

October 2005

## President's Message

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The Bees know it and are starting to hunker down for winter, which starts in about 3 months, winter will start with the Winter Solstice, December 21, when the SUN is as far South as it gets, days are shortest and nights are longest and it will end with the first day of Spring with the Vernal Equinox on March 20, 2006.

By then you may have taken your strong hives to pollinate Almonds (they go about the first of February 2006).

### What Should I do for My Bees During October 2005?

1. Decide now if you want to take hives to almonds, come to the meeting and talk to Randy.
2. There may be some flower bloom available: per Randy's calendar they include: ASTER, IVY, POPPY, DANDELION, and THISTLE.
3. Make sure they have food for the winter, either frames they have built up or supply syrup and pollen.

### Elections

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Yours in beekeeping,  
-Gary Wood, President

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### Bee Bits

By Randy Oliver

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In our own operation, we got badly sidetracked by equipment. The construction of new boxes, and the refurbishing of old trucks and forklifts ate up too much time that we should have been spending with the bees. Add that to our late splits due to the wet spring, and we've got many colonies that are too weak to winter well. The big, fat almond pollination check we were hoping for just slimmed down. Once again, there's always next year!

On the subject of mite control, we're currently finishing up a relatively small experiment to compare the efficiency of Sucroside vs. oxalic acid. Meaningful mite experiments involve the preparation, insertion, and removal of stickyboards, then the tedious job of counting the mites on the boards. I just spoke with Eric Mussen, who is conducting a larger-scale experiment of another product, involving stickyboards, plus measuring the amount of brood

throughout the season. This kind of mind-numbing counting is, unfortunately, often the backbone of good scientific research. We'll share our results with you when complete.

Janet Brisson is also conducting a more informal experiment on the use of powdered sugar for mite control. I'll be very interested to see the results as far as mite levels entering Winter, and winter survival.

The devil of these experiments is often in the details. For example, unless all your queens are from the same mother, and similarly mated, there may be a huge variation in natural mite resistance from colony to colony. This makes clear results much more difficult to obtain. In experimenting with oxalic acid, we can look at data from European researchers, but they mainly used oxalic as a winter treatment, when the bees were not processing nectar, and the mites have no brood to hide in. I don't know how temperature, amount of honeyflow, or proportion of sealed brood affects the effect of oxalic on the mites. We don't know the best concentration of oxalic in syrup to use, nor how often we can apply it without harming the bees. There are a number of large commercial beekeepers trying various oxalic treatments this summer. I'm sure we'll know a lot more next year.

One item of good news in mite control is that we are indeed seeing great differences in mite levels between our breeding stocks. Some of our breeders have gone all season without any mite treatment, yet still have very low numbers of mites. If we can breed from bees that do most of the mite control work themselves then our job will be to simply help them a little when they need it.

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## The Buzz About Bees A Flush Fund of Fascinating Facts

by Maureen Dolan, source

(<http://www.pbs.org/wgbh/nova/bees/buzz.html>)

### Home sweet home

- Bees do not create honey; they are actually improving upon a plant product, nectar. The honey we eat is nectar that bees have repeatedly regurgitated and dehydrated.

- The average American consumes a little over one pound of honey a year.

- In the course of her lifetime, a worker bee will produce 1/12th of a teaspoon of honey.

- To make one pound of honey, workers in a hive fly 55,000 miles and tap two million flowers.

- In a single collecting trip, a worker will visit between 50 and 100 flowers. She will return to the hive carrying over half her weight in pollen and nectar.

- A productive hive can make and store up to two pounds of honey a day. Thirty-five pounds of honey provides enough energy for a small colony to survive the winter.

- Theoretically, the energy in one ounce of honey would provide one bee with enough energy to fly around the world.

- Although Utah enjoys the title "The Beehive State," the top honey-producing states include California, Florida, and South Dakota. In 1998, the United States made over 89,000 metric tons of honey. China, the world's top honey-producer, created more than 140,000 metric tons of honey in 1997.

- While foraging for nectar and pollen, bees inadvertently transfer pollen from the male to the female components of flowers. Each year, bees pollinate 95 crops worth an estimated \$10 billion in the U.S. alone. All told, insect pollinators contribute to one-third of the world's diet.

- Most researchers believe the honeybee originated in Africa. The first European colonists introduced *Apis mellifera*, the common honeybee, to the Americas. Native Americans referred to the bees as "White Man's Fly." Today honeybees can be found all over the world.

Bees often shield themselves from rain, which can chill their flight muscles to the point that they cannot

fly.

### Busybodies

- Bees are not fast fliers; while their wings beat over 11,000 cycles per minute, their flight speed averages only 15 miles per hour. In comparison, a true fly in the genus *Forcipomyia* beats its wings over 62,000 cycles per minute. The Australian dragonfly *Austrophlebia costalis* has been clocked flying at a speed of 36 mph.

- Bees possess five eyes. The three ocelli are simple eyes that discern light intensity, while each of the two large compound eyes contains about 6,900 facets and is well suited for detecting movement. In fact, honeybees can perceive movements that are separated by 1/300th of a second. Humans can only sense movements separated by 1/50th of a second. Were a bee to enter a cinema, it would be able to differentiate each individual movie frame being projected.

- While bees cannot recognize the color red, they do see ultraviolet colors.

- Unlike the stingers in wasps, the honeybee's stinger is barbed. Once the stinger pierces a mammal's soft skin, the attached venom pouch pumps a mixture containing melittin, histamine, and other enzymes into the target. When the bee pulls away, the barb anchors the stinger in the victim's body. The bee leaves the stinger and venom pouch behind and soon dies due to abdominal rupture. When a honeybee stings another insect, such as a honey-plundering moth, she does not leave her stinger planted in the invader. As she retreats from the insect victim, her barbed stinger tears through the insect's exoskeleton.

### Being the Queen

- During the mating flight several drones will deposit upwards of 90 million sperm in the queen's oviducts. The queen, however, will not use all the sperm. She stores about seven million sperm in a special pouch, the spermatheca.

- In one day a queen can lay her weight in eggs. She will lay one egg per minute, day and night, for a total of 1,500 eggs over a 24-hour period and 200,000 eggs in a year. Should she stop her frantic egg-laying pace, her workers will move a recently laid egg into a queen cell to produce her replacement.

- While workers select which fertilized eggs to brood in queen or worker cells, the queen decides the sex of her young. In a mechanism of sex

determination known as haplodiploidy, fertilized eggs will become female offspring, while unfertilized eggs will become males.

Maureen Dolan, NOVA Online's intern, worked with a bee researcher from the University of Massachusetts Boston in the summer of 1998.

## September Minutes

The meeting was held on Labor Day, yet we had a surprising turnout! Shane Mathias led the meeting, as Gary Wood was out of town. There was no business of note. The program was given by Randy Oliver- a summary of the topics of the WAS convention in Moscow, Idaho.

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- Complete line of all beekeeping supplies
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- Glycerine soap making supplies (soap base, molds, scents, and dyes)
- Honeycomb sheets for rolling candles (50 colors and in smooth)
- Beeswax and paraffin, special container candle wax
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Honey Shop and Tasting Bar

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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 Bonnie Bagwell at [arwg@infostations.com](mailto:arwg@infostations.com). The deadline for the November 2005 edition is October 15<sup>th</sup>. 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.

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## Nevada County Beekeepers Association



C/o Gary Wood  
10396 Mountain Lion Lane  
Grass Valley, CA 95949

First Class Mail

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## Nevada County Beekeepers Association

### 2005 Officers

President: Gary Wood.....477-9202  
[grw@usamedia.tv](mailto:grw@usamedia.tv)

Vice President: Merrill Grant.....432-0725  
[mgrant@williams.k12.ca.us](mailto:mgrant@williams.k12.ca.us)

Secretary: Jack Meeks.....432-4429  
[jackm@nccn.net](mailto:jackm@nccn.net)

Treasurer: Janet Brisson.....346-6439  
[rubes@infostations.com](mailto:rubes@infostations.com)

### Board Members

Past President Merrill Grant.....432-0725  
Leslie Gault.....346-7092  
Randy Oliver.....272-4450  
John Miller.....823-1369

### Committee Chairs

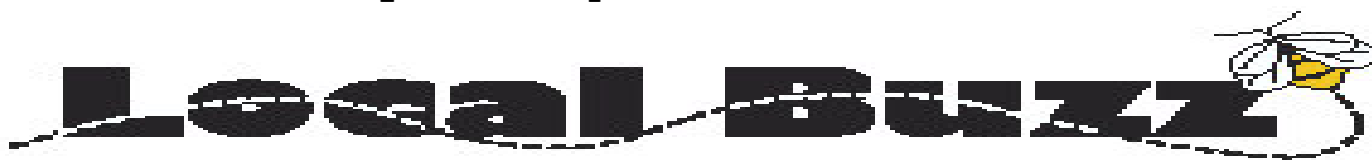
Swarm Hotline: Leigh Johnson.....273-1382  
Lynn Williams.....675-2924

Library: Tynowyn Slattery..265-6318

Newsletter Dist. Gary Wood.....477-9202

Newsletter: Bonnie Bagwell.....878-3622

Honey Extractor Karla Hansen.....265-3756



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