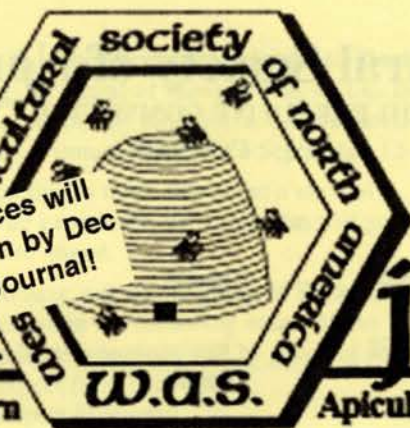


November 2010



WAS membership renewal notices will be mailed soon. Get your dues in by Dec 31 or this will be your LAST Journal!

the Journal of the Western



Journal
Apicultural Society of North America



Message from the Out-going President

Thanks to WAS volunteers

Dewey M. Caron

WAS 2010 is now history. We planned for 125 registrants and ended up with 186 – thankfully the Red Lion in Salem could handle our large crowd. The hard work of Ramesh Sagili (program chair), Vice President Harry Vanderpool, and Herb Brasington (publicity and then registrar/treasurer) helped make it all happen. Several Salem area (WVBA) beekeepers stepped up to volunteer for a number of chores and Carolyn Breece and Alexis DeLong, technician and summer worker for Ramesh at OSU, did yeoman duties, helping with registration and the speakers with their talk projection.

The program featured 20 presenters, 10 from Oregon. We got many compliments on the information and quality of talks at this WAS meeting. A special THANK YOU to all the speakers. This November WAS Journal will include talk summaries.

At the banquet Harry Vanderpool was recognized for OUTSTANDING SERVICE TO BEEKEEPING for his many ORSBA, WVBA and WAS activities and Kenny & Heike Williams took home an Oregon shaped plaque as recipients of the Thurber AWARD FOR BEEKEEPING INVENTIVENESS. It was a pleasure to recognize the Glenn Peters family at the banquet for

their service to beekeeping and for the honey stix donations for our WAS meeting. At 96 years young Oliver Petty, was most deserving of a jar of the Williams' Wild Harvest Honey.

Dirk Olsen, largest beekeeper in the Willamette Valley, hosted WAS beekeepers at his North Albany honey house and explained fall and mite management within his 6000 colony 8 frame operation. The 60 beekeepers also visited OSU to see the honey bee research and hive health monitoring programs of Ramesh, visited the pear germplasm collection and enjoyed the details of growing Ranier cherries in plastic tunnels (using Ramesh's bees) by Horticulture Department Chair Anita Azarenko. Special thanks to all who helped make our tour a good excursion.

Corvallis beekeepers Lynn and Ken from Leapin' Lizards, printed the T-shirts and tote bags featuring the special design of beekeeper Kelle DeForrest (Lane Co). If you would like a special 2010 shirt, showing bees foraging on blackberry with Oregon grape in the background, a few are still left (\$15). Contact Leapin' Lizards (leapinlizardspro@netscape.net) directly.

Thanks to the 10 vendors for their participation and highlight presentations at the meeting. Thanks too to individuals who donated door prizes and auction items. We were able to raise over \$1550 to help meet our program needs. We are proud to report that we have a nice balance of over \$1800 to transmit to the WAS treasurer as a positive income from the 2010 meeting.

Finally -- Thanks too to all who attended -- if you missed it, WAS 2010 was a great meeting!

Visit the WAS website at groups.ucanr.org/WAS/

Western Apicultural Society of North America

2010 - 2011 EXECUTIVE COMMITTEE

President	Antonie Botes PO Box 551701 Kapa'au, HI 96755 808-285-6677 beehivehawaii@gmail.com	California	Archie Mitchell 1520 N B Court, Lompoc CA 93436 805-291-3279 archibald_178@hotmail.com
Past President	Dr. Dewey Caron 15965 Queen Victoria Place Portland, OR 97224 302-353-9914 dmcaron@udel.edu	Nevada	Thomas J. Muncey 1927 G St, Sparks NV 89431 775-358-0467
1st Vice President	Jennifer Bach 808-430-2386	Oregon	Herb Brasington 1881 NE Ashberry Dr, Hillsboro, OR 97124. 503-648-9118 herb@hwbsystems.com
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Secretary	Betty Farber 3249 Schubert Rd, Kamloops BC V2B 6Y4 Canada 250-579-8518 ian_farber@telus.net	Washington	Jim Bach PO Box 397, Selah WA 98942 509-910-6861 (cell) jcbach@fairpoint.net
Treasurer	Jim Bach PO Box 397, Selah WA 98942 509-910-6861 (cell) jcbach@fairpoint.net	Hawaii	Antonie Botes (See President)
DIRECTORS		Parliamentarian	Tom Muncey (See Nevada)
British Columbia	Ian Farber 3249 Schubert Rd. Kamloops BC V2B 6Y4 Canada 250-579-8518 ian_farber@telus.net	Journal Editor/Historian:	Fran Bach PO Box 397, Selah WA 98942-0397 Phone 509-573-4245 febach@fairpoint.net
Saskatchewan	Alvey Halbgewachs 3047 Lacon St, Regina Sk S4N3A9 Canada 306-757-3147 cechalb@sasktel.net		

Each state/province in Western North America is entitled to elect one Director to the governing board of the Society. Directors meet before and after each general meeting and set policy and guidelines for the operation of the business of the Society. Throughout the year, they serve as the liaison between the Society officers and the members in their respective states/provinces. They are responsible for recruiting new members, keeping track of state/provincial concerns and advising the membership of their activities through this Journal.

WAS NEWSLETTER ADVERTISING RATES

(Payable in US funds only)

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Full page (7.25" x 9.75"	\$150 per issue
Half page (7" x 4.5" or 4.5" x 7")	85
Quarter page (3.5" x 4.5" or 4.5" x 3.5")	50
Business card (3.5" x 2" or 2" x 3.5")	25
Up to 25 words (incl header & contact info)	10
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Make check payable to Western Apicultural Society and mail to Newsletter Editor.	

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2 November 2010



Aloha Friends! Welcome to The Big Island of Hawaii! This will be the home of the 2011 Western Apicultural Society Annual Conference September 12-15.

I pledge to make this event a once in a lifetime experience for those that will go to the effort to attend.

We have a dynamic group of Beekeepers on the Island and in the following issues of our WAS journals introductions will be given of what you can expect from bees and beekeepers in Hawaii.

A very intensive search was conducted to come up with a suitable venue. In the light of our VIPs attending and the current economic situation, it was not a easy task. Let me not neglect to inform you that very early in this drama there was a

request from WAS Officers and Directors to enjoy the sun, water and (if that was not enough) sand of the Island. With an active volcano and lava rock everywhere, well.....

So here it is. The Hapuna Beach Prince Hotel agreed to co-sponsor WAS 2011. At a negotiated room rate of \$139 and a buffet breakfast included you might not want to miss the opportunity to be in a world class hotel for a beekeepers convention in Hawaii. With a hosting record of VIPs like President Bill Clinton and Vice President Al Gore, a deal like this is unheard of.

I want to thank Renette Botes for her commitment and hard work for leading the team to come up with the venue. Well done! And yes, ALL the rooms face the Pacific Ocean in case there is doubt about the view....

The Hapuna Beach Prince Hotel and the Mauna Kea Beach Hotel are members of the Prince Resort group. You will have access to facilities at both Hotels and a shuttle service for guests is provided. Enough said. Go to www.princeresortshawaii.com and learn more. We are still negotiating with the airlines to come up with a similar deal for the air fare. In our next issue check all the details.

The number of attendees for WAS 2011 will be limited. First come, first served. When the green flag is out to book (early in January 2011) make sure you are ready. Do not be disappointed!

Arrangements to put a program together are under way. Rest assured that it will fit the venue. More information will unfold as we proceed so please make sure to get the next issue of the WAS journal by checking that your WAS membership is current.

In my next message I will say something about myself and where I fit into the world of beekeeping.

It is a honor to serve as President and a warm word of thanks to my Officers and Directors for their support and outstanding dedication to WAS. Together we will make WAS 2011 a dream come true...

In the meantime "Mahalo from paradise!"

Antonie Botes

Welcome to Hawaii from our new President

Antonie Botes

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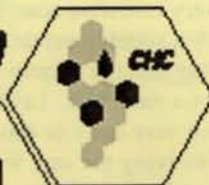
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www.nabeekeepingconference.com

Pre-conference Director's & Delegates' Meeting Minutes

August 30, 2010, Salem, Oregon, 3:00 pm

In attendance were Ian Farber, Kari Hallopeter, Tom Muncey, Archie Mitchell, Dewey Caron, Jim Bach, Fran Bach, Antonie Botes, Skip Jones, Betty Farber, Harry Vanderpool, Kevin French, Margaret Dilly and Claude Dilly.

President Dewey Caron welcomed those present at the meeting. Those present had a chance to introduce themselves.

Pres. Caron asked Tom Muncey to continue as parliamentarian.

Pres. Caron called the meeting to order at 3:10 pm.

Moved Jim Bach/Eric Mussen that the minutes of the pre-conference Directors' and Delegates' meeting held in Healdsburg, California in 2009 be accepted as printed in the W.A.S. Journal. Carried.

Pres. Caron gave a report outlining the problems encountered by the lack of communication from the previous treasurer. Dewey appointed Jim Bach as acting treasurer.

Treasurer's Report: Jim Bach presented his Acting Treasurer's Report. Moved Eric Mussen/Tom Muncey that page 3 of this report be accepted as the annual report for now. Carried.

Moved Jim Bach/Ian Farber that the treasurer's report that was circulated at the meeting be accepted as printed. Amended Eric Mussen that the treasurer's report be presented at the Business Meeting. Carried.

Discussion of a personnel/financial matter.

Moved Ian Farber/Antonie Botes that the pre-conference directors and delegates' meeting deem the previous discussion issue to be held in confidence and that details not be circulated in the Journal. Carried.

Editor's Report: Moved Eric Mussen/Archie Mitchell that the editor's report for the calendar year 2009 and 2010 to date be accepted as presented. Carried.

Past President's Report: Eric Mussen discussed W.A.S. yearly reporting requirements for the State of California and the I.R.S. All required reports and documents would go through Eric.

First Vice-President's Report: Harry Vanderpool reported his gratitude for holding the W.A.S. conference in Oregon. He reported that as of Mon. Aug. 30 there were 121 paid registrations. They were expecting approximately 160, which includes the vendors.

Second Vice-President's Report: Antonie Botes from the Big Island of Hawaii outlined basic plans for W.A.S. 20100. The projected dates would be in August and the conference would most likely be held on the Kona side of the island.

Editor/Historian's Report: Discussion was held on the role of the historian, past and present.

COMMITTEE REPORTS:

Sites: Bill Cervenka was not present at this meeting. However, Jim Bach reported that there is a possibility that W.A.S. 2012 could be held in Yakima or Tacoma, Washington.

Resolutions: Archie Mitchell reported no resolutions had been received at this time.

Auditing: An audit for 2010 will be deferred until financial records are finalized.

Nominations: The following states and provinces are in need of directors: Oregon, Alberta, Arizona, Hawaii, and New Mexico. Skip Jones agreed to be the director for Utah. The nominating committee can nominate Jim Bach to be treasurer and bring this nomination to the business meeting.

OLD BUSINESS:

There was further discussion, first started in 2009, to use an electronic method such as Pay Pal to allow members to pay for conference registrations.

NEW BUSINESS:

Awards: The Board approves state awards versus one award. There are two major awards given at the W.A.S. conference. There is an Outstanding Service to Beekeeping Award and the Thurber Award given for inventiveness and creativity. The latter award is usually given to a member from the state holding the conference.

Communications and Bills: Discussion was held about communication between Hawaii and the mainland. Email, Skype, and the option of conference calls were all mentioned.

Moved Jim Bach/Archie Mitchell that the meeting be adjourned. Carried. The meeting adjourned at 5:25 pm.

Betty Farber, Secretary

IDAHO HONEY
INDUSTRY ASSOCIATION
2010 ANNUAL MEETING
DECEMBER 2-3
RED LION HOTEL
BOISE, IDAHO

Western Apicultural Society Annual Business Meeting Minutes September 1, 2010, Salem, Oregon

President Dewey Caron called the meeting to order.

Moved Claude Dilly/Jim Bach that the minutes of the 2009 Annual Business Meeting, as printed in the 2009 August/September W.A.S. Journal, be accepted and approved.

Treasurer's Report: Acting Treasurer Jim Bach reported that on July 6, 2010 the W.A.S. account was \$31,235.44. As of Aug. 30, 2010 the account was \$31,621.75. This amount did not include conference expenses. Jim is trying as best as possible to reconstruct the expenses for 2009 from the limited data he has in his possession.

Moved Robert Smith/Tom Muncey that the acting treasurer's report given by Jim Bach be accepted. Carried.

Eric Mussen reported that he has submitted paperwork to the Attorney-General of California and the Secretary of State to bring W.A.S. into compliance with required government documentation.

Second Vice-President Antonie Botes brought a welcome from Hawaii for 2011. He reported that there have been big changes in beekeeping in Hawaii over the last two years. He needs a list of suggestions for speakers for the 2011 conference.

Editor's Report: Fran Bach has been recreating the W.A.S. membership list from September 2008. She needs to know who has taken out a new membership. Please let Fran know.

The W.A.S. Journal made a profit of \$337.00 in 2009. In 2010, to date, there has been a profit of \$685.00 over 3 issues.

Fran also reported that a notice is given to those who have email that the Journal is available online. Moved Fran Bach/Kari Hallopeter that the Editor's report be accepted. Carried.

President's Report: Dewey Caron reported a total of 186 registrants to date. Not all were paid registrations. He is happy with the contract with the Red Lion Hotel and the services provided by the hotel. Dewey will submit his president's report to the secretary after the conference. (Report follows these Minutes).

COMMITTEE REPORTS

A. Auditing - auditing for 2010 will be done in early 2011. The President will appoint an auditing committee before WAS 2011.

B. Sites - Jim Bach will look into holding the conference in 2012 in Washington state.

C. Nominations -

President: Antonie Botes

Secretary: Betty Farber

Treasurer: Jim Bach

Editor: Fran Bach

Directors: Utah - Skip Jones

New Mexico - no nomination

Oregon - later appointment, see page 2

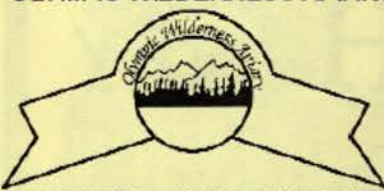
Moved Eric Mussen/Skip Jones that the slate of nominations be accepted as presented. Carried.

Moved Dewey Caron/Jim Bach that there be an option by

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6 November 2010

the president to replace George Steffensen as director for Oregon and to name a first vice president from Hawaii. Carried.

D. Resolutions - Moved Dewey Caron/Tom Muncey that letters of appreciation be sent to the Red Lion Hotel, OSU (Dept. of Horticulture), Oregon beekeepers associations who offered support, vendors and sponsors, workers and speakers, and the t-shirt designer. Carried. Dewey will forward the wording of the resolution to the secretary after the conference.

Resolution wording, as submitted by President Dewey Caron to the secretary:

"WAS would like to thankfully acknowledge those involved in planning and presentation of WAS 2010. We acknowledge the Red Lion Inn, especially sales & marketing (Jude Wright, Anita McIntire and Shannon O'Day), the front desk and meeting/restaurant staff. We appreciate Travel Salem for providing the registration materials and brochures/information on Salem. We thank all those providing door prizes, silent auction and banquet auction items and those purchasing these offerings. Special thanks to sponsors, the Oregon State Beekeepers Association and regional bee associations, WVBA, Lane Co. Beekeepers, Portland Metro and TVBA plus regional bee supply dealers GloryBee and Ruhl Bee Supply.

We acknowledge participating vendors in the meeting. Special thanks are due the meeting speakers. For services above and beyond to make WAS 2010 happen, special thanks to VP Harry Vanderpool, Program Chair Ramesh Sagili, and Herb Brasington, Publicity Chair and Registrar. Many volunteers helped make WAS possible, including Alexis DeLong, student summer worker of OSU and Carolyn Breece, beekeeping technician of OSU and the WVBA volunteers during the meeting. A big thanks to OSU and Dirk Olsen for hosting our beekeeping tour activities."

Unfinished Business: Jim Bach will follow up with Pay Pal to allow conference registrations to be paid electronically.

New Business: A question was raised about bonding the treasurer. There was also a question about event insurance for the conference. A committee consisting of Dewey Caron, Jim Bach and Antonie Botes will look into the possibility of insurance for W.A.S. events and bonding of the treasurer.

Jim Bach will investigate attorney's fees in the event we require an attorney to act on behalf of W.A.S. or to provide advice to W.A.S.

Communications and bills: Dewey reported that he expects to pay all bills from the conference from the Oregon bank account before transferring all monies to the treasurer.

Move Jim Bach/Skip Jones that the business meeting be adjourned. Carried.

Betty Farber, Secretary

President's Report, submitted by Dewey Caron to the secretary:

Dewey Caron reported that WAS has had to deal with a failure of communication with the elected W.A.S. treasurer. Following the 2009 W.A.S. meeting in California, attempts to obtain information on finances and memberships were not forthcoming to WAS Journal editor Fran Bach or myself. I attempted to consult with the treasurer on the hotel contract being negotiated to host WAS in 2010 without a response. Both Fran and myself sought email, snail mail, and telephone contact on numerous occasions related to WAS business items beginning in October 2009. We know Mark was receiving our messages, left directly, left through third parties, and with his business receptionist, but despite repeated attempts, received no direct return communication, not even an acknowledgment of our communication attempts.

As a proposed budget and first draft of a registration form were developed, continued efforts to obtain the treasurer's input were to no avail. As the deadline for an advance of \$2500 to the Red Lion Hotel was approaching, I intensified attempts to communicate but continued to get absolutely no response. I decided that this situation meant either canceling WAS 2010 or seeking another way to finance the advance deposit and accomplish the treasurer's responsibilities. We had to resolve money issues of running a conference in Oregon. I personally advanced the money to the hotel and, in consultation with the board and my "team" in Oregon, took the initiative to set up a WAS account to host the conference and "assume" the treasurer's duties related to meeting registration and funding the annual meeting and paying for WAS obligations.

I directed that Fran Bach discontinue sending further ad revenue income to the treasurer as income arrived for the spring WAS Journal, while both of us continued to seek some communication -- nothing was forthcoming, although there was evidence the treasurer was receiving such communications. In consultation with the WAS board, I then decided on the extraordinary action of removing our elected treasurer and, in accordance with Article VI, Section 6 of our By-Laws, appointed WAS WA Director Jim Bach as Acting Treasurer (announced in the August 2010 WAS Journal, page 4). Very fortunately, Jim was able to personally visit with Mark during his visit to a beekeeper in WA state and he indicated he was not able to meet the responsibilities of the treasurer, and that he would bring a check for the WAS assets in a subsequent visit to the US. On that subsequent visit, he gave Jim a check for slightly more than \$31,000, written on a credit union (non-WAS) account on July 6, which Jim used to re-establish a WAS bank account. No supporting paperwork was transferred despite Jim's efforts to obtain them.

There is continuing effort to obtain WAS financial records still (presumably) in the hands of our former treasurer. A full report of the use of funds for the 2010 WAS meeting will follow payment of all bills and outstanding debts."

Western Apicultural Society Post-conference Directors' and Delegates' Meeting Minutes September 1, 2010, Salem, Oregon

In attendance were Fran Bach, Jim Bach, Skip Jones, Ron Parsons, Kevin French, Kari Hallopeter, Margaret Dilly, Claude Dilly, Tom Muncey, Archie Mitchell, Ian Farber, Robert Smith, Marjorie Smith, Eric Mussen, Alvey Halbgewachs, Cyndi Smith, Jim Smith, Allan Gradek, Dewey Caron, Betty Farber and Antonie Botes.

President Antonie Botes called the meeting to order.

President Botes asked that the members and volunteers who planned the 2010 convention be available to communicate with the Hawaiian committee to assist in planning the 2011 convention.

President Botes has appointed a transition committee. He requested the email addresses of all previous executive members to help streamline the 2011 convention.

President Botes discussed some issues for the 2011 Hawaii convention, such as site location, field trips, and the dates for the convention. The venue and dates will be forthcoming in a future WAS Journal.

Moved Jim Bach/Kari Hallopeter that the meeting be adjourned. Carried.
Betty Farber, Secretary

The Story of WAS

The historical records of the Western Apicultural Society are scattered at this point, and an effort is being undertaken to gather them together long enough to scan them onto CDs for permanent record. Original materials can then be returned to their owners.

Once that is done, we will have the ability to put together "The Story of WAS", from its beginnings through to the present day, and add to it each year. If it is not too large, this can be mounted on the website. On special occasions, if we want a few print copies, print-on-demand services are available and reasonably priced.

At this point, we have access to a full (I believe) set of WAS meeting Minutes, a full set of Proceedings from the earlier WAS conferences, some newsletters (at the moment, only from 2003 to the present), lists of Officers and Outstanding Service to Beekeepers Award winners, photos taken by Ray Hicks, Tom Muncey, Kevin French and Kathy Garvey. With luck, these sets are captioned sufficiently that we know who is in the pictures.

As I have only been involved in WAS for the past seven years, I am sure there are many other items of interest that should be included. Please drop me an email (febach@fairpoint.net) or phone call (509-573-4245) to tell me what you know about. (If you don't get an answer on the phone, PLEASE leave at least your name so I can call you back).

Let's see what we can collect and go from there. This will be a long-term project but in the end, one I believe to be well worth the effort.

Fran Bach, WAS Journal Editor/WAS Historian

WAS Presidents to date

- 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 Mussen (California)
- 1998 Eric H. Erickson (Arizona)
- 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 Antonie Botes (Hawaii)

Oliver Petty: Still Going Strong at 96

By Dewey Caron



Retiring WAS President Dewey Caron acknowledged the many years of service to beekeeping of Oliver Petty who, as usual, attended the entire 2010 conference.

I had the pleasure to give Oliver Petty a jar of honey at the WAS banquet -- a bit of recognition for the nearly 40 years he has contributed to teaching the next generation of beekeepers through 4-H and summer jobs for local teens. Two of Oliver's three sons became beekeepers and his own beekeeping provided the funds for the boys to go to college.

Born in Goshen OR, he started by purchasing 500 colonies in northern California where he apprenticed with beekeeper George Biggers in Whittier. Back in Albany OR, the 500 colonies were split once, and "beginners' luck" producing 100+ pounds of water-white hairy vetch honey the first season. With it, he paid off his bees and built his present home.

Oliver also managed bees for Heins Honey Co of Albany and sold bee supplies. At one time he expanded to 2300 colonies but sought to maintain around 1000 most years. He sold his bee business (Fairview Apiaries) in 1980 to John Mespelt, one of many beekeepers he trained over the years, and introduced to the concept of renting bees for pollination. From that point, Oliver kept 20-30 colonies to 'keep involved'-- and helped custom extract and even move bees for pollination for another 20 years.

Reliable honey crops changed in the Willamette Valley and some bees had to be moved over the Cascade Mountains to drier eastern Oregon for seed pollination. On one trip, Oliver's young helper fell asleep and the bee truck overturned on the narrow Deschutes River bridge, some 300 feet over the gorge. Unhurt, they salvaged what they could (and mystified local police) by placing the hives on the edge of the bridge before getting a local farmer to get the damaged truck to the nearest town.

As Secretary of the Oregon beekeepers for 23 years, Oliver was a frequent attendee at bee meetings, both in Oregon and beyond. Son Walter remembers the family using bee meetings as picnic outings and camping trips. He was present all three days at WAS 2010 and still attends the local Willamette Valley monthly meetings and teaching at their annual "bee school". 10 years after retirement he was one of the 'worker' bees putting the state bee exhibit together at the State Fair in Salem..

Oliver is a lifetime member of the Oregon State Beekeepers and received their AWARD OF APPRECIATION for his many years of services to Oregon beekeepers. He also was presented the Diamond Pioneer Agricultural Award by Friends of Oregon Ag. It was a pleasure to recognize Oliver Petty at 2010 WAS. He has been a pillar of the state beekeeping industry.

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Beekeepers have a number of obstacles to consider when managing their hives. From the very worst, colony collapse disorder (CCD); to the potential, invasive exotic mites such as *Tropilaelaps* or exotic bee species such as *Apis cerana*; to the common, small hive beetles (SHB) and Varroa mites.

Recently, a limited national survey has been funded by the USDA Animal Plant Health Inspection Service (APHIS) in an attempt to document the amount of honeybee diseases, parasites, and pests that are present in the US. The results of the survey could be valuable to beekeepers on the lookout for potential problems, but beekeepers also have to be prepared to act when a problem occurs.

Preventative measures exist for the more common threats. To battle SHB infestations, several measures have been outlined such as removing dead colonies, keeping honey houses clean, keeping excess burr comb off the ground, and minimizing the amount of time inspecting bee colonies. In the case of Varroa mites, preventative measures such as screened bottom boards, small cell foundations, and comb trapping have limited impact. The way to truly fight a pest as persistent as the Varroa mite is through chemical intervention, but to be effective chemicals must be used correctly.

Products such as Apistan, Hivastan, and Checkmite+ are synthetic chemical pesticide treatments that can provide up to 100 percent control of Varroa mites when used correctly. Improper use can result in ineffectiveness and development of mite resistance.

Mark Taylor, Business Manager at Central Life Sciences – makers of Hivastan and Apistan – states, "In many cases of developed resistance, we have found that beekeepers have cut the recommended dose. To be effective, chemical control has to be administered in full doses just as the label states."

If resistance does occur it is advised that beekeepers rotate treatments to restore efficacy. It is also essential to use approved treatments. Experimenting with an unapproved chemical treatment is illegal, and could result in bee death, contamination of honey and harm to the beekeeper.

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Mr. Taylor adds, "The professionals that make these approved products know what they're doing. These products go through rigorous development and testing processes. For example, Hivastan went through research and testing for over eight years. We are confident that when used correctly, it works."

The bottom line is, applying a chemical as directed increases efficacy. **Always read and follow label directions, otherwise you could be leaving your colonies to chance.**

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Scenes from WAS 2010

By Kathy Keatley Garvey, UC Davis, CA



Clockwise from top left: 1. Ian & Betty Farber couldn't resist the antique carousel at Riverbend Park, Salem. 2. OSU worker bees, Alexis DeLong & Carolyn Breece, display Diana Sammataro's handmade quilt for auction. 3. Sue Cobey checks out the queen in one of Dirk Olsen's hives. 4. Questions for Larry Connor as he mans his trade show table. 5. Mike Burgett (left) & Lynne Royce visit with Oliver Petty.



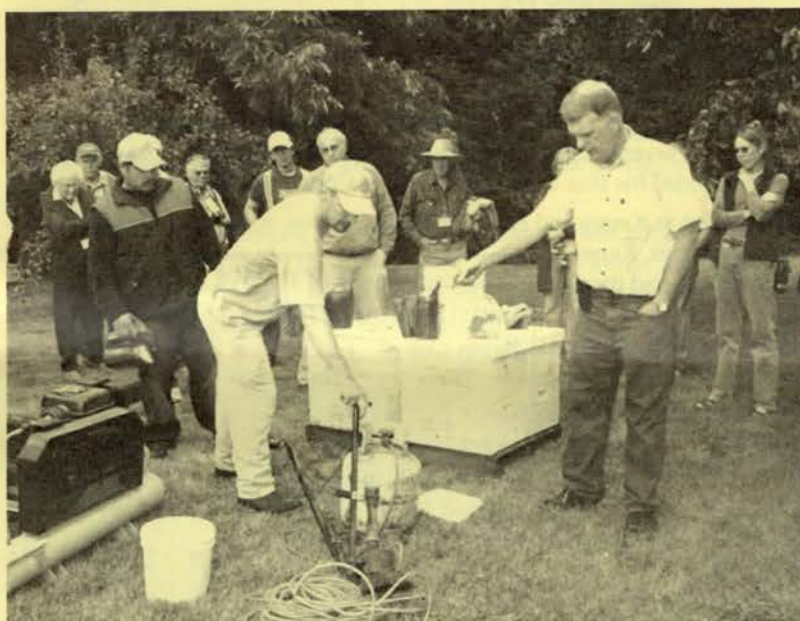
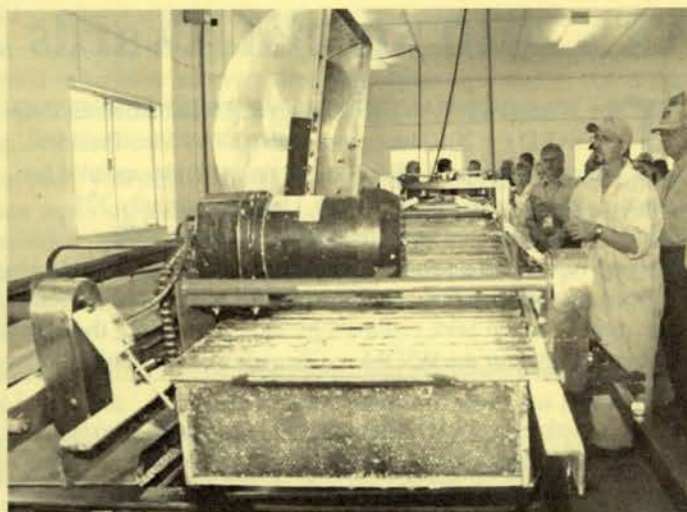
Speaker photos can be found in the August issue of the WAS Journal.




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(Clockwise from top left): 1. Dewey's very own queen bee gets a 'buzz' of thanks for her support of his WAS efforts. 2. Extracting at Olsen Honey, Albany Oregon. 3. Display at OSU Agricultural Farm, Corvallis. 4. Lots of interest in the trade show room. 5. Outdoor equipment demonstration at Olsen Honey.



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WAS 2010 Special Awards

The WAS OUTSTANDING SERVICE TO BEEKEEPING AWARD for 2010 was presented to WAS Vice President Harry Vanderpool. Harry maintains a single-operator bee business in the southern hills of Salem, Oregon, currently 325 colonies. He is also Vice President of the Willamette Valley Beekeepers Association, their representative to the Oregon State Beekeepers Association and past VP of ORSBA. Harry has organized several recent Oregon State conventions and is director of the annual beekeeping course for the WV.BA at Chemeketa Community College in Salem.

Harry, a beekeeper for 20 years, like all commercial beekeeper, has a mobile operation. His season begins with almond pollination in February in northern California. Once back in Oregon, he splits and builds his bees to pollinate cherries and later meadowfoam, sometimes clover seed as well. After again splitting and equalizing colonies, he locates his bees so they store blackberry honey, the major flow in western Oregon, then to the central Oregon desert to irrigated parsley/carrot seed fields around Madra, finishing pollination and fall buildup season on pumpkins south of the Santiam River. Harry uses both a boom and specially designed forklift for hive moves.

Harry is a willing volunteer for the State Fair, building and manning the exhibit for many years and assists in organizing Ag Fest in spring at the fairgrounds. He speaks to home orchard, grower and several school groups each year. He was a speaker at the 2010 WAS meeting, describing his nuc management system. Harry attended his first WAS conference at Corvallis in 2001.

The 2010 THURBER AWARD FOR INVENTIVENESS went to Kenny and Heike Williams. Kenny, a 30 year beekeeper, is a small tools wizard and an acknowledged artist in handling bees. Kenny breaks down his beekeeping inspection and activities into small tasks and then

experiments with tools and techniques that ultimately yield success. He uses a modified lift mounted on a 1955 Studebaker truck, both largely self-built and maintained. The honey house, a model of efficiency, has many Kenny designs.

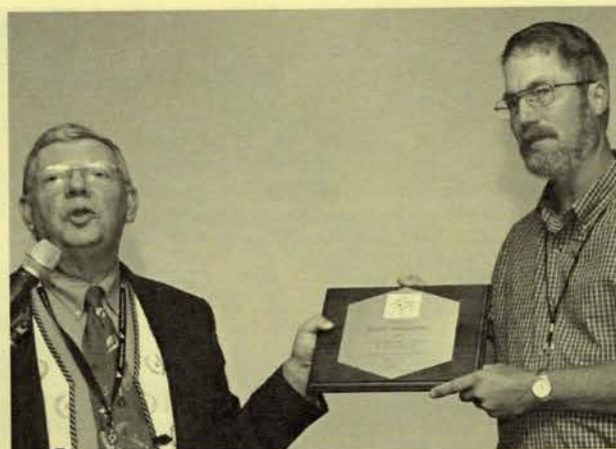
Heike, his beekeeping partner for the last 10 years, started keeping bees 15 years ago as a backyarder in Portland. She returned to her native Germany where she pursued a traditional two-year apprenticeship in beekeeping, earning Journeyman



Dewey with Kenny & Heike Williams

certification. She brings this training and her interest in sustainable /organic beekeeping to pest and disease control and to selection of stock in her small-scale queen-rearing project. She too is an artist in bee inspection.

Kenny and Heike jointly work their 450 colonies, providing pollination services in the Willamette Valley and producing honey in the Coast Range mountains of western Oregon. They have been running one small experimental group of hives without the use of synthetic miticides in an on-going effort to apply successful strategies to the whole outfit. They produce quality packages after almond rental and retail their honey as raw Wild Harvest Honey at a small number of profitable outlets.



Harry Vanderpool receives his award from Dewey

Past recipients of the W.A.S. Award for Outstanding Service to Beekeeping

Susan Cobey	2009
Joe Traynor (California)	2006
Justin Schmidt (Arizona)	2006
Don Dixon (Manitoba)	2003
Christine Peng (California)	2002
Gordon Kern (British Columbia)	2001
Ron Neese (California)	1999
Daniel F. Mayer (Washington)	1998
Gloria DeGrandi-Hoffman (Arizona)	1997
Hachiro Shimanuki (Maryland)	1996
Eric H. Erickson, Jr. (Arizona)	1995
Denis McKenna (Alberta)	1993
Mark Winston (British Columbia)	1992
Eric C. Mussen (California)	1991
Norman Gary (California)	1990
Robert Page (California)	1989
James Bach (Washington)	1988
Elbert Jaycox (New Mexico)	1988
Floyd Hilbig (Nevada)	1987
Basil Furgala (Minnesota)	1986
William Nye (Utah)	1985
Carl Johansen (Washington)	1984
John Corner (British Columbia)	1983
William T. Wilson (Wyoming)	1982
Roy Thurber (Washington)	1981
Harry Laidlaw (California)	1980
H. Len Foote (California)	1979
Ward Stanger (California)	1978

Don't B.U.G. Us!

Morris Ostrofsky

"To open or not open" – that is the question. Does the situation warrant going into the hive. Helping beekeepers use external information about their hive(s) to know whether the bees should be disturbed or not is the focus of this presentation. Hence the name. Don't BUG Us or Beekeepers Unnecessary Gawking. The emphasis is diagnosis not cures.

When you open your hive, you stop production for the day. Instead of foraging the workers spend their time repairing and removing collateral damage from your visit. Keep in mind that there are only about 100 productive days for the bees in our area that includes good weather and good foraging conditions. So even if you go into the hive and unnecessarily bother the bees just a few times, you are impacting the long term survival of the hive.

The presentation looks at various external indicators and discusses whether or not they warrant an in hive inspection. These are a few examples of what was presented.

Queen right: One the biggest reasons beekeepers gawk is they want to know if their queen is laying eggs yet. Your single best indicator of the general health of the hive is a lot of traffic on the landing board. And that traffic should include bees with pollen in their baskets.

Chalk Brood: Mummified larvae seen on the landing board and on the ground in front of the hive if we suddenly have a cooling trend in the weather. The edges of the brood nest can be exposed because the cluster has shrunk due to cold weather.

The brood dies and becomes infected with chalk brood fungus and this is what you

see on the outside of the hive. This situation warrants getting in (quickly) and removing any excess boxes and strengthening the hive by equalizing.

Drones pupae on landing board: Have you seen drone pupae on the landing board in spring? If the weather has been poor at a time of the year when the bees should be raising drones and thinking about swarming, the bees postponed swarm preparation. Part of the postponement is removing drone pupae. By going into the hive you aren't going to change the weather conditions and that is what is causing this.

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Crawlers: Bees crawling on the landing board and the ground. Crawlers are a common symptom to a number of diseases. How do you know what disease? Look at all the symptoms. If it is late winter or early spring and you see spotting on the front of the hive, this is a very distinctive indicator of *Nosema apis*. The first chance they get to get outside and relieve themselves they do so and you can see the result. Basically the bees have diarrhea; a digestive problem. With *Nosema ceranae* you will not see this spotting on the outside of the hive; you may see it inside on the top bars. Another indicator of *Nosema apis* is the orientation of the bees' wings called K-wing. K-wing is the abnormal position of the wings; compare the normal bee's wings in the lower right hand corner with the ones above. A normal bee's wings are folded close to its body where with K-wing the wings are extended beyond the bee's body. Bees' wings life line; when spread out subject to abrasion and shortened life. Treatment is fumigillan in sugar water. You do have to deal with this but the treatment is done outside the hive. When you treat for *Nosema apis*, you are also treating for *Nosema ceranae*.

Play flight (aka orientation flight): Lots of times people call me, especially new beekeepers, in a panic afraid that their bees are preparing to swarm. They see the bees drifting back and forth in front of the hive. If this were a swarm, there would be a greater number of bees and they would be heading out of the hive fast; not drifting back and forth like these bees. These bees are now 3 weeks old, coming out of the hive for the first time and orienting themselves to their hive location. Don't BUG them; it is a perfectly natural thing.

Flies on landing board: It is not unusual at all to see one or two flies on the landing board. They are probably attracted by the sweet smell of the hive. No problem. if you see lots of flies hanging around, you may have a problem. Most of you will fortunately never see AFB. Yet it is extremely important that you can diagnose this disease because unchecked it can be spread to other hives with deadly consequences. First clue may be available even before you open the hive. If it smells like spoiled meat, it could be your first clue that you have AFB. This is a time you have to BUG them.

Varroa mites; Your collection board is a good place to look for Varroa mites. It is particularly important to get your numbers way down in fall because it is during fall that the bees are raising winter bees. These bees have to live through out the entire winter and they need to be healthy going into winter. And this won't happen if they are parasitized by mites. When you see bees on the landing board with deformed wing syndrome, caused by a virus vectored by Varroa mites, the situation is critical. You need to B.U.G. the bees.

The take home message of Don't B.U.G. Us is knowing when to B.U.G. the bees and when to let them be: it makes life easier for the beekeeper and more productive for the bees.

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Why Almonds Rule: Beekeeper Management Practices

Christi Heintz & Meg Ribotto,
Project Apis m.

The National Agricultural Statistics Service (NASS) has recently published two important documents concerning the California almond industry. First, on April 30, 2010 the updated 2009 Almond Acreage Report was released. Here's the bottom line ñ there are now over 800,000 acres of almonds in California. Bearing acreage will be up 20,000 acres compared to this previous pollination season so beekeepers will need to generate 40,000 - 50,000 additional colonies for almond growers for the 2010-2011 seasons.

Then, on July 8, 2010, the objective almond forecast was released. Even with variable spring weather, the almond crop is estimated to be 1.65 billion lbs. or 17% above last year's production of 1.41 billion lbs. While almond acreage is increasing, the Apiary Inspectors of America (AIA), in collaboration with the USDA-ARS and PAm scientific advisor, Jerry Hayes, recently published a report on losses of overwintering honey bee colonies. This past winter, according to their survey, beekeepers suffered 33.8% losses. This annual survey is now in its fourth season and losses are eye-opening: 29-36%. No industry should endure 30% + annual losses. To counteract the decrease in colonies, pollination rental fees that were \$40 in 2000 have jumped to \$150 - \$160 per hive in 2010.

In addition to the almond, honey bees pollinate one-third of our crops. These include over 90 different crops nationwide representing a value of \$15 billion. Never has there been a more opportune time for Best Management Practices (BMPs) to be adopted by beekeepers. Project Apis m. (PAm) is committed to decreasing these honey bee losses specific to managed honey bee colonies and crop pollination

services. BMPs developed by PAm are: 1) Nutrition, 2) Pest Control, 3) Disease Control, 4) Hive Management, 5) Colony Management and 6) Business Management. In addition, BMPs are being developed for growers to assist the beekeeper.

In the area of nutrition, healthy bees require a diversity of pollen. When possible, locate natural forage for your bees. Fall is a critical time to build bees for almond pollination by February 1st. When forage becomes scarce, provide supplemental feed. Keep bees well-hydrated with clean water.

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Managing varroa takes consistent monitoring. Beekeepers should use the same method each time when checking for mites. Practice preventative maintenance by requeening with mite resistant stock. When treatment is necessary, use soft chemicals. Be aware of your neighbors control methods. Given the bees flight range, what your neighbor does may affect you.

Like varroa, Nosema needs to be monitored on a regular basis. When detected, don't overmedicate. Rotate your control methods and follow label instructions. Practice good hygiene -- Nosema is a spore that can appear quickly and live long.

Practice hive management by keeping equipment clean and maintained. Develop a replacement schedule for new frames and comb. Investing time, money and energy on your healthy colonies is sound colony management. Maintain a reserve; don't commit all your colonies to contract. Cull weak colonies and maintain genetic integrity to meet your objectives and lastly, use diagnostic services for objective colony assessment.

Business management requires professionalism in dealing with your grower. The reward is a renewed contract for the next pollination season. Be dependable with the timing of hive drops and pick-ups. Be visible to your grower and develop contingency plans for the unexpected. Be efficient by streamlining your business to manage resources wisely and keep good records to improve practices. Determine pollination fees knowing your operating costs. Protect yourself and the grower by using a contract. Whether you are a third generation beekeeper or a first time beekeeper, keep learning. Join your local, state, regional and national organizations. Access the internet, subscribe to bee journals and attend conferences. Give back by mentoring young beekeepers and contribute to bee research to ensure a sustainable pollination industry.

PAm funds research that is project-driven, results oriented and guided by beekeepers. We are a responsive non-profit organization that can move quickly to fund a project. PAm has funded 15 projects totally \$375,000, as well as, receiving 2 Specialty Block Grants in the amount of \$350,000. Research priorities are: 1) Varroa, 2) Nosema, 3) Pesticides and 4) Colony population and bee longevity. Projects have included research institutions in eight states. PAm is presently funding the DeRisi Lab at UCSF in developing a bee pathogen chip. Jerry Bromenshenk, Bee Alert, Inc., is studying the relationship between viruses and Nosema. Dave Wick of BVS, Inc. is looking into essential oils and their impact on bee viruses. At the University of Florida, Dr. James Ellis' research includes cutting-edge technology using RNA interference to combat varroa. Kimberly Stoner is conducting research on neo-nicotinoids at the CT Experimental Station and Maryann Frazier has a cost-share project on pesticides at Penn State University. Project Apis m. (PAm) has also brought new forms of technology to bees in the bee pathogen chip and virus detection machine.

Visit PAm's website at <http://www.projectapis.org> to find the latest research, current news and events, pollination contract template, a lab directory for beekeepers, The Cummings' Report outlining almond statistics, links to other important websites and to learn more about PAm and how to support PAm. Scientific advisors for Project Apis m. are Eric Mussen, UC Davis, Jerry Hayes, Florida State Apiarist and Gordon Wardell, Paramount Farming. PAm Board Members are; Dan Cummings, Chairman, Gene Brandi, Zac Browning, Joe MacIvaine, Dave Mendes, David Miksa, John Miller and Joe Traynor.

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Hints for Successful Backyard Beekeeping

*Eric Mussen, Extension Apiculturist,
Entomology Department,
UC Davis, CA*

Beekeeping can be an interesting and pleasant pastime. However, besides the enjoyment, beekeeping comes with responsibilities. Beekeepers should have the best interest of their colonies in mind and do what is necessary to keep their bees healthy and productive. Beekeepers must also keep their neighbors in mind. Similar to pets and livestock, beekeepers should do whatever is possible to prevent their charges from creating a nuisance for neighbors.

Before obtaining colonies, potential beekeepers should check on federal, state, and municipal ordinances. While being extremely devastating to many beekeeping operations, colony collapse disorder (CCD) has generated public concern for, and better acceptance of honey bees. Now would be an ideal time to try to loosen restrictions on beekeeping, as has been done in New York City (and, apparently, Washington, DC!).

Regardless of where honey bees are kept, they have the same basic needs that have to be met. I call these the basic fundamentals of beekeeping that I learned from my former PhD advisor, Dr. Basil Furgala. The fundamentals are:

1. a young, prolific queen
2. a quality hive
3. adequate water and food
4. freedom from diseases and parasites.

Meeting these needs is the goal of quality colony management.

The heart and soul of the colony is the queen. Even though she serves at the will of the workers, it is her genetic makeup that determines the size, productivity, and behavior of the colony. For the sake of the beekeeper and the neighbors, the prime consideration is how defensive the bees are. It is bad enough to have unpleasant bees, but when they chase the neighbors around their yard, it definitely is time to requeen.

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The most dependable queens usually can be purchased from long-time, established bee breeders. They have been selecting for "gentle" bees for decades. Queens in swarms, feral colonies or queens from supercedures may have mated in the back alley with disreputable drones and can produce difficult to manage colonies.

Beehives come in a number of sizes and materials. All will work well in the hands of experienced beekeepers. The most important concern is maintenance of the "bee space" so that the frames can easily be removed for inspection without injuring many bees or the queen. Although exterior dimensions of standard Langstroth hive boxes from various manufacturers are identical, the frames and rabbets are cut to different dimensions, so that they do not work well mixed together. Once you select a beekeeping supply line, stick with it.

Although the outside appearance of the hive(s) means little to the bees, it means a lot to your neighbors. Neat, freshly-painted hives suggest an attentive and caring beekeeper. That is the image you wish to project. Besides, hives with extra entrances increase numbers of guard bees significantly and tend to keep the colonies on alert most of the time. Also, extra entrances contribute to faster death through robbing by neighboring colonies.

In climates where summer rains are infrequent or non-existent, honey bee colonies can suffer from lack of water. Water or nectar is used to dilute honey and glandular secretions before they are fed to the brood. Water or nectar is used to liquefy pollen pellets so that the nurse bees can drink the pollen grains. Water is used to maintain the proper humidity in the brood nest. Bees fanning over droplets of water, strategically placed in the hive, produce evaporative cooling to prevent melt downs on hot summer days. In desert locations, honey bees forage only for water at temperatures much above 100° Fahrenheit. They can use nearly a gallon of water a day.

Honey bees tend to collect most of their water from the nearest acceptable source. If it is likely that water foraging may inconvenience the neighbors, get your supply of fresh, shaded water in place BEFORE the bees establish watering holes elsewhere. Leaky faucets, water gardens, fish ponds, dog dishes, cattle troughs, hanging laundry, irrigated lawns and foliage, and swamp coolers are just a few of the places where honey bees will collect water.

Around swimming pools, honey bees will collect water from wet footprints on the pool apron, along the edges of floating objects, and along the water line. The bees do not stand in or on the water. Bees found in the pool water usually are spent foragers that have fluttered into the pool as they ran out of gas. However, they can and do sting swimmers who contact them.

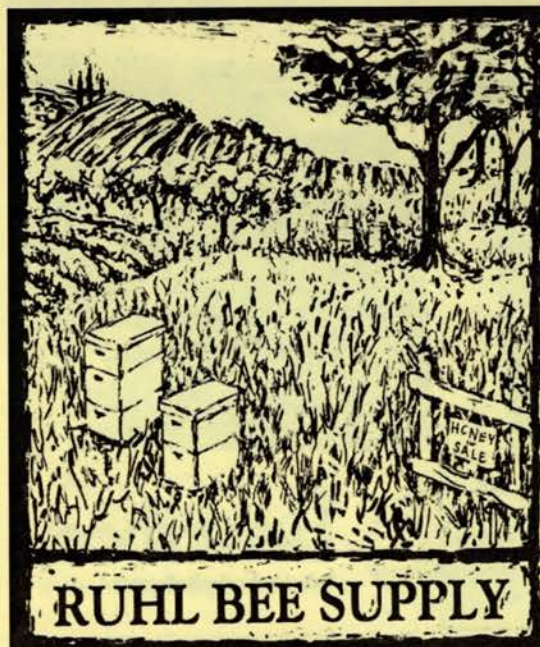
Providing adequate nectar and pollen is often impossible if blooming plants are not within flight distance of the bees. Feeding sugar syrup and pollen substitutes may be essential. Those topics are too extensive to be covered in this article. Information on these topics can be found at various sites on the Internet, including my Bee Briefs at (no www) entomology.ucdavis.edu/faculty/mussen.cfm.

Each colony of honey bees has its own level of defensive responses to stimuli. You can't do much to tone down their natural level, but many things can make the colony much touchier. Nightly visitations by skunks; daily visitations by yellow-jackets, vandals or overly-zealous beekeepers; continuous commotion around the hive entrance; contact with insecticides; inspecting colonies without the use of smoke; and clumsy or careless, rough hive manipulations all set the bees on edge.

Manipulating the hives and frames without gloves encourages beekeepers to be more careful. If the hives are kept way out in the open, a strategically placed flag or two will keep the bees used to a little movement in front of the hives.

You are likely to be a successful beekeeper if you keep the welfare of the colony and the concerns of your neighbors in mind. Treat your neighbors to some locally produced honey and invite them to join you when working the bees or harvesting the crop. Be sure they are properly protected!

(Editor's Note: Dr. Mussen can be contacted at ecmussen@ucdavis.edu or at (530) 752-0472. His web page is at: (no www) entomology.ucdavis.edu/faculty/mussen.cfm.)



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Life on the Dry Side: A Practical Approach

Jan Lohman, Hermiston OR

Our annual income is heavy to pollination with 70% from pollination, 20% honey income and 10% from selling nucs, bees, packages and beeswax. We travel the usual circuit, beginning with the almonds in California, then to cherries, pears and a few apples in eastern Oregon, and finally to watermelon pollination in the summer for 2/3's of our bees and the others go to vegetable seed pollination in Madras, Oregon. Pollination holds interesting challenges for beekeepers, it is not easy on the beekeepers or the bees, lots of night work for the beekeeper and extra working, feeding and requeening for the bees.

There are a variety of employees that you can use to help you run your operation. We have two very full-time employees besides us and also we do some summer hiring and have one part-time person.

There is a scale hive located on our property. (see picture enclosed) We use it to judge the weight of our backyard nucs as well as the hives located in the area. We try to check it several times a week and record the weights. It is amazing what it can gain and then loose in a few days.

We have a beehive placed on a stand outside of our heat room with a tube that goes through the building and comes out at the entrance of the hive. This allows the bees an escape route from the heat room and saves bees.

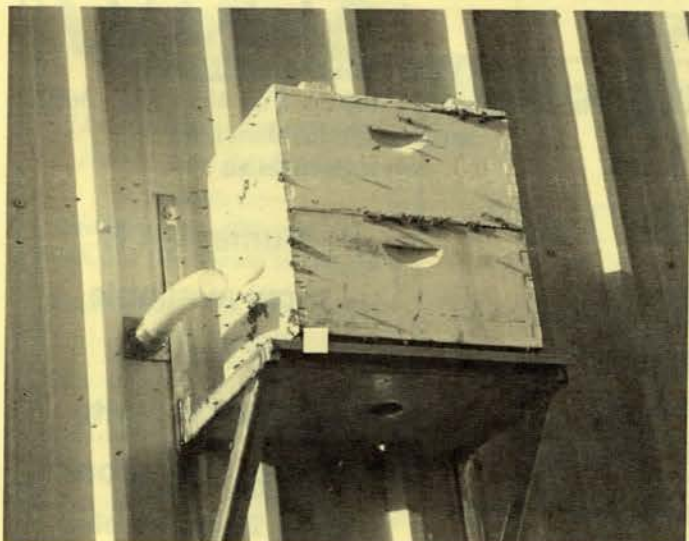
We have some very simple tricks that can be used to keep records. Buy some carpenters chalk and holders – blue works best. Write in code on your lids with the date that you visited the hive and what you saw at that time and example would be

DOA or DL and how you fixed the hive. When you come back, if it is in good shape, you will know that your procedure worked. The chalk will last on the lid for the year and then you can look back on what has happened to the queen over that period of time.

We are hearing so much about nutrition for bees. Colony Collapse Disorder has made us all more aware of how critical good nutrition is for our bees. We fed 8 lbs of pollen patties to each of our hives in 2009 and I think that we will feed more in 2010. You can give them 1#-2# patties each visit during the fall season. Many beekeepers are now also spring pollen feeding.

During the fall in Eastern Oregon, one half of our bees go into buckwheat fields. The buckwheat really prepares the bees for winter and makes for beautiful spring colonies but it adds another set to our already too busy schedule. Our other half go into fall mustard fields where we group them into manageable yards and do our fall bee work. They do not make nectar here but they do gather lots of pollen.

To conclude, enjoy your bees and pay attention to their nutrition and condition and keep records so that you know what works for you and what does not.



Platform hive



Scale hive

Other Products of the Hive --

and some you
never thought of

Ann W. Harman

Don't give up when you have a bad honey harvest. You can make money in many other ways. Beeswax is one of the first products beekeeper think of. Candles and ornaments are popular. Many beekeepers are making lip balms and hand creams. However, these are considered cosmetics and as such come under the jurisdiction of the Food and Drug Administration. Before making and selling any check out www.fda.gov and click on Cosmetics.

Pollen is another one of the products beekeepers think of, but it takes some effort to clean and either dry or freeze it. The best presentation for pollen is in a wide-mouth jar—one that allows the customer to use a spoon. For pollen—and all other hive products—it is very important not to make any health claims. You do not want to assume the role of a doctor and put yourself at risk.

Propolis is easily gathered in a clean and useable condition with a propolis trap. Tinctures are fairly easy to make. Royal jelly is difficult to harvest since it requires modified queen rearing techniques. The market for it is limited. Collecting venom is also labor intensive and requires absolute cleanliness. Specialized equipment is necessary and the bees can become nasty.

One product is the bees themselves. Nucs and queens can satisfy the local beekeepers. However bees are in demand by sufferers from Multiple Sclerosis. Some beekeepers send bees to them throughout the year. The beekeepers have ads in the American Apitherapy Association journal. That contact is aasoffice@apitherapy.org. Recent medical research indicates that bee stings from live bees may benefit those with Muscular Dystrophy.

With the great interest now in growing vegetables, bees are in demand for small-scale pollination. Backyard gardeners who do not want to become beekeepers welcome a hive during the growing season. Contracts for pollination services even for small-scale beekeepers may be necessary.

Digital cameras have produced enthusiastic photographers. Your good photos of bees and beekeeping can be sold, not only to the two bee journals, but also to wildlife, nature, and children's magazines. You can create note cards and calendars with your photos. Writing articles is another product of your hive. The beekeeping journals, nature, wildlife and children's magazines are always in need of an article about bees. Don't overlook cooking magazines for articles and recipes promoting the use of honey.

Why not try your hand in making mead or honey beer? Several excellent books are on the market with recipes for both of these. It is wise to check your state's laws about home production of alcoholic beverages.

So get busy—think outside the box/hive!



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From the UBC Proteomics Lab

Dr. Leonard Foster

Greetings everyone! Hopefully it was a productive summer for everyone and your lives were not too disrupted by fires! As I mentioned briefly in the last edition, we have embarked on an application for funding to take the research we have been doing for the last couple years in the APIS project and try to apply it in the real world. To recap, you'll remember that we have been looking for molecular signatures, fingerprints if you will, that allow us to diagnose whether a particular colony should be able to resist Varroa or American Foulbrood.

The initial three years of APIS was really aimed at identifying these signatures and then the hope was that we would be able to find additional funding to apply these in order to demonstrate their usefulness. At the same time, in order for them to be widely useful we would also need to develop a simple test that could be applied at, e.g., the BCMAL Diagnostic Lab. Well, the proposal we're putting together now would do just these two things. APIS is not quite done but as I have been saying, the results look quite promising.

For the good of the colony

To me, one of the most amazing things about bees is their level of sociality — there are very few examples in the animal kingdom where individuals give up their ability to reproduce in favour of 'kin selection'. In most animals, including humans, every individual is fertile (excepting injuries, diseases, etc.) but in bees all those workers have given up their 'right' to pass on their genes and instead they do all they can to help their sister, the queen, pass on hers.

This altruism includes sharing food, maintaining the nest and even sacrificing themselves in defence of the colony when required.

It was thought that these are the primary altruistic behaviours of bees but a group in North Carolina recently confirmed another fascinating behaviour of diseased bees (Rueppell, et al. (2010) Altruistic self-removal of health-compromised honey bee workers from their hive. *J Evol Biol.* 23:1538-1546). Their title pretty much says it all: bees with disease tend to leave the hive, never to return, so as not to pass on their affliction.

The authors artificially induced 'disease' in the bees by feeding them a chemical called hydroxyurea (I'm not sure what the impact of this would be except that the bees would most certainly have indigestion!) or by anesthetizing them for 105 minutes using high levels of CO₂. After controlling for other possible effects, such as disorientation, the authors show quite clearly that the 'diseased' bees tend not to return to the colony. The authors also describesimilar behaviour seen in some ants, as one might expect of another social insect.

I bet I know what will be going through your mind the next time one of your colleagues shows up to work with a bad cough ..



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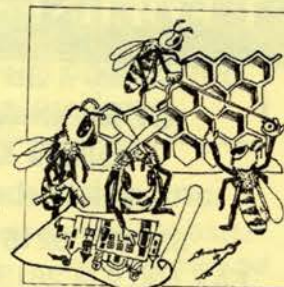
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A new suspect on the trail of CCD

Condensed from a report by Dr.
Jerry Bromenshenk,
Montana State University

In 2007, a team composed of Montana bee specialists and fungal pathologists, and a group of virologists and chemists at the US Army Edgewood Chemical Biological Center was formed to search for the cause of Colony Collapse Disorder. Later, specialists in insect viruses from Texas and Mexico were added.

Using mass spectrometry-based proteomics, a technique modified by the military for screening samples for pathogens, we found an insect iridescent virus (IIV) in bees from CCD colonies that is new to the U.S. -- though similar to an IIV first reported in India 20 years ago -- as well as to an IIV found in moths. It probably arrived in North America in infected bees, or it crossed over to bees from another insect.

All cells from bacterial to human have DNA as their genetic material. Viruses have either DNA or RNA (a chemical variant of DNA) as their genetic material. Viruses thus far associated with CCD have been of the RNA type. The insect iridescent virus that we have correlated with CCD is a DNA virus, a fundamental difference and takes CCD research in a whole new direction. It also caused us to seek out experts in these viruses, who quickly joined our team.

The size, shape, and stacking of these DNA viruses inside cells alters light in a way that causes iridescence. Viruses and infected host tissue may have a bluish green or purplish hue. Insect iridescent viruses have also been shown to contain a protein that causes host cells to self destruct in a process called apoptosis which can be a viral attack mechanism or a host defense strategy. In addition, there is a significant statistical link between CCD, the iridescent virus and a fungal parasite of the genus *Nosema*. We don't know if (1) these two pathogens cause CCD or (2) whether CCD colonies are more

likely to succumb to these two pathogens. We are trying to isolate the specific strain of iridescent virus in U.S. bees so that we can characterize it alone and in combination with *Nosema*.

There are more than two dozen known insect iridescent viruses. Generally, the impact of these viruses is variable, ranging from covert infections with relatively minor effects to highly virulent and lethal ones in some cases. This lethality is one of the reasons that this group of viruses has been scrutinized as potential biopesticides for applications such as mosquito control. This is not good news for beekeepers. In India, an iridescent virus, called IIV-24, has been implicated in high losses of honey bee colonies.

We know that in an Asian honey bee, *Apis cerana*, a combination of parasites and pathogens co-exist, including: (1) *Nosema ceranae*, (2) an iridescent virus, (3) parasitic and predacious mites, and (4) two other RNA-type viruses, Kashmir and a Sacbrood virus. Kashmir bee virus and *Nosema ceranae* have been in North America a decade or more. How similar is the CCD strain of iridescent virus to the IIV-24 from *A. cerana*? It is possible that US bees acquired IIV from the Asian bee along with *Nosema ceranae* and Kashmir bee virus or it may be a variant of a strain prevalent in other insects..

Once fully identified and proven to be linked with CCD, the potential exists to use IIV presence as an indicator of CCD. With an inexpensive and rapid assay, we'd then have the ability to screen for IIV. In the short term, the possibility of developing treatments against the IIV seems remote.

Finally, in a bee collapse in the northeastern part of the U.S. some years ago, an IIV was seen in varroa mites that prey on bees. Varroa may act as a vector for the dispersal of the virus among bee colonies, just as mosquitoes transmit West Nile virus or malaria to humans. Varroa is known to increase damage caused by other viruses, and beekeepers who fail to control varroa levels are likely to sustain high colony losses. In all cases, management practices that reduce *Nosema* and mite loads and try to reduce long term exposures to cool, damp environmental conditions are likely to reduce colony susceptibility to IIV.

The entire paper is published in the online Journal Plos One at <http://www.plosone.org/home.action>

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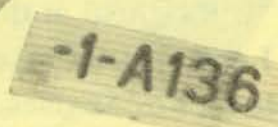
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Beekeepers' Calendar

Nov 1 - 3: ALBERTA BEEKEEPERS ASSOCIATION CONVENTION, Fantasyland Hotel, Edmonton. Info Alberta Beekeepers Association 780-489-6949.

Nov 9: BIG ISLAND BEEKEEPERS ASSOCIATION ANNUAL POT LUCK DINNER, QUARTERLY MEETING, & JUDGING OF HAWAIIAN NATURAL HONEY CHALLENGE. Deadline to enter November 1st (entry forms online at bibahawaiiibeas.org), 5:30 - 9 pm, Komohana Research & Extension Station, Hilo, Hawaii. Info 808-981-5211.

Nov 11 - 14: AMERICAN APITHERAPY SOCIETY ANNUAL COURSE & CONFERENCE, Hilton Los Angeles/Universal City Hotel, Los Angeles CA. Info www.apitherapy.org/store/list/category/courses-classes-conferences/

Nov 16 - 18: CALIFORNIA STATE BEEKEEPERS ANNUAL MEETING, Embassy Suites, San Luis Obispo, CA. Info www.californiastatebeekeepers.com.

Nov 24 - 27: CANADIAN WESTERN AGRIBITION & HONEY SHOW, Regina SK. Info Doreen at dbradshaw@sasktel.net.

Dec 2 - 3: IDAHO HONEY INDUSTRY ANNUAL MEETING, Red Lion Hotel, Boise ID. Info Kay Johnson 208-888-9888 or kay@amgidaho.com.

Dec 3: UTAH STATE BEEKEEPERS ANNUAL MEETING, 9 a.m., Dept. of Agriculture Building, Salt Lake City, UT. Info Steve Stoddard 435-864-3589 or anne@stoddardhoney.com. Website www.utahbeekeepers.com.

Jan 4 - 8, 2011: JOINT AMERICAN BEEKEEPING FEDERATION & AMERICAN HONEY PRODUCERS ASSOCIATION ANNUAL MEETINGS, Galveston, Texas. Info www.abfnet.org and www.americanhoneyproducers.org.

Sept 12 - 15 2011: WESTERN APICULTURAL SOCIETY ANNUAL CONFERENCE, Hapuna Beach Prince Hotel, Hilo, Hawaii. Info page 3 & in future WAS Journals.

Sept 13 - 17, 2011: APIMONDIA INTERNATIONAL CONGRESS, Buenos Aires, Argentina. Info www.apimondia2011.com.

For more Beekeepers' Calendar of Events items, visit the Global Beekeeping Calendar, courtesy of the Florida Beekeepers Association & Malcolm Sanford at <http://floridabeekeepers.org>

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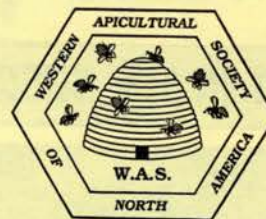
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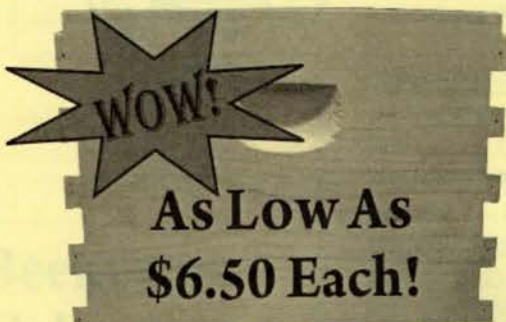
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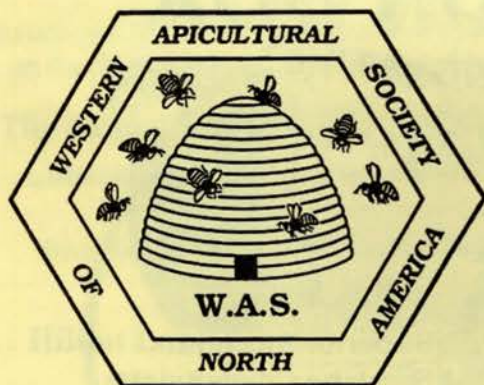
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