boxes and frames today!**

- Heavy duty
- Light but rugged - easy operation
- 1/2" and 1" characters available
- Designed to produce very deep brands
- Uses Standard 20 lb. propane BBQ tank



375 Pine Ave. #22  
Santa Barbara, CA 93117  
(800) 964-8251 BrandNew.net

**Varroa-nator Screen Insert**



a new IPM tool for the battle against the Varroa mite.

- Allows for physical separation of fallen mites & bees.
- Placed on traditional bottom board reversed 180 degrees.
- New landing area & front opening for the bees to come & go.

**MANUFACTURED BY DIMO'S TOOL & DIE LTD.**  
12 BANGOR AVE. WINNIPEG, MB  
PHONE FOR INFO: (204)-772-6998

**nozevit<sup>TM</sup> Plus** 

**Your partner in helping maintain the intestinal Well-Being and Integrity of your honeybee Colonies**

Contains:

- All Natural Plant Polyphenols
- Phytonutrients
- 3 Essential Oils
- Complete Amino Acids
- Vitamins and Minerals



**NO GMO or HFCS!**

**AS LITTLE AS €27 PER USE.**

**Simple, Effective and Economical.**  
**Apply early Spring and late Fall via drench or in feeder. Add to protein patties.**

 **Dadant.com**  
**eKoBeekeeping.com**  
For more information - (907) 727-8200

# WAS MEMBERSHIP NEW/RENEWAL DUES PAYMENT FORM



Name \_\_\_\_\_

First Last

Address \_\_\_\_\_

Street or PO Box

City Prov/State Zip Code

Phone \_\_\_\_\_ Email \_\_\_\_\_

~~~ Tell us about yourself ~~~

Full time beekeeper? \_\_\_\_ If not, what other field do you work in? \_\_\_\_\_

# of colonies? \_\_\_\_\_ How long have you kept bees? \_\_\_\_\_ years

Age group (circle one) under 25; 25 - 40; 40 - 65; 65 or over

New member \_\_\_\_ Renewal \_\_\_\_ Check for \$ \_\_\_\_\_ enclosed

I prefer \_\_\_\_ print copy or \_\_\_\_ email notice when WAS Journal is posted online.

**NOTE: AS OF JAN. 1 2016, PRINT COPY REQUIRES A \$20 SUBSCRIPTION FEE**

Make check payable in US funds to Western Apicultural Society.

Mail to: **Western Apicultural Society**  
PO Box 397  
Selah WA 98942

## Membership Rates

|                  |              |
|------------------|--------------|
| Individual...    | \$20.00 US   |
| Junior...        | \$15.00 US   |
| Senior...        | \$15.00 US   |
| Senior Couple... | \$20.00 US   |
| Couple...        | \$30.00 US   |
| Association...   | \$20.00 US   |
| Commercial...    | \$100.00 US  |
| 10-Year...       | \$200.00 US  |
| Couple 10-Yr..   | \$300.00 US  |
| Benefactor...    | \$500.00 US  |
| Patron...        | \$1000.00 US |

**DON'T FORGET TO SEND CHANGE OF ADDRESS IF YOU MOVE!**



**BeeManiacs** Think Bee™

7619 W Woolard Rd, Deer Park, WA, 99006



Hive tools  
Smokers  
Extracting tools  
Bee suits, jackets, gloves  
...and more coming soon!!

**ONLINE STORE**  
shopbeemaniacs.com

FREE shipping on orders \$50+



info@beemaniacs.com  
www.beemaniacs.com



**Sacramento BEEKEEPING SUPPLIES**

HONEY • POLLEN  
ROYAL JELLY  
CANDLE & SOAP SUPPLIES

**(916) 451-2337**  
info@sacramentobeekeeping.com

2110 X Street  
Sacramento CA 95818  
Fax (916) 451-7008

Fred & Nancy Stewart  
Donna Stewart  
Pamela Hill

**West Coast Bee Supply Ltd.**

All Your Basic Beekeeping Needs:  
Medication - Equipment - Suits -  
And Much More.  
*Your Mail Order Specialists*

Phone 604-272-1921 Fax 604-272-1928  
Email: bluebob@shaw.ca  
9351 #6 Rd., Richmond, B.C. V6W 1E5

**WEAVER'S famous QUEENS  
and Package Bees**

- Buckfast
- All-American
- Beekeeping Supplies
- Assembled Beginners' Kits

**The R. Weaver Apiaries Inc.**  
16495 C.R. 319, Navasota, TX 77868

Phone 936-825-2333 Fax 936-825-3642  
Email: rweaver@rweaver.com www.rweaver.com

# THE REVOLUTION BOX

Everything  
Except  
Bees

## SHASTINA MILLWORK

SUPERIOR  
DURABILITY

- \* Ask about our unique GUARANTEE
- \* Ponderosa Pine Products (kiln dried)



- \* Any Size
- \* Any Quantity

Now  
Making  
Frames

- \* Manufacturer direct
- \* Nationwide shipping
- \* Assembly, paint,  
branding optional

877-789-7526 Toll Free  
[www.shastinamillwork.com](http://www.shastinamillwork.com)