

The Nevada County Beekeepers Association

Local Buzz



April 2010

President's Message

The weather has finally changed; maybe spring is here, or will be soon. We are just now getting some bloom on some of the flowers. My bees are just now coming to life. They don't like the cold weather. It is either snow or a cold rain. Hope the new beekeepers will join us for the dinner at Lin Q buffet in the Raley's shopping center in Grass Valley at 5:30 PM before the meeting. See you all at the next meeting!

Your President, Larry Meritt



April 5th Meeting

Our April 5th program will be a presentation on swarms and splits by Randy Oliver. Randy requests that everyone share their swarm advice, experiences, and photos with him for the presentation. Email digital photos and stories to randy@randyoliver.com. Files smaller than 150 KB appreciated.

Beekeepers Interviewed on KVMR

NCBA members Phyllis Boorinakis-Harper and Julia Boorinakis-Harper host a program on KVMR called 'The Homestead Radio Hour' described as 'every person's guide to do-it-yourself sustainability'. Phyllis and Julia interviewed Janet Brisson and Randy Oliver about beekeeping on March 19th. You can listen to this fun program and find out more about the Homestead Radio Hour at:

<http://kvmr.org/programs/hrh/index.html>

Time to Pay Your 2010 Dues! Are You Online?

Help us reduce paper and mailing costs, get your newsletter electronically and we will reduce your family membership fees to from \$20.00 to \$15.00. I will be collecting dues for the year 2010 at April's meeting. If you are paying in cash, please try to bring the exact change. If you would like to pay your dues through the mail, please send your check made out to NCBA or Nevada County Beekeepers Association, for either \$20.00 (to receive newsletter through mail) or \$15 for NET OFFER to me at:

NCBA

C/o Janet Brisson

20693 Dog Bar Road

Grass Valley, CA 95949

Any questions, please feel free to call me at 530-913-2724 or email me at rubes@countryrubes.com

Thanks, Janet, Treasurer

Bee Bits

By Randy Oliver

This has been an incredible manzanita flow! Strong colonies have been putting on honey, and my yards are redolent with the aroma of ripening manzanita honey. Colonies have built up well so far this spring, and strong ones are already swarming. My guess is that this will be a strong swarm year.

There's no sense in losing bees to the trees, so I suggest that you practice swarm management. Reverse the brood chambers, and give the bees drawn comb above the brood. Split if necessary.

A quick review of the recent paper on pesticide analysis of U.S. beehives. All the following are quotes from the paper [with my comments in brackets].

From Mullin CA, Frazier M, Frazier JL, Ashcraft S, Simonds R, et al. 2010 High Levels of Miticides and Agrochemicals in North American Apiaries: Implications for Honey Bee Health. PLoS ONE 5(3): e9754 [I have removed some citations for ease of reading]

No neonicotinoid residues were found in bees, [although they were rarely found in] pollen and wax. Overall, pyrethroids and organophosphates dominated total wax and bee residues followed by fungicides, systemics, carbamates and herbicides, whereas fungicides prevailed in pollen followed by organophosphates, systemics, pyrethroids, carbamates and herbicides. [The fungicide of most concern is the commonly detected chlorothalonil (Bravo®, Headline®), which has been associated with “entombed pollen.”]

Beeswax remains the ultimate sink from the long-term use of the miticides fluvalinate, coumaphos, amitraz and bromopropylate [this is an interesting finding, since this chemical is not registered for use in the U.S.].... Colony residue levels of these miticides, after their in-hive application, have been shown to increase from honey to pollen to beeswax. Beeswax is the resource of the hive that is least renewable and is thus where persistent pesticides can provide a “toxic-house” syndrome for the bees. The uniform high levels of these miticides present in foundation is particularly disturbing, since replacement of comb is currently recommended to reduce pesticide contaminants. The broad contamination of European foundation with especially miticides has been reviewed previously. Fluvalinate residues in beeswax best correlated with

the French bee winter kill of 1999–2000, although disease factors were more emphasized in the report.

Almost all wax and pollen samples (98.4%) contained two or more pesticide residues, of which greater than 83% were fluvalinate and coumaphos. Clearly, substantial residues of these bee-toxic pyrethroid and organophosphate compounds prevailed together in most beehives sampled. Chronic exposures to high levels of these persistent neurotoxicants elicits both acute and sublethal reductions in honey bee fitness, especially queens, and they can interact synergistically on bee mortality. Our work does not directly associate these miticides with CCD, although higher coumaphos levels may actually benefit the colony, possibly via mite control

Externally-derived, highly-toxic pyrethroids, up to 9 in addition to fluvalinate per sample, were the most frequent and dominant class of insecticides in our samples. Pyrethroids are frequently associated with bee kills. A sample of dead bees, obtained after a community-wide tree application of permethrin according to label instructions, contained 19.6 ppm, 18-times the established bee LD50. Pollen and wax levels of more toxic pyrethroids including bifenthrin, cyfluthrin, cyhalothrin, deltamethrin, and fenpropathrin ranged up to 613 ppb, which is above the bee LD50 for deltamethrin. This level can be lethal depending on pollen consumption rates by differing castes, or wax transfer rates to brood or indirectly to pollen. Moreover, some bee residues of deltamethrin, fenpropathrin and cypermethrin are above levels shown to disorient foragers and cause CCD-like symptoms (see above). It is important to note that pyrethroids are rarely found alone, and in 50% of our pollen and wax samples co-occur with chlorothalonil, a fungicide known to increase bee toxicity of cypermethrin by greater than 5-fold. Bee toxicity of the pyrethroid bifenthrin doubles after Apistan (fluvalinate) treatment, which frequently coincides in our samples. Potential for interactions among multiple pyrethroids and fungicides seems highly likely to impact bee health in ways yet to be determined.

Pyrethroids other than fluvalinate have been reported to impact the foraging capabilities of honey bees. After topical application with 0.009 µg permethrin/bee ... none of the foraging workers returned to the hive at days end, and only 43% of these bees returned even once to the hive because of disorientation due to the treatment. vanDame et al. found a similar effect on foragers with deltamethrin at 0.0025 µg/bee (25 ppb), a dose 27 time lower than the LD50, which disoriented

91% of return bee flights to the hive. These symptoms are reminiscent of those reported for CCD.

Our results do not support sufficient amounts and frequency in pollen of imidacloprid (mean of 3.1 ppb in less than 3% of pollen samples) or the less toxic neonicotinoids thiacloprid and acetamiprid to account for impacts on bee health...

[It is surprising to me that the authors bring up the neonicotinoid insecticides some twelve times in the paper, when the most notable chemical in this class, imidacloprid (mentioned thirteen times), was only found in 1.7% of the samples! Note also that there were zero detections of clothianidin, a widely-used neonicotinoid, which has frequently been blamed for colony collapses! For example, the authors state:]

Systemic neonicotinoid use has greatly increased recently for treating seeds of many major crops, particularly those genetically-engineered, and considerable impact to non-target species may occur. Neonicotinoids and systemic fungicides are often combined as pest control inputs, and many of the latter synergize the already high bee toxicity of neonicotinoids [Iwasa 2004]. A recent landscape-level study of imidacloprid seed treatments on maize in Belgium demonstrated no impacts on honey bees; however, their high prevalence with EBI and other fungicides including myclobutanil, although refuted by some field results [Schmuck 2003], may have more direct impacts on bee health through synergistic combinations.

[I find it of interest here to quote from the papers cited. Iwasa states that three tested synergists had “minimal effect on imidacloprid [toxicity].” He also states that “When honey bees were placed in cages in forced contact with alfalfa treated with acetamiprid and the synergist, triflumizole, in combination at their maximum recommended application rates, no mortality was detected above that of the control.” The Schmuck paper concludes that “Our results suggest that, at the recommended use rates, thiacloprid poses a negligible lethal risk to honeybees when applied either alone or in tank mixes with fungicides of various chemical classes.”]

[As far as the beekeeper-applied miticides are concerned, the authors state that] High levels of fluvalinate and coumaphos are co-occurring with lower but significant levels of 98 other insecticides, fungicides and herbicides in pollen.... Foundation wax is uniformly contaminated with miticides.... Twenty-one wax samples from six different commercial and

two private foundation sources were uniformly contaminated with up to 10.1 ppm fluvalinate ...and up to 14.3 ppm coumaphos.

Extraordinary enhancement of toxicity has been found with addition of commercial synergists to fluvalinate, where a topical LD₅₀ of 0.00964 µg/bee, a 980-fold increase to their reported 9.45 µg/bee without the additive, occurred if 100 µg of piperonyl butoxide [a common pesticide synergist] was applied 1 hr prior to the pyrethroid.

[My take on these results is that attention to the neonicotinoid pesticides is largely displaced, whereas we should be focusing on the in-hive miticides, the agricultural pyrethroids, and the fungicides.]

Randy Oliver

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March Minutes

Pres Larry Merritt opened with Q&A. Some beesuits are flammable. Light colored coveralls, found at uniform and hardware stores, may substitute. Randy Oliver, www.ncbees.org and www.scientificbeekeeping.org announced alternate class dates: three Monday nights 6:30-9PM at Camp Augusta March 8, 15 and 22, OR Imaginarium 9AM-5PM Saturday, PLUS Field Days, either April 3 or April 10 at his beeyard on Meadow Drive off Rte 174. PROGRAM: Randy Oliver audio-visual; Latest News. Half US bee colonies migrate to CA for almond season, spreading diseases coast-to-coast. Nosema ceranae peaks in Apr and Sept.

'Epigenetic' traits, outside genetic control, may be inheritable, skip generations, 'evolve' overnight. 'Proteomics' involves manipulating the GeneDNA>TransferRNA>enzyme protein chain. Synthetic pheromones may make Varroa mites jump off. Varroa resistant and Russian Queens are available. Tylosin TYLAN now available; long lasting syrup formula kills most bacteria, incl AFB(not spores.) DFV Deformed Wing Virus is not connected with Varroa. Colony Collapse Disorder still dangerous, causes still uncertain, worst in Midwest, TX and FL freezes.

February 2010 Treasury
Beginning balance \$2306.89
Inflows \$ 437.37
Total \$2743.89
Outflows \$190.67
Ending Balance \$2553.22
Reconciled 3/1/10

Jack Meeks, sec

Five Reasons to Befriend Your Local Beekeeper

Extracted from an Article by the Rodale Press, five reasons to befriend your local organic beekeeper:

- #1: Beekeepers take a hands-on approach.
- #2: Honey can heal.
- #3: They feed their bees well.
- #4: Honeybees are peacemakers.
- #5: Honey might improve your sex life.

See the article '5 Reasons to Befriend Your Local Beekeeper' at

<http://www.rodale.com/organic-beekeeping?page=0%2C0>

Sacto Beekeepers Classes

The Sacramento Area Beekeepers Association (SABA) is sponsoring a series of classes:

Beginning Natural (no chemical) Beekeeping

Saturday April 24, 2010 Serge Labesque

Beginning Traditional Beekeeping

Saturday May 22, 2010 Randy Oliver

Intermediate Beekeeping

2010 Dr. Eric Mussen Saturday June 19,

Intermediate Natural Beekeeping

2010 Serge Labesque Saturday July 17,

Classes held at the Sacramento County Department of Agriculture building at 4145 Branch Center Road, Sacramento, CA. 8:30 am to approximately 4:30 pm. Fee is \$35.00 Registration is required by the Monday before the course date.

More information available at

www.sacbeekeepers.org or by contacting Ernie Buda at 2211budae@att.net 916-761-3802 or Bruce Waln at bruce.i.waln@gmail.com.

From the Past

(From the American Bee Journal, April 1868)

To Ascertain the Parent Stock of a Swarm It sometimes happens that a swarm issues unobserved and is found already clustered, so that it is not known from which hive it came, when there are a number of strong colonies in an apiary. To trace its parentage, detach twenty or thirty bees from the cluster, dropping them into a tumbler or small box; carry them in front of the apiary, and throw them up into the air by a whirling motion of the arm. Most of them will immediately repair to the parent hive, lighting near the entrance, and standing there fanning briskly, before joining the general mass, thus indicating their native home.

The Nevada County Beekeepers Association is dedicated to apiculture education and promotion of the art and science of beekeeping among beekeepers, agriculturists, and the general public. This is a "not for profit" organization. Meetings are held the first Monday of each month at 7 PM at the Grass Valley Veteran's Memorial Building at 255 South Auburn Street in Grass Valley. All visitors are welcome. The newsletter is published monthly as a service to the membership. Articles, recipes, commentary, and news items are welcomed and encouraged. Submission by email is encouraged. Please submit to Leslie Gault at lesliegault@yahoo.com. The deadline for the May 2010 edition is April 22nd. A limited amount of advertising space (business card size 3" by 2") is accepted and need not be bee-related. Rates are \$1 per issue or \$7 per year for NCBA members and \$16 per year for non-members. All revenue from advertising goes to the Association treasury and helps offset the cost of producing and distributing this newsletter. To receive the *Local Buzz* via email: please email your request to lesliegault@yahoo.com

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Nevada County Beekeepers Association



c/o Steve Reynolds
PO Box 548
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First Class Mail
April 2010

April 5th Meeting

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