The Monthly Extractor

Volume 41, Issue 10 October 2016

This is our newsletter that reflects the various techniques, theories and art of sustainable beekeeping.

From Our President

Greetings Fellow Beekeepers, Enthusiasts & Activists

Elections are looming - for our country and for SCBA. It is a time for important considerations of your voting power, and commitments to a changing future. SCBA is run entirely by volunteers serving on the Board of Directors and the support staff - about 24 positions in all. Our group is very much like a honey bee colony in the respect we all do a series of jobs through out the cycle of the year, from year to year and we make our decisions collectively. For SCBA to thrive and survive, we all have to do our jobs and participate. We love busy worker bees.
Please see below for a listing of the various Board positions. We have 5 "official" board positions that must be filled, plus other positions where the position-holder can decide whether they want to be on the board or not. This allows for flexibility for the Association as well as our important volunteers.
Here is a listing of the positions - we have interest in a few of the positions already (*). Nominations are open October 1st - until filled. We will have an open election at the December meeting, but I've listed positions where the current representative has volunteered for another year (thank you to them!):

Board Positions

- **President - OPEN FOR NOMINATION ***
- **Membership (1st Vice President) -ANN JEREB to serve 2017**
- **Meetings & Events - (2nd Vice President) - OPEN FOR NOMINATION**
- **Secretary – OPEN FOR NOMINATION**
- **Treasurer - LEW SPENGLER to serve 2017**

Important Positions - appointment by 2017 President/BOD Board status as determined by Position-Holder

- **Swarm Coordinator - OPEN FOR APPOINTMENT ***
- **Education Coordinator – OPEN FOR APPOINTMENT**
- **Regional Coordinator - OPEN FOR APPOINTMENT ****
- **Cluster Leaders - Appointed by Regional Coordinator**
- **Volunteer Coordinator - OPEN FOR APPOINTMENT**
- **At Large Representative– OPEN FOR APPOINTMENT**
- **Librarian - Nadya Clark to serve 2017**

Would you be willing to lend your time to the SCBA? It's a fabulous group of people committed to an especially wonderful cause, the honeybee. How can you say no!? If you have any interest or questions about volunteering for a position with SCBA please send me an email - president@sonomabees.com

Bee Well,

Cheryl Veretto
President

This Month's Calendar

Monthly Meeting: Monday, October 10

6 pm – Come and talk to bee experts, have refreshments (bring your own cup), check out our library and plant sales, meet your cluster leader.
7 pm – Gardening for Bees - Kate Frey. Her subject will be on garden design for bees, both native bees and honey bees. Kate recently co-authored a book, which will be for sale (and signing!) for $20.

Upcoming Meetings

November 14. Bumblebees and Other Native Bees - Robbin Thorp
December 12. Potluck

Other Events

October 29. 10 a.m. to 4 p.m. Science Discovery Days- Santa Rosa Fair Grounds – To volunteer call Ettamarie 707-479-1613 or e-mail editor@sonomabees.org This is a free event with free parking that your whole family will enjoy.

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My October
Beekeeping To-Do List by Serge Labesque

A needed correction

An August Minnesota Public Radio news segment and article placed the blame for bee colony losses on the backyard beekeepers who do not treat their hives for mites. The obvious goal of the author of this paper was to exonerate conventional beekeepers of any culpability in the decline of the bees by vilifying the so-called "treatment-free" beekeepers.

Such accusations cannot be ignored. I am compelled to present a different perspective on this issue: By treating their colonies, conventional beekeepers are actually the ones who are eroding and destroying the innate strength of the species. They are negatively affecting its genetic make-up. Treating colonies keeps weak genetic strains alive. Under the process of natural selection, which has proven to be a much better steward of the species than humans, the unfit colonies are simply eliminated and replaced by the fittest survivors. Treatments, along with many other conventional beekeeping practices, defeat this healthy process.

Not only do treatments weaken the bees, but their use also results in higher virulence and resistance in the targeted organisms, facts that have been demonstrated many times.

The beekeepers that treat their colonies for pests or diseases and the scientists who lead them down this path are guilty of abusing the species. They want to keep their toiling bees alive to protect their own careers and their sources of income or honey. In my opinion, they want to justify applying treatments by saying that they did the best they could, and they wash their hands of any consequences. Then, when things go wrong and the methods or the products they used fail, as they regularly do, they blame others for their failure. This is exactly what the above-mentioned article does. They might as well blame the feral colonies for being alive and well without any attention from beekeepers while they are at it.

It is high time those who respect the undomesticated nature of the bees be recognized for their positive contribution in salvaging as much as they can of the innate strength of the species. They have respect for natural processes, and really care about the wellbeing of the bees for what they are and not for the revenue they can generate.

October in the apiaries

This month, the bee colonies complete their preparation for winter. We follow their progress, aiming to finally secure them before November arrives. Overall, the hives become more compact. We can remove unused combs and possibly harvest surplus honey. After this, we will not disturb the colonies for a few months, although regular visits to the apiaries will keep us informed of their wellbeing.

The intense forager activity we often see in front of the hives in early fall is one of the last efforts made by summer bees to prepare their nests for winter. Inside, their sisters care for the young. In a few days, in a few weeks at most, these summer bees will have disappeared. The future of the colonies will then depend on the next generation, the winter bees.

But in mid-fall, the winter bees are still developing, nestled inside the brood nests. They will emerge from their cells in late October or in early November. By the end of the month, most queens will have substantially reduced their production of eggs; some will have stopped. Consequently, the brood nests will consist mostly of sealed brood. Looking at the brood nests at that point in time will give us a good indication of the size of the winter clusters. The equivalent of four frames of brood in a hive will be a fair amount.

The brood chambers are becoming tightly packed. Stores surround and even permeate the brood nests. This cramming together of stores, brood and bees is one of the factors that lead the queens to gradually reduce their production of eggs in the fall. Although we may consider that they deserve to rest for a while, bees and beekeepers also benefit from this drop in brood rearing. Indeed, without brood to be kept at an elevated temperature during late fall and in early winter, the colonies consume very little of their stores. Better yet: when there is little or no brood in the hives after the emergence of the winter bees, these young insects do not have to perform brood-rearing chores that shorten their lives. This is quite important for the colonies, because the winter bees will have to do this sort of work two to four months later, starting in January, when the colonies must increase their populations in preparation for spring. There is yet another benefit to this pause in brood rearing: After the winter bees are born, the varroa mites become vulnerable because there are no more brood cells where they can hide and reproduce; they are exposed to the grooming behavior of the bees. Colonies that possess this highly desirable trait can keep varroa under control.

The timing of the reduction in egg laying by the queens can be crucial for the colonies. When the queens keep producing eggs until very late in the fall, the stores are rapidly consumed. And not only is the healthy period of broodlessness missed in such instances, but the brood nests may also become mite nurseries. If, on the contrary, the colonies stop their production of young bees too early in the fall, the size of the winter clusters may be too small to overwinter safely. Knowing this, the beekeeper avoids adding egg-laying space in the hives during the fall. Note that feedings can also trigger untimely bouts of brood rearing.

The size of the hive entrances have been reduced to make them more easily defensible against yellowjackets or robber bees, and the mouse guards are in place. In

fact, some colonies spontaneously amass propolis in the entrances of their nests.

As we inspect our hives for the last times in the year, we can harvest any surplus honey they may still hold. Certainly, we want to make sure that the bees will be left with enough stores to cover their needs until the next honey flow. But leaving much more honey in the hives than the bees can consume can also harm the colonies, as this can slow their development at the end of winter. This is because honey has a huge thermal mass. It will become very cold during the long winter nights and cold days. Water vapor will condense on the combs, causing honey to ferment, or turn into cold water that will dribble down onto the clustered bees that will be trying to keep their young warm. This will increase the risk of disease or dysentery. So, surplus honey should be harvested. Thirty to thirty-five pounds of honey has proven to be sufficient for mature hives in this area. As little as fifteen pounds will be sufficient in hives that hold nuc-size colonies. A simple rule of thumb to gauge the amount of honey that is left in the hives is to consider that a deep frame holds five pounds and a medium three.

In the center of the stores that the bees have accumulated above the brood nests, there should be one or two combs that still contain some beebread. This pollen was left in place by the bees at the end of summer, when the brood nests were driven downward in the hives. It's a source of protein that will be available to the nurse bees at the end of winter, when the clusters that must rear brood have reached that part of their stores. Possibly, there will also be some empty cells or uncapped honey that will facilitate the establishment of the new brood nests. Evidently, most of the cells in these combs should be of the smaller worker-size. Replacing these combs by combs of solid honey would be a mistake.

Empty combs are removed to make the hives more compact in the fall. The old and misshapen ones will be taken out of service and their wax will be melted. The follower boards are brought closer together around the frames that are left in place. This results in a relatively tall and narrow configuration of the hive contents that is desirable for overwintering bee colonies. The air gaps created next to the sides of the hives by the use of follower boards will draw moisture away from the clusters during the cold winter nights.

In the upper parts of my hives, I place thick mats of dry lavender to provide insulation and absorb moisture. I also make sure that the upper ventilation slots remain open. All together, these features help keep the hives drier.

This month we are actually doing five months' worth of beekeeping. We are laying the groundwork for a new beekeeping year. Now, all that is left to do is to secure the tops of the hives against the wind, and to insert clean monitoring trays under the screened bottoms.

In summary, this month:

- Assess colonies, their health, queens, brood nests and stores. Verify that they are queenright.
- Examine how the bees have organized their brood chambers and how the stores are packed around them. Ensure that there is some comb with empty cells, uncapped honey and pollen centered above the brood nests, surrounded by honey.
- Combine or requeen hives that are not performing satisfactorily (early in the month). Better yet, reduce their volume to strengthen them.
- Adjust the volume of the hives to match individual colony strength and needs.
- Remove old and misshapen combs (follower boards greatly facilitate this).
- Early in the month, configure hives for the consolidation of honey stores (Scratching the cappings of patches of poorly located sealed honey helps.)
- Harvest, extract and bottle only surplus honey.
- Render wax from discarded frames and from cappings
- Return wet frames and cappings to the bees for cleaning (by placing them above hive top feeders or inner covers).
- Watch out for yellow jackets and any instances of robbing. Reduce the entrances of the hives that are threatened.
- Ensure that hives are adequately ventilated.
- Install mouse guards and reduce hive entrances.
- Routinely clean and torch tools and equipment.
- Store unused equipment to protect it from wax moth or mouse damage, and from the weather.
- Secure the hive tops against high winds.

Serge Labesque

BEE WISE:

"Slow Down, We move too Fast"

by Emery Dann

Since I am a "Senior Beekeeper", I see our world needs to SLOW DOWN! If you have ever witnessed a beehive attacked by either yellow jackets or robber bees, you know how fast a hive can be destroyed—a warning for our civilization. Like the bees that rob weak hives, we are moving too fast! What started out as improved efficiency began with the Industrial Revolution. Since then we have embarked on a faster and faster race, doing things with our technology "footprint" that often crushes other living creatures that get in our way. This is called "progress"? We are learning that many commercialized migratory beekeeping practices including queen insemination does not have a good outcome.

As beekeepers, yes, there are emergency times we have to work fast. But much of the time we need to slow down. We can BEE WISE by knowing when to go fast and when to slow down. Speed is often our enemy! You have heard the expression, "Speed kills"! Another rendition of this is "The faster we go, without limits or boundaries causes serious environmental casualties around us.

From the United Nations Environment Program, the Earth is in the midst of a mass extinction of life. Scientists estimate that 150-200 species of plant, insect, bird and mammal becomes extinct every 24 hours. Two thirds of all the species on earth are concentrated in the rain forests, 50% of which have been cut down and then burned to expand agriculture and human civilization. Mounting losses of ecosystems, species and genetic biodiversity are now threatening all life on earth.

We can make a difference by stewardship in our personal lives and how we assist our bees. Serge Labesque has taught us personal bee stewardship showing us how bee exploitation weakens bee health and diversity. We need to re-frame how we keep bees and help one another. Bees contribute and cooperate for the good of their own hive and the environment. We can learn principles bees have used to succeed for millennia. Here are 4, of many concerns about honey bees:

1. **EXTRACTIONS:** We need to consider when the best time for the bees to be removed and how best to do it. First, can the beehive be left in their present location, especially through the winter? Why is moving the hive necessary? Once we start an extraction, we must continue it until the bees are safe and have what they need in their new hive including moving to a new location. Extractions are traumatic! I will not wreck through a hive by extracting bees at the wrong time of year when the winter bees are emerging, etc. Honey supplies have been carefully stored for the winter. Doing an extraction late summer into fall is not good for many reasons. The queen may easily be injured or die in the process. Then the hive is doomed because a new queen cannot be raised by the colony. The best time to extract is in the spring, with the fewest number of bees present. For the best results is to slow down and wait, unless there is no other option to save the hive from destruction or extermination.
2. **MOVING HIVES:** There are times when hives must be moved from a bad location. Every move stresses colonies. A better location can be of great benefit to a hive if moved soon enough rather than leaving it to dwindle or weaken further in an unsuitable location, especially for the winter. Knowing and finding a good location may not be easy. Plan ahead to help your bees thrive.
3. **COMBINING HIVES:** If you have two small healthy hives, combining in the Fall is a great strategy to provide enough numbers of bees for a stronger hive to support foraging, hive work, and heat production for bee survival during the winter.
4. **ABUSE BY POISONS AND CHEMICALS:** We are destroying our environment and our health with Glyphosate building up in our toxic environment along with other pesticides, herbicides, and fungicides. The effect is lethal and sub-lethal. I found the best comment I have ever read accurately describing the chemical crisis we are experiencing today:

> *We need to wake up to the fact that nature is a delicate balance. Using these artificial chemicals is like trying to fix a fine watch with a large hammer. The results are not going to be good. The watch won't be fixed; it will be totally destroyed. If we continue to hit nature with these large chemical hammers, we (and all life forms) will be the ones to suffer as our ecosystem collapses.*

Good questions to ask are:

1. "What do I need to slow down or stop doing to help my bees and the environment?"
2. "What do I need to start doing differently now in my life and beekeeping?"

I make my biggest mistakes when I try going too fast for too long. Preparation and knowing what my bees need from me makes a huge difference in the quality of life. It is so much easier to have what they need by anticipation and preparing ahead of time. I want to be effective in my beekeeping stewardship. After all, honey bees are both effective and efficient—not just "busy" like we humans!

Bee Plants of the Month

By Alice Ford-Sala

Beneficial Tree of the Month

Vitex agnus-castus Chaste Tree
Family Lamiaceae

Vitex is perfect for an area where you want a smallish tree that is attractive to bees and other beneficial pollinators. The spiky clusters of lavender flowers are borne in summer through fall, a treat for bees during those long dry weeks of nectar dearth. The leaves are fragrant, deeply divided in a fan-like pattern. It is a deciduous tree, so is bare in winter. It can grow 10 to 15 feet tall, and is prone to making multiple trunks, so prune it if you want a single trunk. The small seeds provide birds with winter nutrition. They have been used for centuries to treat a variety of conditions, especially useful in fertility and women's health.
Plant Vitex in full sun, with good drainage. Needs moderate to regular watering.

Chaste Tree

Cover Crops of the Month

Note: The next three months will be about cover crops.

Fall is a traditional time to sow the seeds for these crops here in Northern California, to take advantage of hoped-for rains. I recently gave a small talk on this subject for the Sonoma County Beekeepers Association Gardening for Bees committee. Below is one section of the talk, with November and December continuing the theme. All the plants are bee-friendly if allowed to flower.

Plants for breaking up, loosening and enriching soil:

Daikon radish, Raphanus sativa. In North America is used as a crop for increasing organic matter in the soil. It is grown, let to flower, and then the roots are left in the soil to decompose and enrich the soil. The white blossoms are attractive to pollinators. In Asia it is an important food crop. Also know in the USA as oilseed radish.

Borage, Borago Officinalis. Readily re-seeds in the irrigated garden. The leaves and roots are both good for the soil, as composted matter or left on the ground to decompose. Deep taproots and fibrous roots help loosen soil. The blue flowers are highly attractive to bees.

Dandelion, Taraxacum officinale. Widely viewed as a weed, the taproots pull nutrients into the soil, the greens are edible and the classic yellow flowers are highly attractive to pollinators.

Sweet clover, Melilotus officinalis has large taproots, grows up to 6 feet tall, adds nitrogen to the soil. Beloved by bees, heavy producer of honey.

Fava bean, Bell Bean, Vicia faba. Large taproots pull nutrients, including nitrogen from soil. Attractive to bees. Widely used in Mediterranean and Latin American cuisine.

Alfalfa, Medicago sativa. A well-known forage crop, widely used as fodder for many animals. Can be used as green manure, which is tilled in to the soil, or mowed and left to decompose on the ground. Taproots loosen soil and fix nitrogen. Honeybees like Alfalfa, but due to a complicated pollen delivery anatomy the best pollinators for it are alfalfa leafcutter bees.

Parsley, Petroselinum crispum. Parley has a very large taproot that develops even better the second year after planting from seed. When left to flower, attracts a myriad of insects, including beneficial wasps, syrphid and tachinid flies, lacewings and bees.

Farmer Olympics

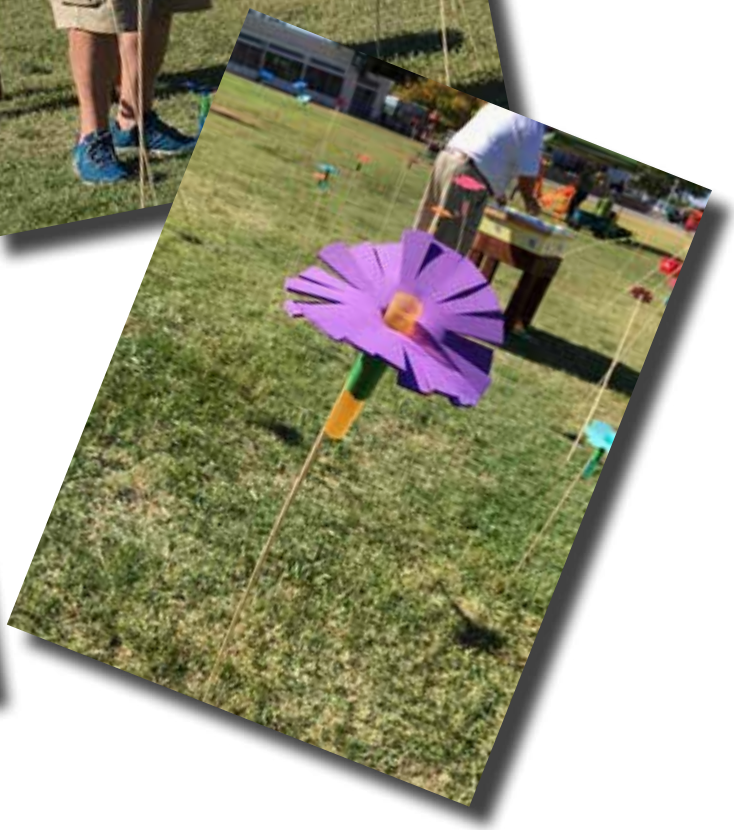
By Christine Kurtz

On September 17 The Farmers Guild had an event from Noon to 7p.m. at the Petaluma Fairgrounds. Here is the link from the Press Democrat describing the event better than I could:

http://www.pressdemocrat.com/news/5891390-181/farmer-olympics-in-petaluma-from?artslide=0

Lew Spengler our treasurer took the lead and set up an SCBA booth and came up with a great idea to involve the public and especially young children (although older children and adults had just as much fun). Flowers were fashioned with a tube in the center and attached to a stick and spread out in a "meadow". Inside the tube water (aka pretend nectar) could be poured. In the center of the meadow a hive was set up with comb. A willing "bee" would come get her antennas at the table and a dropper or "proboscis". The game or "work" was to run around squeeze the dropper in the flower tubes to suck up the "nectar" then run to the hive and deposit the load in the comb until your piece of comb was full. The reward was a honey stick. It was great fun to volunteer and watch all those busy "bees" work and learn something about bees in the process.

Thanks to all, especially Lew Spengler and his family, for making this a great event. Lew heard it was a favorite for the families!

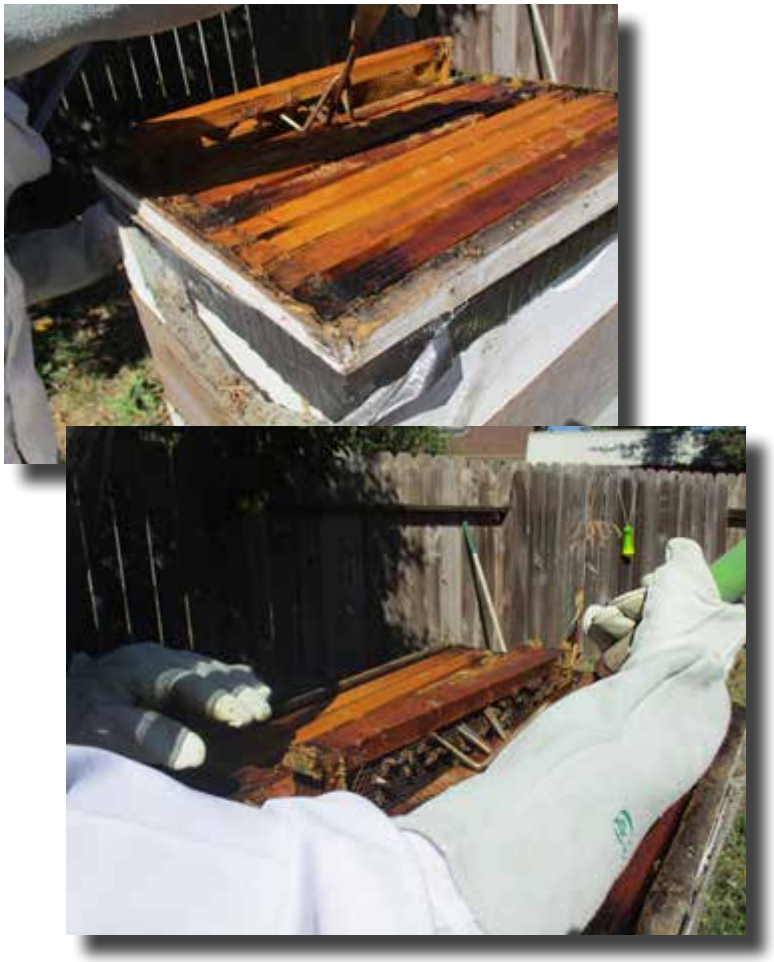


Lesson from a 4-H Beekeeper

By Ettamarie Peterson

When I showed up to help Luc and Lili do their fall hive inspections they were all set except they couldn't find their hive tool. This happens to me frequently causing me to replace the missing tool to find it later. I think I have at least 5 now! We looked around to see what other tool would substitute. I spied a sturdy looking flat garden trowel that would help pop the propolized lids and boxes apart. Luc, being an amazing imaginative divergent thinker, came up with the idea to use a garden hand cultivator to lift the frames. He reasoned the points could go under the frames and then he could use leverage to lift them up. I must say it worked even better than the jay-bar tool I generally like! The three points were better than the one. The size was just right! I am tempted to put one in my hive tool bucket to use from now on! If you have one, give it a try.

By the way if you have any beekeeping equipment you would like to donate to the Liberty 4-H Beekeeper's Project, contact Ettamarie Peterson at editor@sonoma-bees.org. We plan to make candles in December and could use any wax you might want to give us. In the spring we will be making splits and raising queens so nucs would be appreciated. Any boxes, hats with veils, tops and screen bottoms, hive tools and smokers are also needed for our new members. These beekeepers will clean up old equipment and sterilize it before using it.



Luc using a small garden cultivator to lift frames.
Photos By Ettamarie Peterson

Regional Groups

By Christine Kurtz Regional Coordinator

Fall prep bee cafes and hive dives have been happening throughout the clusters. The cluster leaders have been working hard to organize their groups. We have had the best year so far with the cluster groups as they have after 3 years jelled and members are participating and enjoying learning opportunities. We have never had this many workshops, hive dives and bee cafes. We are at the forefront of these ideas and concepts, there were no templates to follow and the cluster leaders had to take on some of the uncertainties and sometimes create on their own themes in these events. At times they even held me up when I was tittering on the edge of burn out and were so supportive. The cluster leaders are an amazing group. I am in awe and deep thankfulness. They volunteer not only in the events but also behind the scenes, answering e-mails, supporting you in the many fashion it presents itself. I can't say it enough, take good care of your leaders.

On October the 23, the cluster leaders will meet again. Together we have learned oodles. We will map out 2017 and have all the groups on the same page. This will take the guesswork out, be more predictable and organize things ahead of time. We will also introduce Kelli Cox and Sally McGough a dynamic complementary duo that will take over the regional coordinator position in 2017. I will still be involved as their humble advisor and shift my volunteer work to the "Bee Sharing Program", figuring out more efficient and fair ways for us to share our survivor stock and perhaps create small queen rearing groups in each cluster.

East Cluster September Hive Dive and Bee Café: Prepping Hives for Winter

By Lauri Dorman, East Cluster Coordinator

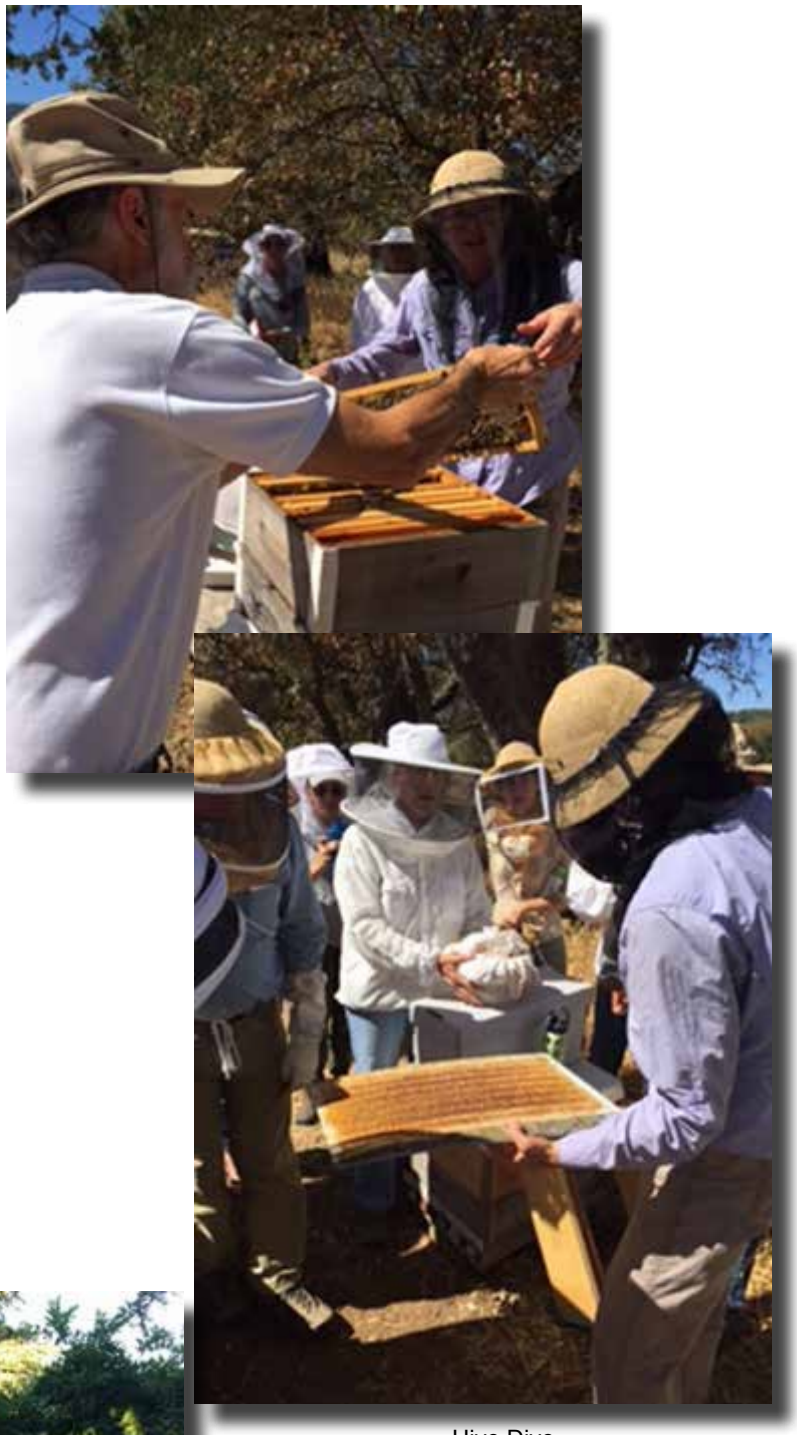
Good-bye summer! Hello fall! A group of East Cluster beekeepers gathered at Lizanne Pastore's apiary last Sunday to learn about preparing our hives for winter. The day was HOT and we were rewarded with Serge's classroom instructions and then Lizanne went through four of her hives sharing her observations and occasionally looking to Serge for confirmation or advice. From new beekeepers (One gentleman was patiently waiting until spring for his first hive.) to more experienced beekeepers we all left with new knowledge and perhaps more confidence in going into our own hives for this critical October examination and hopefully setting the bees up for success for the winter.

Serge focused on a checklist for mid-to-late October hive dive.

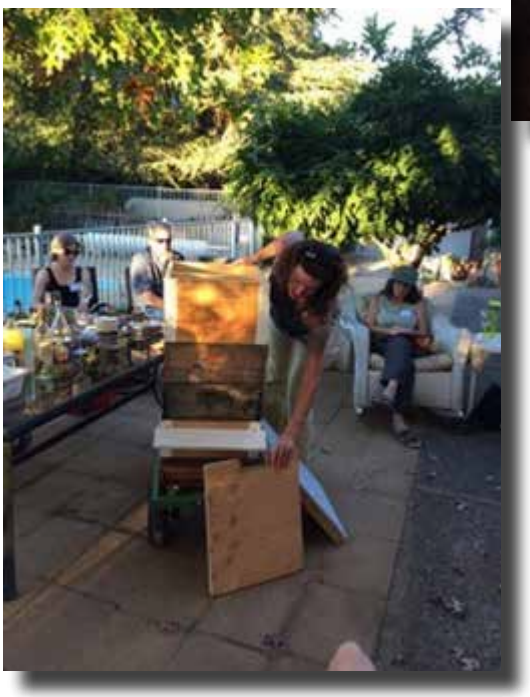
- The colony and its health
- Population size
- The brood nest
- Stores
- Hive organization
- Hive Equipment

The East Cluster will continue the conversation on Tuesday at a Bee Cafe gathering at the home of Caryl Castleberry. Thea Vierling and Lizanne, who together have more than 15 years of beekeeping experience, will lead the group with more information on Prepping Your Hives for the winter with discussions and Q&A.

The Clusters of the SCBA are an important way to share information and experiences in small groups. It is also the perfect way to 'hook-up' with a bee buddy. Working your hives with a friend is a smart way to manage your hives. Together you can strategize, challenge assumptions and hopefully make great decisions for the benefit of the bees.



Hive Dive
Photos by Lauri Dorman



Bee Café
Photo by Thea Vierling

On Pondering about Bees

By Christine Kurtz

The SCBA Board generously helped sponsor me to attend the Natural Beekeeping Conference in Pasadena August 19-21. Two days of immersion around like-minded beekeepers was exciting and very educational. The following is knowledge I picked up to share with all of you.

Nectar is a rich floral secretion made by plants as an attractant and reward for a partnership with animals. I give you nectar and you pollinate. Nectar's composition is 25-75% sugar solution (glucose, fructose and sucrose), B complex vitamins, organic acids and amino acids. Bees use nectar to make into honey, which is the carbohydrate part of their diet and it is fed to their larvae along with beebred their protein source. Hording and storing food enables them to live year round through adverse weather and winter. Honey is also an energy source for adult workers and drones. Well-fed nurse bees can make ample royal jelly for young larvae and queens. It is also used as a metabolic fuel for heating the hive to maintain homeostasis. Bees consume honey in winter and shiver to generate metabolic heat to maintain constant temperature and during brood rearing times. Honey is also fuel for manufacturing wax. The 8lbs of honey to 1lbs of wax ratio shows the incredible energy necessary for any colony to start a new nest or expand an existing one and why it only happens naturally in a strong nectar flow and in these parts it's short- March through June.

Nectar is approximately 80% water and needs to be dehydrated to 18% and below for storage. If you can imagine how small a honey crop is and how one load is 85% of her body weight and each load is 1/300th of an ounce of nectar and she has visited from 50 to 100 flowers to fill up, and then it still needs to be dehydrated to below 18%, the reverence for this creature grows. The numbers out there are 1/8 to 1/10th of a teaspoon of honey per collecting bee, which is if she lives her life to the fullest and her death is not premature. That's what it takes, a million flowers, to make a pound of honey. What does a million flowers look like? I try to imagine that sometimes when I frolic in my garden and although very lush I realize how little I actually provide on my acre farmette. No wonder bees forage 3 to 5 miles radius to find the resources necessary. And why do the bees work so incredibly hard? What are the benefits beyond food storage? How about the evolution of a relationship with plants to maintain good health and better survivability through self-medication?

Not all pollen is created equal nor is nectar. Comes to no surprise that bees need a varied diet to gather all compounds for good nutrition. Bees will seek out sources to remedy nutritional deficiencies, to compliment their diet. It's the same for us, we would not do well on a single source of food and we try to compliment our foods to be balanced, and so it is with bees.

Besides Vitamins and minerals, enzymes and sugars honey has components called Phytochemicals (Alkaloids, Flavonoids, Phenolics, Terpenoids). Phytochemical are biologically active compounds found in all parts plants and therefore in nectar and pollen too. Antioxidants are one of those phytochemical compounds for example. Phytochemicals helps plants mediate ecological interaction, a sort of protection to the elements, as many things would like to attack and eat plants. Although plants are very generous to many, they do want to survive and grow and reproduce like everyone else. So these compounds are toxic on one side and beneficial on another.

Within phytochemicals are phenolics and honey is rich in phenolics. Phenolics have antioxidant properties. Antioxidants help in preventing cell damage. We know that food rich in antioxidants are good for us and so again it is also for the honey bee. And as with our own human foods antioxidants can vary greatly depending on the source, certain nectars have more antioxidants than others and again having abundance and choices matter.

Another compound that helps honey bees is caffeine. Some plants produce it as a natural pesticide to keep harmful insects away. It is found that in bees it enhances memory and improves cognitive performance. Yes you might also feel more alert and ready to learn after that cup of java. We have so much in common with bees. Citrus is a high caffeine nectar plant and bees sure love it in my garden!

Honey also contains antimicrobial activities, it has been used for wound care for centuries after all, but foremost it helps preserve and benefits health by keeping damaging microbes at large.

Honey influences defense against toxins and enhances survivability when under attack. Certain enzymes in honey are relied upon to metabolize toxins. These enzymes are encoded genetically and can upregulate, meaning be turned on to detoxify (this happens with pollen and propolis as well).

Ivy Vitex

Lavender

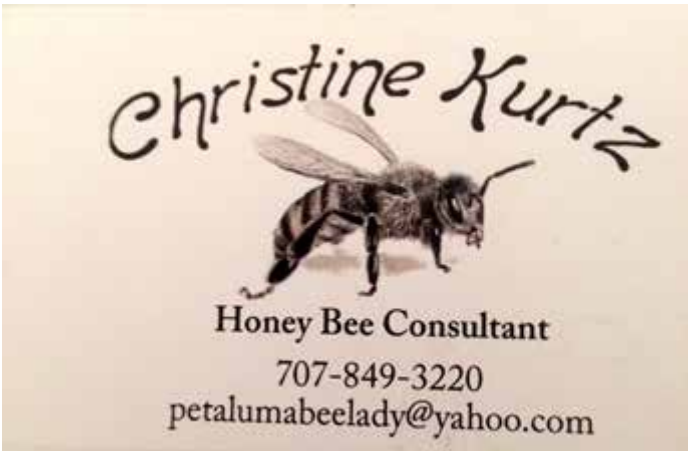
Borage

There is really exciting and interesting research going on whether bees select honeys according to their medicinal benefits (matter of fact same goes for pollen and resins to make propolis). And why not? How would they have survived this long without a pharmacy? Oh but wait a minute nature has it's own pharmacy, it can make you sick and it can heal you. In experiments bees can select honeys according to their antibiotic activities. It's nor so far fetched that bees if given a choice would self-medicate, they survived this long after all. The research is definitively pointing in that direction. Pollen, nectar and propolis are being studied for self-medication.

Access to a made by nature and varied diet becomes immensely important for healthy bees. Sugar water is lacking in antioxidants, lacking in defense against toxins, lacking in those switches to upregulate detoxification, lacking in helping immunity, in stimulants to learn better, sure it can sustain you but at what cost and health risk? The same can be said about pollen patties, they lack essentials for good health, for detoxification of pesticides, of antioxidants etc. Bees on natural pollen tolerate pesticides at higher levels, can detoxify better and live longer. Not to say it would benefit bees even more if we cleaned up our toxic environment and help bees at the source of one of their problems. We have tremendous work to be done there. Educate your neighbors. Educate your town. Look beyond your yard.

The best thing you can do for your bees is to provide varied natural clean food resource.

Thank you SCBA for having sponsored me to the Natural Beekeeping Conference, for helping become a better advocate for bees and giving me the opportunity to share what I learn with all of you.



August General Meeting Minutes
September 12, 2016

By Secretary Becky Jackson

Held at the Rohnert Park 4-H Building, about 95 people present.

President, Cheryl opened by talking about the need for volunteers and 2017 Board positions. The membership is at 450 members now.

Ettamarie won the 50/50 Raffle: $111.00!
3 plastic 5 gal water jugs (aka Swarm catchers) were given to other lucky ticket holders.
Cheryl welcomed visitors and new members: Susan, John, Sharon, Taylor, Laura, Karen, Melissa, David, Emily, Brian, Laurel. We're glad to have you!

Karen Hudson talked about Measure M (prohibits GMO crops in Sonoma County). She was looking for campaign volunteers.

Cheryl announced Farmers Olympics, Blooming Backyards coming up.
Some clusters have Fall Workshops planned, look for emailed invitations. The Cluster Coordinators will meet Oct. 23rd to plan next year.
Cheryl, Christine and Storm all took and passed the UC Davis test for Master Beekeeping. They are at the Apprentice level and are continuing through the program.

Rita Maloney thanked the Heirloom Expo volunteers; our booth won "Best of Division"!

A committee is forming of artistic people to improve our look and update our graphics at community events that represent SCBA. Check with Rita or Cheryl if you want on.

Our speaker next month is Master Gardener Kate Frey, and she will have copies of her book to sell for $20 at the meeting, so bring your cash!

Rita was contacted by a Monsanto rep that wants to come speak to us (Jerry Hayes). He writes for the American Bee Journal. She'll possibly schedule him next year.

Tonight's speaker is Christine Kurtz on "What's in Your Hives?"
She speaks from her heart, and about her experiences and what she's learned.

Go on Google Earth and draw a 5-mile radius to see where your bees might be foraging! It's very informative. Bees need a choice of nectars and pollens to remain healthy. They will choose nectars to 'self medicate' themselves. Nectars have varied lipids, anti oxidants, etc. and bees know what they need. Don't feed sugar water, which has no health benefits!

The queens fly further than the closest DCA's (drone congregating areas) in order to ensure genetic diversity.

Inspecting the Entrance of the Hive

- Every morning look for traffic, demeanor, flow coming in, orientation flights, robbing, drones flying.
- What's coming in-- Pollen, nectar, water, propolis?
- Behavior—fanning, guarding, wash boarding, grooming, housecleaning?
- Big mass of bees at the hive—balling an intruder, swarming, bearding, absconding?
- House cleaning is a hygienic behavior. Don't reuse comb with old beebread. It dries out and they can't eat it.
- Are you seeing chalkbrood mummies? In the spring, take out old comb so they make new wax. There's not much else you can do, it will clear up with warmer drier weather.
- Check the monitoring board, the debris gives you clues.
- Wildlife around your hives: lizards, birds, spiders, mantis, wasps, and snakes. Decide if you can live with it.

Inspecting Inside the Hive

- Decide how often and why?
- Opening the hive—look at their demeanor, population, use your senses (smell, sound, touch).
- Take notes and consult them!
- Is the colony queen right? Local stock is best; they are adapted to local pathogens and medicines. 10-20% of queens don't come back from mating flights. Look for queen cups and queen cells. Swarm cells are on the bottoms and sides of comb, there are lots of them and they' [re different ages. Supercedure cells are on the face of the frame, larger and planned. Emergency cells are unplanned, only a few (1-3), smaller and use existing cell. Totipotent is the stage where an egg can become a queen or a worker depending on food.
- Look at capped brood. If queen is failing, both worker and drone brood together. If all the brood is domed up like a bullet, the queen is gone and you have laying workers.
- Look at the health of larvae and pupae. Pearly white? Diseased are yellow, dried, melted-looking.
- Beebread is fermented pollen. They must ferment it to break the hard husk of the pollen granules. Is there enough surrounding the brood patches?
- Honey and nectar is for the adult bee nutrition. The status of their food pantry shows if they are thriving or starving.
- Propolis is an antifungal and antiviral, and antibacterial. They use it to coat the hive interior, or to embalm objects too big to remove from the hive.
- Wax coloration—it is lipophilic and holds pesticides and diseases. Rotate it out every 3 years, date your frames.

Diseases & pests

- American Foulbrood—a nasty disease, kills brood. It smells bad and a good test is to stick a toothpick into a dead pupae cell, and if it pulls out in a gooey thread, you must destroy and burn the hive.
- European Foulbrood—it's seen mostly in the spring, a stressed hive might have it, and then recover as it warms up.
- Nosema apis or ceranae—symptoms include diarrhea, K-wing, bees crawling, winter loss, slow spring build up, decreased honey production. Bees self-medicate with their choice of nectars. This disease is still being studied.
- Dysentery is caused by many things—fermented sugar water, honeydew nectar, molasses and kitchen corn syrup.
- Idiopathic Brood Disease, aka Snotty brood, aka Parasitic Mite Syndrome—unknown causes. Stress disease? Nutritional?
- Bald Brood—wax moth related with tunnels below the sealed brood. It occurs in linear patterns where the wax moth larvae tunnel across combs.
- Varroa destructor—mites that are the main pest of honeybees today. Being extensively studied. Chris Conrad says the bees he extracts from walls are usually Varroa-free!
- Hive Beetle is new here, but rampant in the South. They have rounded mallet antennas. It may be too dry in CA for them to prosper, but there are a few. They tunnel through honey stores and it turns to a fermented slime.
- Wax Moth—not a significant problem in healthy hives. The bees will eject them.
- Tracheal Mite—is a minimal problem. Is it because our bees have found foods and pollens to medicate themselves? It was a huge problem in England, and when it first arrived in US, but not anymore.
- Viruses—Sac brood, Deformed Wing virus (maybe 'turned on' by Varroa, the virus was already there?). Solarize (UV sun rays), freeze, or scorch your used equipment before storing.

Christine ended by emphasizing—Create Communities of beekeepers. Share your stock. Consider going treatment-free, and using locally adapted stock. Plant flowers for all bees!

Meeting ended at 9:25 pm

Respectfully submitted,

Becky Jackson, Secretary

Links to Association Reports:

September Board Minutes - www.sonomabees.org/wp-content/uploads/2016/10/SCBA-September-Board-Minutes.docx

Contact Information

Regular monthly meetings of the Sonoma County Beekeepers' Association are held on the second Monday of each month, at 7 pm at the Rohnert Park 4-H Building. The meetings cover a wide range of topics of interest to beekeepers. Everyone wanting to learn about honeybees is cordially invited to attend. You do not need to be a member nor a beekeeper to attend these meetings. Dues can be paid online at our website sonomabees.org, at our monthly meetings or by mail. Please see our Website for the application and various kinds of memberships available.

Our mailing address is:
Sonoma County Beekeepers' Assoc.
P.O. Box 98
Santa Rosa, CA 95402-0098

Extractor Techs- Call Ettamarie 707-479-1613 or Janet Leisen 707- 528-2085 or Cheryl Veretto e-mail president@sonomabees.org to rent the electric extractor for $5 a day. Rental fee is $5 per day. Cheryl is located in Sebastopol. Janet is North of Santa Rosa. Ettamarie is in Petaluma. There is a hand extractor at Deborah Rogers' home and her e-mail is deborah@olivequeen.net She lives in Glen Ellen.

2016 Board Members

and Other Helpful People

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Ads in This Newsletter

The monthly costs for ads are $10 for a business card size, $20 for ¼ page, and $40 for a half page. Annual costs are $60 for business card size, $120 for ¼ page, $240 for ½ page and $ 300 for full page. Send jpg or Word document to the editor and money to SCBA Treasurer at SCBA, P.O. Box 98, Santa Rosa, CA 95402. The current and back issues of the newsletter are on the www.sonomabees.org web site so many people besides the 400 or so members view the ads.