



West Sound Beekeepers Association
www.westsoundbees.org

Volume 9, Issue 4



BUZZWORD

April 2006

NEXT MEETING

Tuesday – April 18, 2006
7:00 P.M.

Stedman's Bee Supplies
Silverdale

Refreshment Schedule

April-Kimberly Brokamp, Jerry A. Hominda
May – Joe Higdon, ??
June - Open

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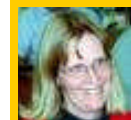
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EDITOR'S CORNER:

By Jerry Hominda

I am open for any topics, information, and idea sharing from any members. If you have a thought you would like to include in the newsletter you can e-mail me or send it by postal mail. I would be more than happy to include it.

I look forward to hearing from anyone in the future.

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The earth does not argue,
Is not pathetic, has no arrangements,
Does not scream, haste, persuade
threaten, promise,
Makes no discrimination, has no
conceivable failures,
Closes nothing, refuses nothing, shuts
none out.

Walt Witman 1819-92: *'A song of the Rolling Earth'*
(1882)

Message From the President:

Hello Everyone!

It's April and things are moving! Pollen and nectar are rolling in. Packages are here. Populations are exploding or about to and your Winter troubles are behind you. The great thing about beekeeping is that not only do we all do it differently, but that we all have different circumstances to deal with and have to learn to roll advantageously with the punches.

Every Spring beekeepers make decisions about reversing (switching positions of the top and bottom brood box). Reversing is a common beekeeper practice yet still manages to illustrate the saying "ask two beekeepers, get three opinions". I think most beekeepers, at least on this continent, practice reversing. They use arcane, scientific, or even arbitrary reasoning. They consider calendar dates, observable bloom, colony strength, etc. The usual goal seems to be to encourage the colony to expand the broodnest. At this time of year the lower box is often lacking in

stores and the queen only laying eggs in the upper box, seemingly disinclined to travel below and use all that available room. Perhaps bees feel uncomfortable with empty space above, but it seems it is easier for them to expand the brood nest upward more readily than downward, particularly if the queen is an older one. Reversing is also thought to reduce the inclination for swarming by making the bees feel less crowded. The risks of reversing too early or with colonies that are too weak are a general setback instead of a boost, usually having to do with their need to keep the broodnest at 91-97 degrees F. They will abandon brood at the edge of the broodnest if they aren't able to heat the entire brood nest. Loss of brood causes colony stress... Advantages besides getting the colony to use the lower parts of all frames include a stimulatory effect from the reorganization of stores and a better distribution of queen pheromones which helps suppress the urge to swarm. It also helps break the honey barrier above and help the bees perceive storage space in the supers up top and, hopefully, fill them with delicious honey! Perhaps best of all, it makes the beekeeper aware of too light colonies (starving) and really heavy ones (honey bound?).

In the mid 1800's, the Reverend Lorenzo L. Langstroth, "father of modern beekeeping" patented the movable frame hive and his book "Langstroth on the hive and the honeybee; a beekeeper's manual" allowed people to practice beekeeping instead of bee domicile disruption. One of his biggest contributions to apiculture was his discovery of "bee space" which makes Langstroth style hives account for 75% of human-made bee housing world-wide (about 90 Langstroth based varieties, totally incompatible with each other). He recognized that bees fill in gaps under 1/4 inch with propolis and fill gaps over 3/8 inch with comb. The magic dimension in between 1/4-3/8 inch, bees leave open for moving around and is known as "bee space". It lets us remove our frames without destroying the boxes and lowers the risk of driving ourselves mad! The "tip of the month" in the March 2006 Bee Culture recommends making sure frame and box dimensions match in respect to bee space: Tops of frames 1/4-3/8 inch below the top of the box edge and bottoms of frames flush with the lower box edge. With proper bee space, ladder comb and drone cells won't be present to be ripped asunder when boxes are taken apart nor available to crush bees when the boxes are rejoined. Mangled and crushed bees stress the colony... Alberta's Allen Dick, famous for his "A beekeeper's diary" on the internet (worth visiting), believes the gap between the frames of the upper and lower boxes discourages the queen from "going down" to lay in the lower box and

stopped scraping off ladder comb. He found his bees built less burr comb and lowered the need to reverse. In fact he no longer recommends reversing in most cases. Ask two beekeepers?

American beekeepers seem to be warming to the idea that it might be worthwhile to replace that ancient, blackened comb, once a source of pride, with new foundation on a regular basis. Benefits to replacing aging comb have been documented by honeybee researchers and include reduced levels of nosema and AFB spores, reduced incidence of chalkbrood, larger, longer lived workers and higher honey quality. Requeening and comb replacement are practical responses to viral infection because bees vary genetically in susceptibility, while good sanitation practices are key to prevention. Residuals from chemical treatments are also removed. Drawbacks to comb replacement are material and labor costs (both human and bee), reduced durability of comb during extraction, and reduced honey yield if drawn during a flow. A 20% annual replacement is frequently recommended in this country. I like to use my queen marking paint to mark our frames to track comb age (this year is white). I use an unmistakably different color for combs slated for early replacement. We want uniform, solid banks of worker cells for higher efficiency and try not to settle for less. At certain times of year it's possible to get foundation drawn well with syrup or honey capped in surplus. These frames can be stored in the freezer or a warm, dry room and used to advantage in late winter or early spring. A nice idea, but we haven't managed it yet. European beekeepers commonly replace half or all their combs at once! I want to call them names but I'll refrain! Replacing all the comb at once is used as a treatment or partial treatment for foulbrood diseases or dropping to a smaller cell size. In America we call this "shook swarming" or the "shakedown" method. It has the added advantage of a swarm control method and if it's not for disease treatment you might get a little more use out of the old comb and brood, which you'll otherwise lose. The method is called a "shakedown" because you literally shake the bees off the old frames down into a clean hive body with new foundation. It's good to cage the queen so she won't experience the somewhat rough treatment. A newly hived swarm often exhibits great enthusiasm for drawing comb and can often manage a good honey crop. With a "shook" swarm you don't end up with half the bees like a normal swarm, but all of them! Foundation is drawn out fast! For bees to draw comb they need incoming nectar or syrup and plenty of it. During a honey flow two boxes of bees can be "shook" into one brood box with an excluder and comb honey supers above it; since bees are in high gear it's possible

to get a good comb honey crop. If you have frames of drone foundation available you can also quickly rid your bees of 95% or more of any Varroa mites that might be present without using any chemicals! You can take advantage of the fact that mites do not enter cells for the first seven days after the eggs have been laid. A frame of drone foundation is introduced into a hive a week before the shakedown is planned (it doesn't matter what hive the drone eggs and larvae come from since the mites don't enter cells until after they are seven days old). The frame with drone brood is placed in the new broodbox and the rest of the frames contain new foundation. It will take at least 8 days before the first worker brood in the new cells are capped, the first drone cells will start to be capped on day four. You probably already know that Varroa prefer and seek out drone cells over worker cells. Drone cells offer an advantage to the mites in that they are capped for a longer period which offers the Varroa a chance to raise more offspring than she would be able to in a worker cell (average of 2.4 vs. 1.3 offspring). The foundation can be removed with almost all of the Varroa any time after the cells are sealed. Be sure to remove it before the drones start to emerge on the 24th day after the drone foundation was introduced to the egg donor colony. A couple days early to be safe. Otherwise you're actually boosting Varroa infestation! You can freeze the foundation for 48 hours, thaw and reintroduce. Better yet, already have a thawed frame ready to swap. Having a drone frame in every brood box will help keep your other frames full of worker sized cells and contribute to the ongoing fight against Varroa. Wow! Cheap and clean Varroa control, 100% comb renewal, record comb honey harvest and swarm prevention in a single operation. Mind blowing!

We've talked about foundation at the meetings and I'll mention it here. Purists may prefer 100% wax foundation laboriously wired into the frames, but a lot of us like the ease and convenience of plastic foundation that snaps into (and out of) wooden frames like a breeze. Its less expensive to buy than fully "drawn" plastic cell-and-frame in one, and since the bees draw it themselves, comb pheromone is incorporated into the wax. These oxygenated compounds are believed to stimulate the hoarding instinct in honey bees. (I am O.K. about them hoarding honey!) On cold, rainy days when the bees are cooped up, plastic foundation helps to keep them from "getting into mischief" as former president Paul Hostika was fond of saying. You don't want them removing the bottom inch of comb and making a bunch of swarm cells! It's no secret I like that funky green plastic Pierco undrawn drone foundation and frame (available from Better Bee). The

green is easy to find and remember to swap out for Varroa control; I put one in every brood box. In Spring the colony will find it imperative to raise large numbers of drones in response to the colony-level reproductive urge. If not enough drone cells are available, they will rework the worker cells into larger drone cells, usually at the edges and bottoms of the frames or broodnest. In the wild, drone comb is found outside of the main mass of comb. This keeps it out of the Winter cluster and broodnest. If drone cells are in the brood raising area, they will use them. Rearing drones in mid-winter is an unnecessary drain on colony resources. We left drone foundation in all our hives last Winter, filled with honey. The conservative russians were fine but those festive Italians raised a batch of drone brood every month only to force them out to die in the cold. This year we'll do things differently! Interestingly, pollen isn't stored in drone cells. It's too hard to move quickly. Pollen and nectar on the other hand, are easy to move and frequently stored or worked in the drone cells. Walt Wright (Bee Culture March 2006) remarks that during the brood rearing season honeybees like 20% of the total brood area in drone cells, based on observation of feral colonies. Dr. Nicholas Calderone of Cornell University in Ithaca, New York, wrote of his drone brood removal experiments in Bee Culture magazine (February 2006). I saw him at the state convention in 2004 and was inspired to start drone comb management. He used two frames per 10 frame brood box (in the 2 or 3 position and the 8 or 9 position). he put them in a month before apple blossom time and swapped them for (thawed) frozen frames of the same at 26-30 day intervals. He culled all other frames with over two square inches of drone calls. He did four exchanges and found that was enough to avoid Fall miticide treatment most of the time, but not enough to completely eliminate the need for treatment if levels went above the "economic threshold" (over 2 mites in a 300 bee ether roll). Another potential benefit to beekeepers is that honey production was equal to or greater than the control colonies, presumably because the removed drones didn't consume the time of the house bees and honey they normally would. He assumes beekeepers regularly monitor their mite to bee ratios. (You monitor your mites, don't you?) I think he might be leaving his drone frames in too long since cells are capped on the 11th day after they are laid and emerge on the 24th. Even if you remove them on the 23rd day after insertion that gives the colony seven to eight days to get the cells clean and eggs into them, without risk of any drones and mites emerging into the hive. He uses two combs per 10 frame brood box, but other studies ("Varroa mites and how to catch them" University of Wageningen, Netherlands 1999) suggest one frame per brood box. The

bees will make more drone cells if they feel there aren't enough, so you need to watch for them. There are also, as Dr. Calderone points out, more than just four opportunities in the year to use the method. He is focusing on trying to find the minimal amount of treatment and a slightly flexible treatment regime so that it won't seem too troublesome for beekeepers to actually consider using the technique.

Well, I've droned on long enough. Hopefully you'll be able to use some of these ideas on comb management while you practice the art of beekeeping. Be sure and tell us all about it. Remember that honeybees come with instructions- they're just in a foreign language and the print's too fine to read! See you at the meeting -Basil

P.S. April's election month. If you care to throw your hat into the ring, now's your chance! Joe Grubbs, Treasurer, and Chanetta Ludwig, Secretary, will not be available for re-election. The election enables the membership to affect the direction the Association is headed. That's important! Vote conscientiously!

**Minutes From the
March 21, 2006, Meeting
Held 7-9 PM at Stedman's Bee Supply**

Recorded by Judy Gunther

Basil Gunther presided at the meeting

New Business

- Because a double program was scheduled the usual opening format was omitted.
- The question of who would or might attend the state convention was put to the membership and we got a dozen solid affirmatives.
- Paul Lundy updated us on the Study Grant Program for teenagers detailing the basics of the program. Applications will be available on the website.
- Basil presented "Wonders of honeybee anatomy", richly supplemented with photographs and diagrams. The audience was spellbound.

- David Heid won the door prize: a Betterbee hive divider. The last time one of these was offered he won that one too. This time he redonated it and Joe Higdon took it home! (David was hoping to get the newsletter irregularities settled, by the way, and made some progress in that direction....)
- The second program, "Top Bar Hives" was postponed as Duane Kinney & Co. was mysteriously absent. George Purkett's Association Apiary update included the new and freshly painted (in interesting colors and patterns) Association hives and Purkett-designed and built hive stands. A sign-up sheet was passed 'round for the volunteer apiary duty roster. George's report was as entertaining and informative as a program would be, so all were satisfied.



What is in the jar Basil?



Top Bar Demo