



The Buzzzzz

The Monthly Newsletter of the Gilroy Beekeepers Association

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Photo of the Month



A Honey bee on Ceonothus. Photo by Cathy Carlson

Gilroy Beekeepers Association News
Two Exciting Intermediate Beekeeping Classes
Bernardo Niño (from UC Davis) and Serge Labesque!

by Vicki Basham

I'm very pleased to announce that we're offering two intermediate beekeeping classes this spring



On **April 16**, **Bernardo Niño** will present a series of talks on honey bee biology, maladies of the hive and how to prevent them, an introduction to queen rearing techniques, advanced hive management as well as some updates on the latest honey bee research.

Bernardo Niño currently works at UC Davis as a Research Associate in the Department of Entomology and Nematology. You might recognize his last name - he is the husband of Dr. Elina L. Niño, the Assistant Cooperative Extension Specialist heading up the El Niño Bee Lab at UC Davis. Bernardo Niño has his Master's degree in Entomology. You can learn more about him by checking out his website at <http://elninobeelab.ucdavis.edu/bdn.html>.



On **May 14**, we'll have **Serge Labesque**, the author of our monthly beekeeping to-do list column. He may be the only beekeeping instructor in northern California to teach treatment-free beekeeping. He is especially well known in Sonoma and Marin Counties, and teaches beekeeping classes at Santa Rosa Junior College. He's frequently a guest speaker at the San Mateo and Santa Clara bee guild meetings. Serge Labesque keeps local bees only and does not use any treatment whatsoever in his colonies for pests or diseases.

Labesque's class will provide the management techniques that he attributes to his success. He talks and illustrates in great detail the complete yearly cycle of a honey bee colony and what we should be looking for each month in a healthy colony. He also includes a hands-on session with a hive, demonstrating what we are observing in a hive inspection.

If you'd like to learn a little more about Serge Labesque, you might find this article interesting: <http://www.sfgate.com/homeandgarden/honeybeechronicles/article/Serge-Labesque-builds-a-better-beehive-4599463.php>

Keep an eye on your email for more details, such as cost, location, and hours to be provided soon!

As reported last month, the order window for packages will open March 1st and close at the end of the April meeting. Delivery will be in the latter part of April. For three pounds of bees and a marked queen, the price will be \$88 for members and \$95 for non-members. A \$5 refundable deposit will be required on the package box. An order form is attached at the end of the newsletter. If you have any questions, please email Wayne Pitts at presidentgba@gilroybees.com.

Remember, it's time to pay your dues if you haven't done so already. Dues are our primary source of income and allow us to do such things as donations to research and holiday parties. See Vicki Basham if you haven't paid yet.

Thanks to Cathy Carlson for submitting this month's photo. Remember, photos are welcome from everyone.

News from the Bee World

The following article appeared in the blog *Bug Squad- Happenings in the Insect World*.

A Push to Protect Pollinators

by Kathy Keatley Garvey

A United Nations' organization today issued a global pollinator health report and the news was not good.

The two-year global assessment by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) lamented the decline in pollinators due to such human-driven factors as habitat loss, pesticides, and malnutrition. These and other culprits, including pests, invasive species and climate change, can mean extinction of many species.

Major news organizations quickly sought input from experts, including two UC Davis entomologists: native pollinator specialist Robbin Thorpe, distinguished emeritus professor of entomology, who was interviewed by KGO Radio, San Francisco, and pollination ecologist Neal Williams, associate professor of entomology, who provided comments to *The Washington Post*.

It's not only the pollinators that are under siege. So are "the livelihoods and hundreds of billions of dollars worth of food supplies," according to the Feb. 26 IPBES report.

The assessment, "Thematic Assessment of Pollinators, Pollination and Food Production," is the first issued by the four-year-old IPBES, which spans 124 member nations. Seventy-seven experts participated, drawing information from 3000 scientific papers. "Pollinators are important contributors to world food production and nutritional security," said Vera Lucia Imperatriz-Fonseca, Ph.D., co-chair of the assessment and senior professor at the University of São Paulo. "Their health is directly linked to our own well-being."

Numbers released by IPBES help tell the story:

- 20,000 – Number of species of wild bees. There are also some species of butterflies, moths, wasps, beetles, birds, bats and other vertebrates that contribute to pollination.
- 75 Percent – Percentage of the world's food crops that depend at least in part on pollination.
- 235 billion to \$577 billion – Annual value of global crops directly affected by pollinators.
- 300 Percent – Increase in volume of agricultural production dependent on animal pollination in the past 50 years.
- Almost 90 Percent – Percentage of wild flowering plants that depend to some extent on animal pollination.
- 1.6 million tons – Annual honey production from the western honeybee.
- 16.5 Percent – Percentage of vertebrate pollinators threatened with extinction globally.
- 40 Percent (plus) – Percentage of invertebrate pollinator species – particularly bees and butterflies – facing extinction.

"In addition to food crops, pollinators contribute to crops that provide biofuels (e.g. canola and palm oils), fibers (e.g. cotton), medicines, forage for livestock and construction materials. Some species also provide materials such as beeswax for candles and musical instruments, and arts and crafts," IPBES related.

The report indicated that pesticides, pests and diseases pose a special threat to managed bees "but the risk can be reduced through better disease detection and management, and regulations relating to trade and movement of bees."

Pollinators need to be protected, the report emphasized. We can help safeguard our pollinators by:

- Maintaining or creating greater diversity of pollinator habitats in agricultural and urban landscapes;
- Supporting traditional practices that manage habitat patchiness, crop rotation, and coproduction between science and indigenous local knowledge;
- Education and exchange of knowledge among farmers, scientists, industry, communities, and the general public;
- Decreasing exposure of pollinators to pesticides by reducing their usage, seeking alternative forms of pest control, and adopting a range of specific application practices, including technologies to reduce pesticide drift; and
- Improving managed bee husbandry for pathogen control, coupled with better regulation of trade and use of commercial pollinators

Additional findings:

- A high diversity of wild pollinators contributes to increased stability in pollination, even when managed bees are present in high numbers.
- Crop yields depend on both wild and managed species.
- The western honey bee is the most widespread managed pollinator in the world, producing an estimated 1.6 million tons of honey annually.
- The number of beehives has increased globally over the past 50 years, but a decrease in hives has occurred in many European and North American countries.
- Climate change has led to changes in the distribution of many pollinating bumblebees and butterflies and the plants that depend upon them

Neal Williams explained to *The Washington Post* in an email: "Hospitable landscapes are ones where there are suitable nesting habitats for diverse pollinator species and where consistent forage resources are accessible (within the flight range) of the bees throughout their flight seasons."

Robbin Thorp told KGO that "through agricultural intensification, we have lost a lot of habitat for native pollinators." He advocated more nesting habitat for bees. And, he said, "we need to be cautious whenever we apply pesticides" because pesticides are designed to kill insects, and bees are insects.

Honey bees, Thorp said, are just one species of about 20,000 bees in the world. "Most native bees are solitary bees that nest in the ground. They don't have a queen, they don't make honey, but they are very important in our environment."

Protecting our pollinators is crucial. They are, as IPBES, said, "economically, socially and culturally important."

Presidents Message

by Wayne Pitts

Did your hive(s) make it through the winter? A certain part of beekeeping is art, separate from knowledge. New information and applying the new information can take you to a higher level of success, but the art of beekeeping is essential to the colony's success. The art involves observation, integration of learned concepts, attention to detail, being in tune with bees, and learning to read the colony. To help you achieve this, we are offering 3 classes this year; a beginning bee keeping class in March, and intermediate class in April with Benardo Nino at UC Davis, and a class by Serge Labesque in May.

Part of your success will be in choosing the best location for the colony so that it has a varied source for forage, and is in an area where it is exposed to a limited amount of chemicals. Any hive established within 5 miles of another beekeeper is in competition with his neighbors for resources, and the genetics, pathogens, and parasites of your own and the other colony. This makes us literally our brother's keeper. Colonies need to be tracked (take good notes) and your management style adjusted for the conditions that the colony faces. Speaking of parasites; we all love the early spring we received this year, especially loved by varroa. Watch for high mite levels this summer and do what you think should be done to combat the rising mite numbers.

Keep the hive tool sharp and smoker primed!

March in the Beeyard

My March Beekeeping To-Do List

By Serge Labesque

Dividing hives

Last month, we saw what needs to be done to prepare for the division of our hives. We leave it up to the bees to signal when it is best to carry out our plans. Having found a colony that is getting ready to swarm, we know that it is now time to proceed.

The weather is favorable; countless foragers are flying in and out of the hives. Our equipment is at hand, including hive bottoms and tops, supers, frames, follower boards, nuc boxes; everything and anything that we might need in our apiaries.

The smoker is lit as a precaution, but we probably will not use it, because we want the bees and the queen to remain on their combs. We assess the brood nest and decide how many splits we want or can actually assemble from this hive. In most instances, I like to divide a hive into three splits of

approximately equal strength. Doing this gives a good degree of control over swarming and results in strong and potentially productive colonies. Later in the spring, however, with good weather and nice honey flow, strong colonies that have desirable traits may be safely divided into many more splits.

The procedure requires that we pay a little more attention to the contents of the splits when the colony has not yet started building queen cells than when cells are already present. This is because we need to ensure that the young queens will be raised under good conditions. But, if we chose to wait until queen cells are formed, we might miss the swarm and the bees could be lost. Also, we need to remember that frames that carry queen cells must be manipulated with caution in order to avoid damaging them and injuring the queens that are developing inside.

Starting at the center of the brood nest, we look for a comb that contains eggs and very young larvae. Not much open brood is necessary, since its main purpose is to produce a few queen cells. Actually, too many larvae would compete with the developing queens for nutrition, and, if we find large areas of comb with lots of open brood, it is quite likely that the colony is not ready to be divided. This comb is placed in the center of a super or nuc box where we must create a well-organized brood nest around this open brood.

We repeat this process for all the divides.

As we move more combs and bees out of the parent hive to form the splits, we make sure that there is plenty of bee bread and uncapped honey right next to the young brood. The nurse bees that will feed the developing queen larvae will need direct access to these nutrients to produce royal jelly. Nutrition is a key element in obtaining good quality queens. Then comes sealed brood which is distributed equally among the divides. Finally, more stores are added around the embryonic brood nests we just organized. Certainly, we do not neglect to also include some empty comb to provide egg-laying space for an eventual queen and clustering space for the bees that will soon be born. The balance of the parent hive receives the same attention as the splits, because it is a split in its own right.

When the divides are to be left in the original apiary or within close proximity, we add one or two frames of bees gathered from the brood nest area of the parent hive. These young bees will stay in the splits, whereas the older bees will tend to return to the hive that will be left at the original location. Except for the entrance of the parent hive, the entrances of the splits are reduced to about one square inch or less. If the divides are going to be moved to a distant apiary, they are closed immediately to retain all their bees.

No effort is made to find the queen, but we may see her. When this happens we move her with the comb she is on into a super or nuc box that will house one of the splits that will be relocated. Being queenright, this split will not receive precious brood that will be necessary in the queenless divides. She will be given some mixed stores, two or three frames of bees, and at least a frame with empty drawn comb where she can lay eggs. In essence, the queen will have swarmed and found a nest cavity.

Dividing a hive when queen cells are present is quite simple. All we need to do is to form as many splits as we want, as long as the strength of the colony permits, providing each divide with at least two queen cells, brood, stores, bees and some empty comb.

Between four and seven days after we divided the hive, we return to check on the bees. The use of follower boards facilitates remarkably the inspection of the splits, because the frames may be slid apart to avoid damaging queen cells. If eggs are found, we know that this divide contains the queen, and we manage it accordingly by adding the necessary comb space. In the absence of eggs, we should find queen cells. The divides that are particularly strong may be divided again, leaving at least two queen cells in each of these subsequent divides. If we need to make any correction to the configuration of the splits, now is the time to act. Then, we will leave the divides undisturbed for the next three to five weeks, depending on the weather, while the young queens develop, perform their mating flights, and begin to lay eggs. After waiting patiently for the end of this biological process, we will verify that the

divides have become fully functional colonies headed by young vigorous queens. It will be a joyful moment!

March in the apiaries

This year again, spring weather arrived very early. The honey flow started after a string of mild days at the end of January, and the colonies built up remarkably well during the early part of February. Soon, space was needed to allow for the expansion of the brood nests and to contain the nectar that the foragers were collecting. This early activity was quite exciting and yet worrisome at the same time: Where was the El Niño rain we had heard so much about? Those winter months were supposed to be the coldest and wettest time of the year! Nonetheless, the ground around here still begs for water, and the winter creeks are not flowing. If we have received most of the rain that we are going to get this year, it's going to be another long summer dearth for bees. If instead rain finally comes in March and April, the bees may not be able to visit the blossoms, and we will have a mediocre season of colony reproduction. At this point, the best we can reasonably hope for is a long series brief wet spring storms separated by periods of nice weather.

What does this all mean for beekeepers? Probably that we need to be very much aware of the impact this odd weather will have on our bees.

This time of year is normally a season of rapid colony growth, a precursor of colony reproduction, swarming. Since the congestion of the brood chambers drives the hives to swarm more than anything else, we have to anticipate the bees' need for an increased hive volume. Just as important is that we provide it in a timely manner. So, in addition to expanding the brood chambers, we add more nectar storage space, clustering space for the foragers between the hive entrances and the brood nest areas, and we supply frames where the bees can gather and build new combs.

We monitor our hives frequently in early spring, inspecting them at least once a week or every ten days at most, weather permitting. These inspections are brief, mainly focused on the brood nests to discern the onset of preparations for swarming and, as always, possible signs of health problems. Indeed, the threats of European foulbrood and chalkbrood, these so-called spring or stress diseases, are greater at this season. When this happens, the affected brood combs have to be removed from the hives and discarded in such a way that bees can no longer access them.

Since we know that some colonies will be inclined to swarm, especially after periods of inclement weather that keep the bees confined to their hives, we have set up swarm traps, which may be our temporarily unused equipment, and our swarm-catching gear is at the ready.

However, hive divisions are more dependable sources of new colonies and quality queens than swarms. For this reason, we are also prepared to split our colonies at the onset of their preparations for swarming. Soon we will even raise a few more queens from brood collected in our best hives.

If there is any surplus honey in the hives that sent foragers to the mustard bloom in February, it should be harvested without delay if it is to be extracted, or else it will crystallize in the comb. In doing this, we need to maintain enough nectar storage space in the hives though; otherwise, the brood chambers might become honey bound. However, be very cautious when removing honey from the hives, as the summer dearth may once again be very long.

There may be laggard colonies that were unable to build up fast enough at the end of winter to exploit the early flow. They could be at risk of starving when inclement weather prevents foraging. We must figure out why they are failing. If they are not already superseding their queens and if they are otherwise healthy, requeening becomes an option at this time of year. This may be done by inserting queen cells from hives that we split or from colonies that are preparing to swarm.

Yes, we have entered the busy time of the year. Might as well enjoy it, but let's be prudent and not forget that this summer could be another tough one for bees that depend mostly on natural non-irrigated vegetation for their nutrition.

In summary, this month:

- Inspect hives on nice days, at a time when foragers are out in large numbers.
- Watch for signs of spring diseases and other health problems, and look for signs of preparations for swarming.
- Provide additional egg-laying space in the brood chambers.
- Place supers.
- Maintain forager clustering spaces between the entrances and the brood nests.
- Remove frames with old empty comb that bees vacated before they re-use them.
- Add new empty frames, thus providing the bees with comb-building opportunities.
- Prepare hives that have been selected for multiple divisions or for queen rearing (emphasis is on the development of the brood nests).
- Perform the first hive divisions of the season (but only if and when the hives are ready and when weather permits!)
- Place swarm traps.
- Clean or dispose of the equipment that held colonies that failed, as appropriate.
- Open the entrances of the hives to match the increasing forager activity.
- Ensure that the bees have access to water.
- Ensure that the hives remain adequately ventilated.
- Observe the performance of the queens and colonies.
- Requeen or combine hives that are not performing satisfactorily, and those that have failing queens.
- Harvest surplus honey.
- Give extracted supers and cappings back to the bees for cleaning.
- Keep the hive tops secured.
- Pull weeds from in front of the hives.
- Prepare swarm-catching equipment.
- Render wax from discarded frames.
- Cull old and misshapen combs.
- Routinely clean and scorch tools and equipment.

Serge Labesque © 2016

Drippings from the Extractor

by Dave Stocks

Obtaining Bees

With spring rapidly approaching, it seems an appropriate time to discuss how to increase our hive numbers, specifically through the purchase of bees. It's important to say that before we do anything, we need to have a very clear understanding of what we expect from our bees. Once we've done so, we can determine the best source to obtain bees. The characteristics of bees can be described as genetic traits. Some of these traits of particular importance are gentleness, longevity, adaptability to local conditions, good hygienic behavior and the ability to build strong colonies. And of course, we can't forget honey production. To discuss any of these in detail would be an article in itself. For the sake of discussion, let's say the ideal hive has bees that are gentle, the queen lives for multiple years, they are adapted to local weather variations and produce lots of honey. Using this hive as our standard, let's compare the different ways we can obtain bees. Although an excellent way of increasing hive numbers, splitting our own hives is purposely omitted. We will concentrate on bees from outside sources.

Let's begin with capturing swarms. This can very easily be one of the most exciting parts of beekeeping. It can also be challenging and frustrating. Obviously, with swarms, the cost is very inexpensive if there is any cost at all. Good or bad, when you buy bees you have some idea of the history of those bees. This is not the case with swarms. However, I feel you can make some assumptions which make these bees appealing. First, you can assume that an early spring swarm comes from a hive that has survived at least one winter. This means that they survived potentially high mite counts in the fall and weather extremes through the winter. Further, by the mere act of swarming, the mite cycle has been broken. This should result in bees that can buildup faster without chemical treatment. Along with the advantages of swarms, however, come disadvantages. First is the unknown of potential disease infection. It's true that weak colonies will most likely die off in the winter and only healthy hives will survive. However, there is still the potential for the presence of disease spores. Like any other hive, they need to be monitored. Second is the potential for bees that are less than gentle. When buying bees, we would hope that the supplier has chosen gentleness as one of the traits for which he or she breeds. With swarms, we have no guarantee. Finally, some bees just appear to be nomadic. I've caught swarms and placed them in hives only to find them gone the next day. Obviously, this can also happen, although not as likely, with purchased bees. It's a lot easier to accept when there is no money out of pocket.

For instant gratification, the best way to obtain bees is the purchase of existing hives. Often, for whatever reason, a beekeeper wants to sell hives. Although I have done so several times, I'm not sure I recommend this in the fall. In the spring it is a different story, especially if you are allowed to inspect the hives. An inspection that reveals a thriving colony that meets all your desired traits may well be worth the expense of buying the wooden ware that will go along with it. Some possible disadvantages are unknown queen age, the possibility of disease and the purchase of "junk" equipment.

The two most common ways to obtain bees is through the purchase of "nucs" and packages. Let's start with "nucs". A "nuc" is short for nucleus or nucleus colony. In beekeeping, "nucs" have many uses.



"Nucs"

For the purposes of our discussion we'll focus on them as a source of purchased bees. When the beekeeper buys a "nuc", they receive anywhere from three to five frames of bees in a scaled down Langstroth box. As well is the case with packages, "nucs" will have a mated queen. Unlike packages, many suppliers will guarantee that the queen is laying. Because of this, buildup to an established colony

will be faster than packages, usually six to eight weeks. Often times "nucs" are only available with deep frames, a disadvantage to the beekeepers that likes to use medium Langstroth frames. Also, like established colonies, there is the possibility of receiving old, damaged equipment. A "nuc" generally costs around \$160.00

The last way of obtaining bees is the purchase of packages. This is the most common means, especially for new beekeepers. A package will include either three or four pounds of bees and a mated



Packaged Bees

queen. Unlike a "nuc", the queen is not a confirmed layer. Packages are slower to build than "nucs", generally taking eight to ten weeks to buildup. If placed in new equipment, the chance of disease is greatly diminished.

Whether buying "nucs" or packages, the source is very important. Serge Labesque has often spoke in his column about his belief in only choosing local bees. This sentiment is growing. Dr. Tom Seeley echoes this in a recent interview in the *American Bee Journal*. Dr. Seeley prefers local wild populations to increase his hives. Package bees appear to be a "last resort".

So what do we do? To the best of my knowledge there are no local "package" producers. There are only a few sources for local "nucs". At this time, there are few options other than ordering bees from outside the area. But it doesn't have to be that way! We as a group have the knowledge and resources to offer bees to our members. Let's talk!

Be diligent! With the January rains and February warmth, colonies are building rapidly. People are already seeing swarms. A warm afternoon is an excellent time to check your bees. Be extra mindful of providing plenty of room. And don't be bashful. If you have questions or need help, ask a fellow member. We're all in this together!

Calendar of Events

Meetings

March 1, 2016

Gilroy Beekeepers Association
7:00 pm
Old City Hall, 7400 Monterey Rd.
Gilroy, Ca
<http://www.uvasgold.com/gba/>
Topic: Roundtable Discussion

March 2, 2016

Santa Cruz Beekeepers Guild
6:30 pm
El Rio Mobile Home Park, 2120 N. Pacific Ave.
Santa Cruz, CA
<http://santacruzbees.com>

March 3, 2016

Beekeepers Guild of San Mateo
7:00 pm
Trinity Presbyterian Church
1106 Alameda de Pulgas
San Carlos, CA
<http://www.sanmateobeeguild.org/>

March 6, 2016

Monterey Bay Beekeepers
8:00 am
<http://www.montereybaybeekeepers.org/>

March 7, 2016

Santa Clara Valley Beekeepers Guild
6:15 pm
<http://beeguild.org/>
Dwell Christian Church San Jose
1292 Minnesota Ave
San Jose CA 95125
Topic: Plants for Bees

Classes and Conferences

March 12: Beginning Beekeeping Sponsored by the Gilroy Beekeepers Association Info at dave.stocks@yahoo.com

March 19: 3rd Annual In Her Majesty's Chambers- Intro to Queen Rearing Short Course
Info at www.wingsofnaturebees.com or www.ziaqueenbees.com/zia. (See attached flyer)

Apr 5: World of Honey - Honey Tasting Series (International honeys), U.C. Davis Honey & Pollination Center. Info 530-754-9301 or aharris@ucdavis.edu or <http://honey.ucdavis.edu/events>.

April 16: Intermediate Beekeeping with Bernardo Niño. Sponsored by the Gilroy Beekeepers Association. Info at <http://www.uvasgold.com/gba/>

May 7: 2nd Annual Bee Symposium, U.C. Davis Honey & Pollination Center. Info 530-754-9301 or aharris@ucdavis.edu or <http://honey.ucdavis.edu/events>.

May 14: Intermediate Beekeeping with Serge Labesque. Sponsored by the Gilroy Beekeepers Association. Info at <http://www.uvasgold.com/gba/>

October 13-15: Western Apicultural Society conference, Honolulu ,HI
<http://www.westernapiculturalsociety.org/>

November 15-17: California State Beekeepers Association annual conference, San Diego, CA
<http://www.californiastatebeekeepers.com/events.html>