

THE MARIN BEEK NEWS

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December 2012

What's the Buzz

Our next meeting will be on Thursday December 6, 2012 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm.

Join us for an entertaining evening in conversation with author, Hannah Nordhaus and commercial beekeeper, John Miller. Hannah's "Beekeeper's Lament," a national bestseller, follows the life and times of migratory beekeeper John Miller during the height of CCD. This book brought the bee crisis to the mainstream, enlightening the general public to the plight of the bees and portraying the unique life of this gregarious beekeeper. Mea McNeil will engage Mr. Miller and Ms. Nordhaus in a Q&A that is sure to be a great time. Bring a copy of the book to be autographed. Whyte's Book Smith in San Anselmo and Book Passage in Corte Madera offer a 10% discount for club purchases. Please send any questions to anna@marinbees.com.

Upcoming Meetings:

January 3, 2013

[Steve Sheppard](#). Dr. Sheppard is Department Chair of Entomology at Washington State University. His area of interest is population genetics & evolution of honey

see Buzz on page 2

INSIDE THIS ISSUE

- 1 What you Missed
- 1 What's the Buzz
- 2 Dues Reminder
- 2 December Hive Tips
- 4 The Librarian's Desk
- 4 Website News

What You Missed

Our last meeting featured a talk by club members Bonnie Bollengier and Gary Morse of Bonnie Bee & Company. Bonnie Bee & Company was founded with the goal of bringing to fruition the Marin Survivor Stock Program to provide a source of Marin adapted survivor bees that did not rely on chemical treatments.

Gary began the presentation with some history of the efforts to develop Marin adapted survivor bees. In 2009 the club started the Marin Bee Census Survey. Through the survey, it was seen that the bee losses in Marin County consistently topped the national average. Concurrently the Marin survivor stock program was initiated by a group from Marin Beekeepers led by Mea McNeil, Jerry Draper, and Dan Stralka. The goal of the project was to develop a locally adapted honeybee that could survive without chemical treatments with a low percentage of annual colony loss; but the group had little experience in raising queens so their efforts floundered.

Through speakers and workshops the group gained more knowledge but the ability to raise local queens in quantities to supply the increasing demand for local untreated bees was still a problem. The group began looking for sources of untreated bees from other areas. Bees were obtained in 2010 through Zia Bees of New Mexico and in 2011 from Old Sol of Oregon. Both of these companies were leaders in developing survivor stock lines of bees. However, importing bees in large quantities still had inherent problems. The climate that the bees were from was not the same as Marin County's climate. Also, there was no local control over the selection process so we were still relying on outside sources to determine the genetic stock.

Bonnie and Gary decided to start a business in order to jumpstart the survivor stock program. Their first task was to find a source for bees for the nucs that they planned to create with local queens. Most nuc producers use bulk bees obtained from beekeepers coming out of the almond orchards. Bonnie & Gary selected Randy Oliver for their bulk bees. They felt

see What You Missed on page 3

bees, insect introductions & mechanisms of genetic differentiation.

February 7, 2013

[Kirk Visscher](#). Dr. Visscher is an associate professor of entomology at UC Riverside. His research interests include the social behavior and ecology of social insects with emphasis on honey bees, which occupy a special place among the social insects because they are among the most behaviorally complex, the most amenable for study, and of the greatest benefit to man.

March 7, 2013

[Kirk Webster](#). Kirk Webster is a master natural Queen Breeder living near Middlebury, VT. His queens are selected for VSH (Varroa Selective Hygiene). Colonies that display this characteristic detect infested larvae and then uncap & remove them.

April 4, 2013

[Heather Mattila](#). Heather Mattila is an Assistant Professor in the Department of Biological Sciences at Wellesley College. Professor Mattila's research focuses on the role that intracolony (within-colony) genetic diversity plays in the organization of communication and division of labor in honey bee colonies.

May 2, 2013 & June 6, 2013

TBD

Dues are Due

A reminder that annual dues for 2013 are now due. Dues are still just \$20 per year. You can pay in person to David Peterson at the monthly meeting or mail you check made payable to Marin Beekeepers to:

Marin Beekeepers
c/o Mary Nordquist
2072 Hatch Road
Novato, CA 94947

New members and members with new contact info please make sure to include your address, phone number and e-mail.

Membership includes free admission to all meetings, access to the Club's honey extracting equipment, and subscription to the Club's "MarinBuzz" listserv, which serves as an online discussion forum and a way to notify Club members of local bee swarm information.

December Hive Tips

* Cold doesn't kill bees - moisture does. Make sure your hive tilts forward slightly so rain doesn't condense inside on your bottom board. Not sure the bees have enough ventilation? On a warm day, quickly check the inside of your top to see if it is wet or has mold. If so, consider giving them a little more ventilation by adding a shim, stick, or thin piece of wood between the top and inner cover.

* Approximately half of annual hive deaths occur October - December. If you lose a colony, you will want to try to determine the cause of death. Most importantly, you want to be sure you did not lose the hive to American Foulbrood. Chances are slim that the cause is AFB, however because several cases were reported in Marin last year you'll want to check to be sure. Good photographs and information are available online, including in this report:
http://www.countryrubes.com/images/American_Foulbrood_AFB_pdf.pdf

If ABF is a possibility, be sure to store the equipment in such a way that other bees cannot find it and rob it out and take the disease home with them.

If you can rule ABF out, store your honey supers and built out combs in a manner that will not encourage wax moths, i.e. where light and airflow are abundant or in a freezer (or after freezing). If you stack outside, put spacers in between hive bodies to allow for airflow and store in a manner where mice will not have access - like on top of a screened bottom board with entrance reducer in.

* By now, you should have removed your excess space and honey, leaving less space for the bees to need to heat this winter. If for some reason you still need to remove a hive body, do so in a manner that will cause the least heat to be lost in the hive. Pick a sunny day and work during the highest temperatures of the day (usually around 2-3pm). You can put an inner cover between the hive body to be removed the rest of the hive. Alternatively, you can add a bee escape board (plans can be found here:
<http://www.beesource.com/forums/showthread.php?21375-Vortex-Bee-Escape-Board-With-Pics>) for 48 hours.

that Randy paid a lot of attention to rearing bees and that they were probably healthier bees than from other sources. The queen cells that were put into the nucs were grafted from hives of local Marin stock from several beekeepers throughout the county.

For the first year of their program they had only a few simple criteria. They looked for untreated colonies in Marin that had survived at least 18 months. They talked with local beekeepers, examined beekeeper's journals, and worked many hives looking for bees with a calm temperament.

They enlisted the help of Melanie Kirby and Mark Spitzig to help with the grafting. Melanie & Mark have many years of experience rearing queens. Their help was instrumental in the success of the first year of the program.

Two techniques were used to create the queen cells.

1. Queenless starter & finisher cell builders were set up in four areas of Marin, from Novato to Belvedere. Queens were grafted from predetermined bee stock that met the primary criteria, collected from various beekeepers. The grafted cells were placed into special frames that held twenty to thirty cell cups per frame. The frames were then installed into the cell builders. A few days later each cell builder was checked to make sure that the queen cells were being formed.
2. Grafting was also done into small splits using a method that Randy Oliver calls "The Foolproof Five Cent Grafting Method". Eight to ten cells were installed into the split by pressing the cell cups into the side of a frame of comb. This method had an 80% take of queen cells.

Bonnie and Gary discovered that successful grafting can happen even under less than ideal circumstances.

Prior to grafting, Bonnie and Gary searched for and set up their mating yards. The most important criterion for their mating yard was location. They were able to find space in west Marin where the density of beekeepers was low. This allowed them to have more control over the mating process.

At eleven to thirteen days after grafting the ripe queen cells were pulled from the cell builders for installation into the queenless nucs. The nucs had been

prepared a day earlier when Randy and his sons delivered the bulk bees to the mating yard where the bees were installed into the waiting nuc boxes. Transporting the ripe queen cells was a painstaking process. Bonnie or Gary would drive while either Mark or Melanie held a nuc box containing the queen cells, resting on a pillow on their lap in order to cushion the cells from any shock from the road as they drove to the mating yard. A queen cell was installed into each of the nucs in the mating yard.

Bonnie and Gary then waited patiently for the queens to emerge and mate, waiting twenty eight days from installing the queen cells in the nucs. They then checked for mating, brood pattern, etc. and then started distributing the nucs to their customers. Their goal was to locate the nucs into the same micro climates that the queens were from.

How did it work out? Bonnie and Gary exceeded their queen cell and nuc production goals. 80 queen cells were planned and 120 queen cells were created. 50 nucs were planned and 80 nucs were created. The excess queen cells were shared with the beekeepers that had helped them during the grafting process.

They were able to increase their own apiaries and identified potential breeder queens for next year. They now have over 40 colonies in various micro climates throughout Marin County. Bonnie pointed out that it is too early to access the survival rates of this year's nucs until they have gone through at least one winter season.

What do beekeepers in Marin want?

1. Less than 10% annual loss. The annual loss over the last four years has averaged around 40%.
2. Healthy, untreated bees, pest and disease problems that are handled by the bees without chemical intervention.
3. Good honey production.

Future goals for Bonnie Bee & Company and the Marin Adapted Survivors Project:

1. Develop a 100 point selection protocol for potential breeders. Share this protocol with any other interested beekeepers in Marin.

2. Develop breeding stock from bees adapted to Marin micro climates.
3. Be able to provide queens later into the season, either ripe queen cells or mated queens.
4. Continue to refine the selection criteria
 - a. Temperament.
 - b. Mite Resistance
 - i) Hygienic Behavior
 - ii) Self Induced Broodless Period
 - iii) Something Else???
5. Propolis Production. Propolis has been found to have certain health benefits.
6. Honey Production.
7. Observe how colonies are allocating their resources. Sometimes small differences in allocation for brood rearing, foraging, mite control, etc., can be the tipping point between healthy and unhealthy bees.

Bonnie spoke about her interest in studying the effects of a broodless period on bees. A break in the brood cycle also created a break in the mite breeding cycle. Broodless periods occur when bees swarm or supersede the queen. Bonnie noted that some beekeepers are caging their queens within the hive for approximately two to three weeks in order to create a broodless period. She has also noticed that some hives seem to create their own period of broodlessness by the queen simply shutting down egg laying for a period of time.

Bonnie closed by saying that achieving Marin adapted survivor bees is a long term process that won't happen overnight, but will happen.



Installing Ripe Queen Cells into the Nucs

The Librarian's Desk

The Club library has books available for loan to members. Drop by the table at the back of the room and see our selection of beekeeping manuals and fiction offerings. If you've borrowed an item, please remember to bring it back for circulation to the rest of the club. We're happy to receive donations of books or other materials, including past issues of beekeeping magazines.

Website News

We've got a new look! Go to <http://marinbeekeepers.org> to check-out the new club website. At our November meeting, Anna Gravley, web master for the club site, gave a short preview of the site, with its new options, including a review of information sharing via the Club forum, classified ads for selling, buying and trading equipment and events calendar. Suggestions and/or questions are welcome and should be sent to Anna at anna@marinbees.com