
Decision Time

Laidlaw Reception

2000 CSBA Convention

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I know that a lot of bills roll in at the end of the year, but that is the timing of annual subscriptions, etc. Therefore, it is time to make one of three decisions: 1. to **renew** your subscription for the hard copy (mailed) of this newsletter, 2. learn how to find the newsletter on your computer [url - (no www) entomology.ucdavis.edu/faculty/mussen], or 3. let your subscription lapse. For those of you who still wish to receive a copy in the mail, please turn to page 7. You will find a convenient form that can be returned with your name and address, as it currently exists in our records, on the back. If your address has changed, this would be an excellent time to let us know. Thanks.

Laidlaw Reception

More than 100 persons swarmed to the UC Davis campus on Wednesday, November 29th, to attend the dedication of a campus building

named in honor of Dr. Harry Laidlaw, Jr. Although it is torn up due to renovations and was not a place to meet at the time, the Bee Biology Facility is now, officially, the Dr. Harry H. Laidlaw, Jr. Honey Bee Research Facility. Dr. Neal Van Alfen, Dean of the College of Agriculture, was on hand at the University Club to officiate (and provide the food and drink). Harry was given an artist's rendition of the new sign that will greet all comers to the Facility, once it is operable. Entomology Department Chair, Dr. Rob Page, reviewed Harry's career, including successes and failures in honey bee research and in University administration. Former Entomology Department Chair, Dr. Mike Parrella, also described some of Harry's former accomplishments and his selection to receive a campus achievement award reserved for only a select few individuals. I believe that Harry is 93 years old and he was particularly pleased to have an opportunity to meet with so many beekeepers (about 50 in attendance) with whom he had

previously worked and communicated. Following the renovations, my office will be at the Laidlaw Facility, no longer in Briggs Hall on the main campus. It will be a privilege to work in a building named after a world leader in honey bee genetics and controlled inseminations, even if it was somewhat difficult for Harry's daughter, Barbara, to describe to her elementary school classmates what her Dad was doing at work.

2000 CSBA Convention

The venue for this year's convention was a bit different from other years. We held the meeting at the Pines Resort, located west of Yosemite, in Bass Lake. Bass Lake has a post office, a gas station, a market, a few stores, and a resort, so I guess it is a small town. Our group was large enough to fill the resort comfortably and the room rate was about 27% of what was listed on the back of the door. Obviously, there is some water there. Bass Lake is a reservoir that was at its lowest seasonal level when we arrived. A quick stroll on the "beach" quickly educated the stroller that what appears to be dry soil, even hundreds of feet from the water's edge, is highly saturated sand and clay into which your feet will sink to your ankles. But, the visit was essential in the planning process for the Fishing Derby.

Those who arrived on Monday were greeted Tuesday morning with a dusting of snow that arrived overnight. The precipitation began as rain, so the snow covered a layer of ice. The whole resort is built on a hill, so walking was a bit

treacherous. There were patches of ice every morning to help us pay attention to where we were walking.

Following the opening ceremonies and committee reports, Eric Mussen reported on research findings generated by studies supported with CSBA funding. He stated that the contributions from CSBA, although limited by necessity, have led to some very interesting, promising and useful information over the past season. Deborah Delaney and Lynn Royce, at Oregon State University, determined that the presence of coumaphos strips have some detrimental effects on drones during their immature development, but it was pretty difficult to determine the effects, if any, on their mating behavior. Michael Embrey, affiliated with Penn State University, determined that tobacco was the best smoker additive to knock down Varroa. However, it took more puffs than normally would be used to calm the bees. Fresh (red) seed heads from eastern staghorn sumac were second on the list, with grapefruit leaves (good in the lab) of no effectiveness in the field. Christine Peng, at UC Davis, has isolated a few strains of the fungus *Hirsutella thompsonii* that are infective to *Varroa*, but appear to be safe for bees. Her next studies will include safety for bee brood and a reliable delivery system to the mites.

Steve Sheppard, from Washington State University, related that a sugar ester, called sucrose octanoate, was very toxic to *Varroa* at very low concentrations and has no detrimental

effects on bees, at all. His efforts, next year, will be devoted to developing a cost-effective delivery system for contacting the mites in the hives with the product. Marla Spivak, working in conjunction with Tom Glenn in southern California, determined that even short exposures to even portions of a strip of coumaphos would devastate developing queens. Portions of strips in mating nuclei were detrimental, also. It appears that the negative effects do not persist after the strips are removed, but the results of those tests are not completed. Finally, Eric reported on the studies that he conducted with eight fungicides used on almonds. The fungicides did not appear to be a problem for almond pollen germination or tube growth, as long as the chemical dried before the pollen got into it. Three of the tested fungicides were toxic to developing honey bees at 22 parts per billion of the dosages that are used in the field. The toxic effects of Captan® were not surprising, because they have been known for a long time. The other two chemicals, that caused larvae to die or pupae to fail to molt to adults, were Rovral® and Ziram®. Eric said that he did not suggest that the growers stop using these necessary disease control products, but he wanted the beekeepers and growers to know that the chemicals do injure the brood and can cause economic loss to colonies.

This year we held our Research Luncheon on Tuesday, a day earlier than normal. Dr. Daniel Mayer, an Integrated Pest Management Specialist, shared the results of

the studies that he has been conducting on the toxicities of pesticides to honey bees, leaf-cutting bees and alkali bees over the past twenty plus years. The results of this life's work have been condensed into a publication that should be in the hands of every beekeeper - Pacific Northwest Extension Publication PNW518: How to Reduce Bee Poisoning from Pesticides. The publication can be ordered from the Bulletins Office, P.O. Box 645912, Pullman, WA 99164-5912. Their toll free number is (800) 723-1763. Checks (made payable to **Cooperative Extension Publications**), cash, or credit cards will work. A single copy costs \$1.50. It costs an additional dollar to mail a copy (or two), so save a dollar and order two for \$4.00. There are discounts for quantity orders.

Tuesday afternoon we had a series of speakers who explained the chemistries and uses of newer insecticidal products that are going to be applied more often for pest control on California agricultural crops. The first product described was Confirm®, an insect growth regulator. This particular chemical is called a "MAC" (molt accelerating compound) because it induces caterpillars to form a second head capsule before it is needed for a molt. The larvae stop feeding within six hours of ingesting the chemical and die in three to seven days. A second product, Warrior®, is a pyrethroid that is toxic to honey bees, but only if they get into the spray while it is still moist. Currently, the formulation is microencapsulated, but the micro-

capsules are one-tenth the size of a rape seed pollen grain and are supposed to be too small in diameter to be picked up by foraging bees. The company is working on an EC (emulsifiable concentrate) formulation that should be even less likely to cause problems with honey bees. Success[®] (spinosad) was described as another chemical that only causes bee mortality when the bees get into the residue before it dries. These newer materials could be better for honey bees, if daytime applications are avoided. The final speaker described the use of Furan[®] and related that Merced County has particular restrictions on use of that product around bee locations. Unfortunately, honey bee-toxic Furan residues remain in the field up to 14 days (according to PNW518: How to Reduce Bee Poisoning from Pesticides) following application. A representative from the CA Dept. of Pesticide Regulation wrapped up the topic. He emphasized that California has pretty stringent pesticide use regulations and that not very many Reports of Loss are filed. Those documents are the basis for determining whether or not there are problems with agricultural chemicals in the field. Any report submitted to an Agricultural Commissioner becomes a permanent part of the pesticide use documentation for that year. If reports of losses of honey bees are not filed, then it is assumed that losses are not taking, or have not taken, place. If that is not a true representation of the facts, then only the beekeepers can improve the documentation process.

While the "die-hards" were listening to the presentations, Liz

Vaenoski was conducting a very informative, hands-on demonstration, of pouring beeswax candles in "The Boathouse." Of special interest were her accessory items, like candle mold holders, that were constructed from materials available at hardware stores. Early in the evening President Marty Renn held a social mixer in his suite that moved into the Pines Restaurant for the Ladies Auxiliary-sponsored American Honey Queen Reception. The homemade honey deserts were delicious.

Wednesday morning started somewhat early for the ten intrepid anglers and one Judge (Thank you, Ila Hohmann) who braved the cold, brisk air in an attempt to win one or more of the three CSBA 2000 Fishing Derby trophies. Since the only water with any depth was off the right end of a small dock, we stacked in there like sardines and thrashed the water for 60 minutes, trying to attract a bite. Derby coordinator, Eric Mussen, has come up empty handed fishing Bass Lake many times, so he had a contingency plan if no fish were caught. The plan wasn't needed. A fish took some bait from the bottom minutes after the Derby started, but the fish wasn't landed. A few minutes later, Russell Heitkam enticed a 16 inch trout to grab a spinner. That catch (and release) eventually earned Russ the trophies for the First Fish and the Largest Fish. It was about half way through the derby when Greg Walls said, "Something's taking it." "It" was a couple of fat mealworms that he brought with him. The mealworms had been accompanied by a couple of wax worms (I wonder where he found those?) at the beginning of the

trip, but the wax worms seemed to have disappeared during transit. Greg landed a 14-inch trout that earned him the trophy for the Smallest Fish. He had fierce competition for the final trophy from Wayne Harrison who had brought his minnow seine. All Wayne saw were tadpoles around the dock; the minnows were someplace else.

Over the years, Frank Eischen has tested a very large number of leaves, twigs, and chips from various plants in a bee smoker to see what effects they would have on *Varroa* mites. He will be publishing his results in a future of the American Bee Journal, where he will give credit to CSBA for funding a portion of this effort. Right now, creosote bush is a leader in the "easy to find and works pretty well" category. As a precaution, Frank warned against some immediately toxic impregnated cardboard and some corn cobs that don't show the toxic effects until a couple days later.

Nathan Holleman, recently appointed CEO of the National Honey Board, visited the convention and described the Board's new areas of emphasis:

- A. "Nutraceuticals"
 - 1. sustained energy -
- developed a Sports Gel (honey, water, and potassium) that provides quick energy and eliminates the "come down" at the end of a marathon, etc.
 - 2. antimicrobial activity - best U.S. honey, so far, is alfalfa; ulcer treatment
 - 3. antioxidant - disease preventative in humans; immune system enhancement

- 4. pre-biotic potential - promotes the growth of beneficial microbes in the intestine
- 5. allergy and asthma - relieves symptoms
- 6. type 2 diabetes (resistance to insulin) - honey better for these patients than sugars

- B. Dissemination of technical information
 - 1, especially to the institutional food users
- C. Crisis Management
 - 1. inappropriate, non-food use of honey house facilities
- D. Honey spectroscopy
 - 1. honey adulteration, at about a 1% level, can be detected at Penn State

If you have an identifiable, **single floral source** honey (especially honeydew) that you would like to have tested for medicinal properties (and potential for really great dollar returns), please contact Marcia Cardetti at the National Honey Board [(800) 533-7162]. The Honey Board has a very stringent routine, including wearing latex gloves, etc. for taking these honey samples. They cannot contain any contaminants, if a true antibiotic analysis is to be conducted. So, I hope that you still have a few frames, capped, in your supers, somewhere because previously extracted honey cannot be accepted. Also, try as hard as you can to find out EXACTLY what plant was the source of the honey. If you only know the "common name," get in touch with me and we'll try to get a two-part Latinized name for the source.

Next on the agenda was Bill Rice, an economist from Fresno State University whose major emphasis of study is product marketing. His opening statement was that honey is the country's "best kept secret." He suggested that each beekeeper develop, and hand out liberally, a new business card that includes important facts about bees or honey. When he asked if anyone in the audience did have such a card, he was surprised to be able to examine just such a card. The card contained excellent information on using honey for cooking, but that wasn't Bill's idea of a real "grabber." Bill distributed a sheet containing the "Ten Commandments of Bee and Honey Marketing." His suggestions dealt more with changing peoples' perceptions of bees and honey than providing them with facts. He suggested that the use of honey be promoted as a change toward a better life style, not just another way to sweeten breakfast. Beekeepers should work harder to communicate with others in agriculture and the general public, to inform them that they provide an essential service to the whole food production process, not just a temporary input. Develop a catchy nickname for your company, so that it sticks in the minds of those who hear it. Make your customers so happy with your relationship that they become champions for you and your industry.

Wednesday afternoon, around 50 members went on a tour of Yosemite Park. Since the elevation was a little higher than Bass Lake, the ice was a little thicker. So, we slipped up and down the short trails that lead to the scenic

vistas. The ice crashing down the waterfalls was pretty loud (how do you tell that from a landslide sound?). And, as the shadows lengthened, we went to the Ahwahnee Hotel for a semi-formal dinner. The Ahwahnee is an extremely spacious building, with very large timbers (nearly whole trees) in its construction. The meal had to be special, because there were more forks around my plate than I needed for three meals (they kept taking one away, every so often). The meal was very good and on the way back to the resort the bus drivers played a videotape that they had just purchased at one of the stores. So, we got to learn quite a bit about the mountains and the valley, after our visit.

Thursday morning we heard from Madera County Detective Deavers. Madera was one of eight counties that were provided with special funds through AB 157 for an "Ag Crimes Unit." To qualify, there had to be an unreasonable amount of rural theft and vandalism. What the program does is add some investigators to the force and provide for communication and coordination of all the law enforcement personnel in the region. This way, patterns of crimes and distribution of stolen property are noted and perpetrators are more likely to be caught. So far, \$330,000 in stolen equipment has been found and a number of arrests made. The thing that can help all rural citizens the most is to identify their property with an individual "brand." For decades, California beekeepers got their brand numbers from CDFA. That system is no longer functional. Beekeepers and their neighbors are

being asked to join the Owner Applied Numbering (OAN) system. You should be able to contact the Sheriff's Department, Ag Crimes Unit (in the 8 counties that have one) or the California Farm Bureau Federation to get a post card that can be submitted to get your 8-10 digit individual number. Unlike the earlier CA hive ID numbers, your new number goes into a national database. If your property shows up on the East Coast somewhere, it can be traced back to you in seconds. Thus, you should get the new number, brand your hives and frames, and also mark, indelibly, your vehicles and personal property around your warehouse and home. Deavers also said that the constabulary would be much more likely to pry into bee business (like stop trucks or approach people working bees in fields at night), if they had bee suits (especially veils and gloves) that they could put on. The price of a bee suit is puny compared to the value of a load of hives that can disappear overnight. How about checking with your local authorities and being sure that the personnel are appropriately

equipped to do the work that could be of great value to you?

Lisa Ahlem, from the Almond Board of California, wanted the audience to be aware that the Almond Board publishes a "Pollination Directory" annually. Previously, it was printed out in "hard copy," but next year may be the year that it is available only on the Web. Your company will be added to the list, for free, if you simply contact the Board and let them know that you wish to be listed. The telephone number of the Almond Board is: (209) 343-3218.

The state's problems with red imported fire ants (RIFA) warranted a presentation by Ray Bingham from CDFA. The first hint we had of a fire ant / honey bee connection was the border stop of an infested truckload of bees in 1997. By asking that beekeeper about locations in previous years and searching other records, fire ants eventually were found in 18 agricultural locations in Kern, Fresno, Madera and Stanislaus Counties, where infested bee equipment had been set down. The state is in an

"eradication" mode for RIFA at the moment. Different insect growth regulators are being fed to the ants on corn grits, once the ants are located by putting out Spam[®] bait stations. So far, other states have not prohibited bees from returning to their states of origin following visits to the infested counties of California, but beekeepers should be aware that such a thing could happen.

Michael Burgett, from Oregon State University, described what might be the progenitor of all honey bees. The specimen was found in amber and is about 10 million years older than any other bee that has been found, previously. The fact that it was found in Baltic amber also suggests that honey bees may actually have gotten started in Europe, not in Asia as is the current thinking of many scholars. Mike's big claim to fame,

associated with this find, is that his name is indelibly attached to the new species name, as one of two scientists who described and named it. Mike also lent his support as auctioneer, along with American Honey Queen Angie Olson, to the Thursday afternoon auction. This auction is the major fund-raiser for the CSBA and is the main reason that we can support up to \$20,000 in research, annually. The results of this year's auction were similarly successful.

**Have a Healthy and Prosperous
New Year!**

Sincerely,

Eric Mussen
Entomology Extension
University of California
Davis, CA 95616 [(530) 752-0472]
[FAX (530) 752-1537]
INTERNET:ECMUSSEN@UCDAVIS.EDU

Eric Mussen
Entomology Extension
University of California
Davis, CA 95616