ISSUE 31 • JANUARY 2013

Kelley Bee News
Modern Beekeeping

Jim Hamilton and grandson Erik tend a hive, photo courtesy of Jim

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The Buzz

Welcome to 2013. Wasn't it just yesterday that we were worrying about Y2K and Varroa mites?

We're still worrying about Varroa, and small hive beetles, and lots of other terrible things that befall our hives ... but we're still fighting the good fight. Honeybees are critical to our survival; we need to help however we can. Thanks to all of you for doing your part in that.

Education and information are essential for us to help honeybees thrive, and those are two of the goals of this newsletter. Is the newsletter meeting your needs? We appreciate any feedback, article ideas, and we love your pictures. Thanks for continuing to give us ideas and inspiration.

With the New Year upon us, you may want to reflect on your apiary goals for the year. More hives? Fewer chemicals? Raising your own queens? Being very active in the local bee club? One of the glorious things about beekeeping is there are many dimensions to it. We hope you find the parts that challenge your talents and bring you great satisfaction.

If you need inspiration, we think you'll find it in the 30+ pages of information, fun, great photos and beekeeping insights. Enjoy!

Thank you for your continued patronage of Kelley's, and thanks for making us part of your beekeeping adventure.

Happy New Year!

M. Jane Burgess
Kelley's CEO & Partner

Bee Thinking About

For January, 2013

Editor's Note: *Welcome to a new year of month-to-month beekeeping considerations. If you're new to this every-month article, we make a list of things to think about for your apiary—but it of course varies by geographic location, the weather you're having, and your beekeeping preferences.*

Beekeeping Really is a Year 'Round Activity . . .

The one thing I wish I understood before I started beekeeping was the way the year progresses with bees. For example, beekeeping really starts in February, not April. The honey season is really over in the middle of the summer, not the end, although there is plenty of work to do in the late summer. I know there could be a late honey flow but I have never seen it. The bees start to get ready for winter long before we even think about the winter months.

Mary Lou, Indiana

For most of our readers, January is one of the few times of year when there is very little to do *in the apiary*. There's still *plenty* to do beyond it however, as described below.

For readers with a climate opposite that of North America's, we hope you're happily harvesting honey and building up your colonies. We love sharing information on beekeeping around the world, so if you find a spare minute and want to tell us about your unique challenges, please email KelleyBeesEditor@gmail.com.

So, what's to be done this time of year?

In the apiary: For most of us, external hive checks are all we dare perform because of the weather. Things to do include:

1. Remove any snow that has blocked doorways and ventilation holes. Honeybees need fresh air, and the ability to exit for a "biobreak" when weather permits.
2. Clear any dead bees from the entry way and ventilation holes.
3. Look about: Beekeeper Cleo Hogan shared that the "first thing I look for in the apiary in January and February is for what has been in the apiary. The best clues come from the tracks in the snow. Birds, rabbits, perhaps a mouse or two. Certainly no clear-thinking human."

A propolized mouse from inside a hive, photo courtesy of Norbert Gernes. For more information on this amazing incident, check out page 4 of our December, 2010 issue.

Look for tracks. Not only is it interesting, but if you find tracks go into hives but not away from them, you may want to investigate further.

One beekeeper told us when he saw lots of human tracks in the snow in his out-apiary, he kept a closer eye on it. Turns out some hunters were perhaps overly curious about bees. In years past he'd experienced hives being knocked over in the winter and the honey stolen. He suspects letting the hunters know they were seen (and making a show of writing down their license plate number) may have prevented another loss.

4. Review the area and remove any branches that may fall onto hives under heavy snow or ice.
5. Look for dead bees. Some dead bees is not a bad thing—it tells you the colony has recently had some live bees who were out doing their business or perhaps choosing to die outside the hive when it was their time. We can't quantify how many dead bees would be appropriate versus how many would be alarming. That depends upon how big the colony is and your weather conditions.

IF helpful to you, determine if the colony is still alive. If you don't see any dead bees, or see what you think are way too many, perhaps you've lost the hive. Some beekeepers will put an ear to the hive body likely containing the cluster, and rap sharply, hoping to hear a reactive buzz.

Should you do that? On one hand, it's comforting if you hear it so you know they're still alive. On the other hand, what are you going to do if you don't hear it? This time of year, things inside the hive generally are what they are. There's likely not much a beekeeper can do about whatever is going on in there unless conditions allow you to investigate further.

There is one good reason to determine if you've truly lost a colony or not: if you need to order more bees. **Now is the time to do so** (see A-Bee-Cs article in this issue.)

6. Feed. Many parts of the US have again experienced an unusually warm start to winter. Bees NOT in their winter cluster consume more stores than clustered bees, so these may be the months where any colony short on stores may be reaching a critical level. The Mountain Camp Method, described in previous issues, is reasonable insurance against starvation IF they can get to it. (If it is quite cold, they may not break cluster to get to their own honey or anything else.)

   Weather permitting, you could add a liquid feeder as well, but bees generally don't take it well unless the temperature is sustainably 45 degrees or warmer.

7. Rejoice! Celebrate if you have an unusually warm day and see bees out flying (beyond their quick biobreaks). On an unusually warm winter day, you may want to provide nutrients, like honey, or sugar syrup.

Bees lining up to take down sugar syrup.

Outside of the apiary: there's plenty to do, including:

1. Repair equipment. It is much easier to remove wax when it is brittle from the cold! Spread a good coat of paint over those external hive surfaces if that's how you protect them from the weather.

2. Inventory and plan: As Texan beekeeper Dennis Brown[1] stated: "January is the month I take inventory of all my hives, all my extra hive parts and make a plan for what I want to accomplish with my bees during the coming season. Then, I am able to look at what I have on hand and decide if I need to order anything before the season begins. If I do need something for the coming season, I usually place that order in January. It is never good when you get into the busy season and discover that you don't have

something and you need to order it. Planning ahead is key in order to be successful in beekeeping. If you don't make a plan, you will always be one step behind."

3. Beekeeper Cleo Hogan seconded spending some time planning in January: "start seriously considering your goals for the coming year. How many hives, where they will be located, medicate or not, comb or extracted honey, need more equipment or supplies, etc.
4. Build new equipment.
5. Read. Start with perhaps the 2013 Kelley's catalog, where you'll find many must-haves, along with some great books and other resources to help you be a better beekeeper. Did you miss any newsletter issues? They're all available at www.kelleybees.com.
6. Write. We'd love to hear about your beekeeping practices—what works and doesn't, why you keep bees, what you wished you'd known from the beginning, **any helpful hints** (please please please) and the unique challenges of your apiary. Email us at KelleyBeesEditor.com.
7. Organize those cool apiary photos—and send them to us! (Again, KelleyBeesEditor.com.) Thanks.
8. Volunteer. We suspect your local bee club would appreciate your talents. And if there isn't a local bee club, perhaps this is the time to get it going? Check with your community's senior center—we suspect they'd love a bee presentation, along with the local daycare and elementary school.
9. Pray to the bee gods for a gentle winter that allows the bees to get out when they need to do so, for the cluster to remain large and with golden, nutritious honey, and for the queen to have restorative rest to lay thousands of eggs when the season comes.

We're sure we've forgotten something!

As always, your comments and contributions welcome, email KelleyBeesEditor@gmail.com or visit kelleybees.com/blog.

[1] Dennis Brown, author of Author of "Beekeeping: A Personal Journey" is a regular contributor to our newsletter. You can learn more about his approach to beekeeping at Lone Star Farms, www.lonestarfarms.net.

January To-Do List

Here we are in January once again. I remember in my younger years hearing my parents say; "Time really flies by as you get older". I never really understood that statement until I got older. It seems like last January happened only a few months ago.

Here at Lone Star Farms in Bryan, Texas, January is the month that I repair any broken hive parts that I have set aside during the past year. I clean up any hive parts from dead-outs and I spread a good coat of paint on those exterior hive parts to get them ready for the up-coming season.

January is also the month that I take inventory of all my hives, all my extra hive parts and make a plan for what I want to accomplish with my bees during the coming season. Then, I am able to look at what I have on hand and decide if I need to order anything before the season begins. If I do need something for the coming season, I usually place that order in January. It is never good when you get into the busy season and discover that you don't have something and you need to order it. Planning ahead is key in order to be successful in beekeeping. If you don't make a plan, you will always be one step behind.

Dennis Brown, *Author of "Beekeeping: A Personal Journey", Lone Star Farms, www.lonestarfarms.net*

Questions or comments about this article? Please go to kelleybees.com/blog.

Healthy Bees

EPA Memo to James R. Comer, Commissioner, from Lois Rossi, Director, December 10, 2012

The Environmental Protection Agency hereby grants a specific exemption under the provisions of section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, to the Kentucky Department of Agriculture for the use of amitraz strips (Apivar®) to control the Varroa mite, (Varroa destructor) in honeybee colonies. This authorization is subject to the conditions and restrictions outlined below, as well as those specified in your request to the EPA.

1. The Kentucky Department of Agriculture (KDA) is responsible for ensuring that all provisions of this specific exemption are met. KDA is also responsible for providing information in accordance with 40 Code of Federal Regulations (CFR) §166.32(a.). Accordingly, EPA headquarters and the EPA Region 4 office shall be immediately informed of any adverse effects resulting from use of this chemical in connection with this exemption. In accordance with 40 CFR §166.32(b.), a final report summarizing the results of this program must be submitted to EPA within 6 months following the expiration of this exemption. In the final report, document performance issues received by KDA due to the development of amitraz resistance in the target pest.

2. Apivar® is an unregistered product (EPA File Symbol 87243-R) formulated as a sustained release plastic impregnated with 3.33% amitraz (0.5 g active ingredient (a.i.) per strip, manufactured by WYJOLAB for Veto-Pharma S.A. may be applied. All applicable directions, restrictions, and precautions on the product label as well as the section 18 use directions submitted with your December 5, 2012 application must be followed.

3. A maximum of 48,000 strips with amitraz may be used.

4. To control Varroa mites, remove honey supers before application of Apivar®. Use 2 Apivar® strips per brood chamber. Separate the double strip and hang each strip between two comb frames inside the brood area or the bee cluster, with a minimum distance of two frames between strips. Suspend Apivar® strips in the brood chamber in such a way that the bees can walk on both sides of the strips. Leave strips inside the hive for 42 days, and then remove. In case of movement of bees inside the beehive away from the strips, reposition the strips into the bee cluster, and leave strips in place for 14 more days before removal. Strips must be removed after a maximum of 56 days. Do not re-use strips.

5. A maximum of two treatments, one in the spring and/or one in the fall, may be made per year if Varroa mite infestations reach treatment threshold. Apivar® strips may not be used when hone supers are present. Honey supers cannot be placed in hive until 14 days after strip removal.

6. Applicators must wear protective (chemical-resistant) gloves when handling treated strips.

7. Total residues of amitraz in honey and honeycomb (beeswax) are not expected to exceed 0.2 ppm and 9 ppm, respectively. A time-limited tolerance is in the process of being established to support this section 18 pattern.

8. This exemption expires one year from the date of authorization.

9. Unused strips should be stored in a cool, dark area. Any unused, unregistered product must either be returned to the manufacturer or distributor in unopened packaging or disposed of in accordance with the Resource Conservation Recovery Act following the expiration of this emergency exemption.

Now available from Kelley's.

This is the first time an emergency exemption from the Kentucky Department of Agriculture has been granted for this use under the FIFRA section 18 program. A section 3 registration is currently under review. Therefore, progress toward registration is sufficient at this time.

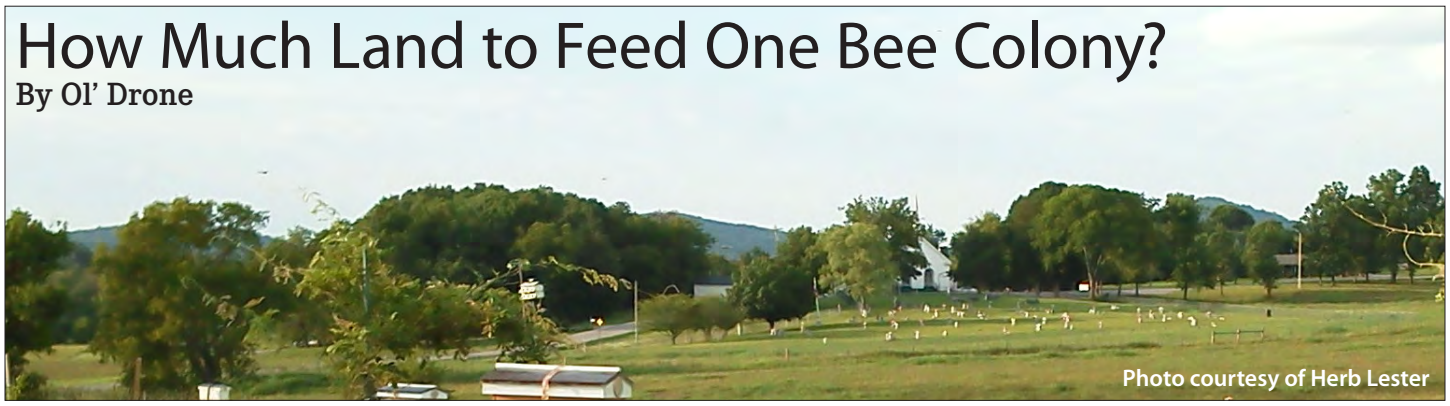
Any future correspondence in connection with this authorization shall refer to file symbol 13-KY-01.

If you have any questions regarding this authorization, please contact Emergency Response Team member, Stacey Groce (703-305-2505, groce.stacey@epa.gov).

Questions or comments about this article? Please go to kelleybees.com/blog.

How Much Land to Feed One Bee Colony?

By Ol' Drone



Conventional wisdom suggests that to nourish one colony of honeybees it takes one acre of blossoming trees, shrubs, or flowers to thrive. No one really knows for sure, and of course, there are so many variables that no generalization can be assumed. It may be one acre in some regions but five or more elsewhere. For almond pollination, two colonies per acre are needed for a well-pollinated crop. Crop insurance policies often require this rate before they pay any claims for a poor crop.

How big is an acre? Visualize a football field (less the end zones) and you'll see that a lot of blooming flowers are needed. Your bees will assure good backyard crop yield for your local, melons, squash, and apples but your garden furnishes only a tiny share of the nectar needed for feeding a colony. One acre becomes sufficient if there is a continuous pollen and nectar available from spring to fall, with sources including herbs, fruits, vegetables, bushes, clover, flowers, flowers, and more flowers.

You can't go to a store and buy a bag of "Purina Bee Chow" although beekeepers do occasionally feed supplements when their hives do not have sufficient natural forage. Sugar syrup is fed to bees to provide calories to help the bees to survive. For them to raise and feed the brood they need protein, which is pollen, or a rich pollen substitute. This supplemental feeding is useful for short time only and is used especially when they need lots of bees ready to pollinate crops before the optimum bloom time.

First spring pollen comes from willow, aspen, maple and alder but each of these are only good for a few weeks. Dandelions bloom about three weeks followed by clover. Next comes the fruit trees with lots of nectar and pollen but in a few weeks they are gone. Black locust, basswood and other trees can furnish nectar from millions of blossoms for a large tree but the bloom time is short. Even with these trees, an untimely rain may wash out most of the nectar.

A bee yard surrounded by a forest does not yield a good honey crop. Dense shade from a conifer forest does not allow growth of sun loving nectar plants. Open meadowland, preferably with wetland nearby, is the best location for a bee yard and for good honey yield.

Some native meadow blossoms sustain a longer nectar flow. The drought-resistant, yellow sweet clover bears tiny flowers, hard to see, but blooms from early July through September and produces a good honey surplus where it is grown. When they can't find local blooms, bees sometimes travel up to five miles to find the food that they need.

A recent report from London highlights the need for adequate foraging area for a good honey yield. Beekeeping in cities has become popular in European cities as well as NYC. A London business group called "InMidtown" wants to supply more hives to new urban beekeepers to increase honey production. Although it sounds like a good idea, the London Beekeepers Association opposes this and claims that there are already too many hives in the 600 square mile London region. With 3,337 registered hives, that figures to 5.5 colonies per square mile and already severely limits honey production to only 37 pounds per hive—way below the national average. The InMidtown group is busy planting honeybee forage in whatever space they can find but the beekeepers group prefers limiting more hives to increase the honey yield per hive and educating the public to sound beekeeping practices.

Questions or comments about this article? Please go to kelleybees.com/blog.

Natural Beekeeping

by Lady Spirit Moon

There seems to be two definitions of Natural Beekeeping:

The Certified Naturally Grown (CNG) program requesting beekeepers be certified by having their hives inspected annually by 2 other beekeepers. The program is called natural because beekeepers use "organic" products in the hives, e. g. essential oils, Formic Acid, Oxalic Acid...etc.

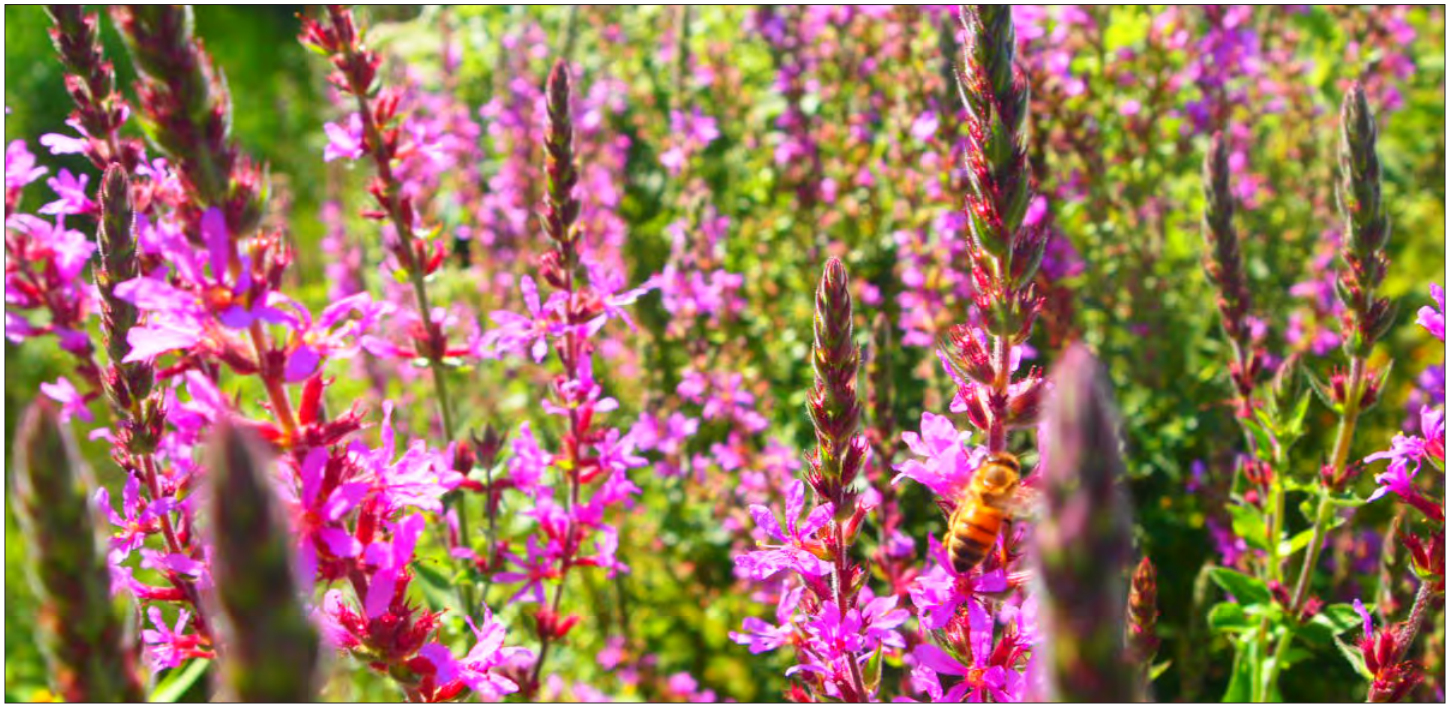
The other definition of Natural Beekeeping is nothing in the hive but frames and what the bees take in. If the bees don't take it in through the front door, it isn't put through their roof. This is where I fit in.

My Natural Apiary

When I first started beekeeping folks snickered because I wouldn't treat my bees. I took some pretty hard comments from old time beekeepers and commercial beekeepers telling me my bees would die if I didn't treat. The first year I tried using the essential oils formula. I used a very tiny portion of the formula once before throwing the rest out. I just couldn't bring myself to put it into the hives. Instinctively, I couldn't put anything in my hives the bees didn't take in. After the first 3-4 years into beekeeping my bees still didn't die. The beekeepers leaning on me to treat, or telling me I was in denial, stopped asking me about my bees. Some actually stopped talking to me at all.

Though I use Langstroth 8-frame equipment, I always imagine the colony in a tree and keep that perspective in mind whenever I do anything to the hives, bees, or yards. There are no weeds touching the hives in my apiaries. Bugs can drop down through the screened bottom board, but they can't climb up. I mulched the apiaries; though I will be transplanting Corsican mint to keep down the weeds as the mulch degrades. I also planted herbs.

One hive swarmed the first year and to my knowledge that was the last time I had a swarm. I make sure they have enough room to grow and split hives when necessary. There is a solar bear fence surrounding an inner fence. This year I will put landscape fiber against the inner fence as a wind barrier. Last year the winds were horrendous enough to move a metal commercial cement mixer 8' and lay it on its side. And that was behind the house. Freezing wind is what killed 2 hives during a severe snow storm this past winter. And temperatures dropping from mid-70 to below 40 before 5:00 p.m. killed 4 more hives.



Varroa

I don't have Varroa mite destruction because I use 4.9 foundations in my brood frames. This choice was based on Michael Bush and Dee Lusby's information regarding the cell size. Italy did a study in 1999 on foundation cell sizes 4.9mm, 5.0mm, and 5.1mm and found there was a significant drop in Varroa in the 4.9mm cell, with no significant drop in 5.0mm or 5.1mm. I had a hive die during a snow storm a couple years ago when the lid was blown off and was talked into sending 1,000-1200 bees to Beltsville Lab for testing. They counted 40 Varroa. Even though that amounted to 3-4%, they called it Varroa Destructor.

A Stress-free Focus

The honeybee's autoimmune system is 67% at best. Anything and everything stresses them, for example: opening the hives (which sets them back a day); not enough food stores; noises on the outside of the hive; position of the hive in the apiary; going into the hive too often; animals or pests; almost anything that doesn't happen if they were in the tree trunk. And any kind of natural or man-made chemicals in the hive upset the hive's bacterial balance.

All too often people don't think of the honeybee in its own environment. Beekeepers tend to keep bees according to their own personal viewpoints or life style. In truth the bees keep me. They tell me what their needs are and I try to provide. This is not easy in a farming community. Five hives have had CCD scenarios this year, queen issues in 2 hives, and 3 hives with diminishing amount of bees over time. I never had problems until a farmer, experienced in No-Till farming and planting GMO corn, expanded his acreage. There was a major dearth last year from mid-June to late fall and my girls in the late nucs only had the GMO corn to feed on the following spring. The Clothianidin in the Neonicotinoids used on the coating of seed corn affects the bee's learning ability. It will fly out to forage but will forget how to get back. Their nervous system is also affected—saw this in my one queen as she marched across the comb for three months without laying anything. Sometimes she acted drunk while hanging on the very edge of a frame when I lifted the frame out of the hive. Held my breath on that one.

Hive Inspections

I check my hives twice monthly unless there are indications to do otherwise. When I approach a hive for an inspection, I check for several things:

- The ground in front of the entrance for dead bees. If I see more than there should be for that time of year, I go into the hive.
- I watch the bees going and coming. I was told if I saw pollen going into the hive I could be sure of a queen. Experience has taught me otherwise.
- I check for robbers or other insects on the sides, under, and behind the hive.
- I open the lid and deeply inhale. If it smells like warm honey, I don't go any further. If there is an unusual odor, I go into the hive.
- I check for the hive's sound when I open the lid. I have discovered that if they seem to scatter to the four directions and there is no hive hum, it's an indicator of no queen.
- If I do go into the hive, I check for the queen, amount of bees and brood, conditions of bees, and amount of pollen and honey.
- In my notes, I keep track from where the nuc came and its history (if I have it), weather, time, temperature, and, in red ink, where the queen was spotted on which side of what frame. I also keep track of brood pattern, honey/nectar and pollen, and on what frames. Notes are kept on every hive in both apiaries. The deadouts are kept as well but in a different file. No notes are deleted.
- I do not mark my queens. I've never seen my girls put a mark on her, so I don't. My mentor, Carl Chesick, would often remind me to mark my queen, but I haven't come across a situation where marking was going to tell me anything I needed to know other than the fact she was superseded.

Regarding Queens

As in the natural order of things, my bees raise their own queens. They know better than I how to do this. I do not introduce a queen into a new hive. I do get nucs of different stocks and spread them in different locations for the queen to mate with feral and local stocks. My bees are resistant and hygienic. They are not cheap as I have spent time and effort raising them. There is a lot of feral stock in my diverse pool of genetics. When sold, each 5-frame nuc box will have 4 frames of brood, nurse bees. Nurse bees do not forage so I provide a frame of honey, with pollen if I can arrange it. By the end of the old brood cycle, the queen has mated and the honey in the honey frame has been replaced with new brood. Usually they are ready to go into a regular hive by this time. I do not ship bees.

Honey

The honey supers stay on until mid to late fall—usually after the last flower dies. Holistically, the Annual Honey has the entire year's pollen to help with next year's allergies. This year I did make extra honey by increasing the size of my colonies, but not enough for them and for me. Bee hives do not fatten up in farming communities as they do elsewhere because of GMO crops. I'm fairly certain I'll have enough to feed to my two dogs (a tbsp a day keeps them worm-free). I'll take my share after I'm certain my girls have enough to get them through to spring. In the past, a 2-box deep brood with one medium honey super has been sufficient. If I have to feed, I make sure at least 25-30% of the sugar feed is honey. Bees need their nutrients to come out of the winter in good health. Honey keeps the Nosema in check.

Great Instructors

Carl Chesick is my teacher and mentor. I have learned and shared more with him than with any other person. But I listen to everyone. From what I have learned from many beekeepers around the world, scientists, and doing my own research, I glean what will work in my apiaries. But, in truth, I mainly listen to my girls. They have taught me to listen to the animals in the woods, birds in the air, and heed the messages in the blowing wind; look at the flowers and the environment around me and plant for their and my needs; to move gently and slowly; compassionate patience; and most importantly, all living things have the right to live and be treated well.

* * *

I look forward to working with the African beekeepers in Senegal, Africa, January, 2013, sharing information on bees, teaching Apitherapy, and How to Make Your Own Soil. BEe Healing Apiary and the Center for Honeybee Research have partnered in this project. And, yes, I will share the trip when I come back.

Lady Spirit Moon owns BEe Healing Apitherapy; is a Certified Beekeeper; Master Herbalist; Certified Nutrition Consultant; and is studying Apitherapy under Dr. Stephan Stangaciu, Romania. She is also Ambassador for the Center of Honeybee Research.

Questions or comments about this article? Please go to kelleybees.com/blog.

Bill, from Oshtemo, MI shared photos of dog Stella. On the left, Stella imitates a bee in winter … hanging out on the couch.

Of course, every hive has guard bees at the door, as Stella demonstrates in the photo on the right.

Bee-Havior

What Goes On Inside a Winter Hive?

By Kent, Master Beekeeper

In cold weather, honeybees, one of the few insects who survive winter as a hive, cluster in a well-defined manner to keep warm. A cluster begins with an interior temperature in the mid-fifties, and contracts and expands as the temperature falls and rises.

But, how does this work? What happens in the cluster? We turned to Master Beekeeper Kent for answers, along with a few other sources.

Bees create a cluster around the queen, her survival is critical. The bees within the cluster move about freely—in cold weather there is an almost constant circulation in the cluster.

At the core of the cluster are the "heater" bees, who will have their heads in the cells on each side of the comb, and will be working their thoracic (flight) muscles in a method different from flight (the muscles contract against each other, not against the wings.) Heat is created.

The next layer of bees will be the "replacement" bees who are either returning from, or going to, the food source. These bees will next replace either the "heater" bees, or the "insulator" bees.

The outer layer of the cluster is comprised of the "insulator" bees. These bees strive to maintain a temperature of 48-75° F.; the inner cluster ranges from 64° F. to the low 90s, largely depending upon whether brood production has begun. The insulator bees do not participate in working their muscles to keep the hive warm—they are strictly insulation. If, on these outer ring, their thorax dips below 48° F., they can no longer activate their flight muscles. Inevitably they fall into a coma, and fall off the cluster where they likely perish.

Questions or comments about this article? Please go to kelleybees.com/blog.

Bees Can't Fly!

By Ol' Drone

French entomologists studied and calculated the aerodynamics of honeybee flight in 1934 and concluded that it was impossible for a bee to fly. No one bothered to tell the bees, however and therefore they continued flying as they have done since 40 million years ago.

As young beekeeper Taylor Rosenthal will testify during this package install, yes, bees can fly!

Bees, as we know them, are said to have been separated from the wasp family which is much older (perhaps 100 million years). Wasps and most ancestors are carnivorous and eat other insects, while honeybees are vegetarians and gather pollen as demonstrated by presence of "pollen baskets" on their hind legs. Prior to that time bisexual plants that needed cross pollination had not existed.

For many years scientists tried to understand animal flight using the aerodynamics principals of airplanes and helicopters. During the past ten years, flight biologists have revealed the mechanism by using robots with "flapping wings". Findings of researchers at Cal Tech have developed movies of a bee in flight at 6000 frames /sec and learned how insects actually CAN FLY! Apparently it has to do with short wing beats at extremely high beats / second. The smaller the weight of the insect, the faster the beats must be. For example, a mosquito (light weight) has one of the fastest beats at 400 / sec. No wonder they make that pesky "whine". By comparison, the honeybee measures at 230 beats / sec. This principal is demonstrated in birds also as tiny birds flit about quickly with high wing speed, but larger birds like crows or big herons flap slowly with their larger wings. Bees need to work harder than most insects as they hover while drinking nectar and often forage and carry home to the hive heavy loads of pollen and nectar double their own body weight. When working harder to stay aloft carrying a heavy load, honeybees can alter their wing stroke amplitude but do not change the wing speed.

Many experiments have been performed to measure just how far a honeybee can fly in order to forage for nectar and honey. The conclusion is that "they can fly as far as they have to". Bees have been traced as far as 17 miles from their hive but this trip would leave them exhausted and much lighter in weight. Data shows that a flight range of four miles (covering 32,166 acres) would sustain a colony as hive weight is gained at this range. Following the law of "diminishing returns", when flying a distance greater than four miles, both the bees and the hive depending on them would lose weight. The alfalfa blossom is difficult to collect for the bee and bees from hives placed directly in the alfalfa yard have been found collecting 10 times as much pollen from safflower plants even though these plants were 5 miles away.

Another factoid question about honeybees is how fast can they fly? Some records show that they can attain a speed of 15 miles /hour!

Questions or comments about this article? Please go to kelleybees.com/blog.

Bee-Yond & Bee-Hind the Hives

Practical Insights on Wax Rendering & Selling

While researchers around the world are studying whether you should keep cell phones away from bees, Bob Hollis shared a real practical reason to park your cell phone while working bees and their by-products.

Bob Hollis demonstrates that fancy equipment isn't required for wax rendering.

"Don't talk on your cell phone while pailing honey," stated Bob. "Its buttons don't work as well after you pull it out."

Bob was sharing his expertise on wax rendering, and cell phone usage, at the Michigan Beekeepers Association annual meeting. Wax rendering is a popular and broad beekeeping topic, and comprehensive information may be found in many excellent books, and on the internet. To supplement that information, beekeeper Bob, who works about 100 – 150 hives and sells wax and candles, shared his insights, including:

He uses capping wax, the wax cut off of frames pre-extraction. He doesn't attempt rendering the darker wax that held brood—it takes too much time, energy and effort to get a workable wax from it.

There are lots of markets for wax beyond the traditional selling of candles at craft shows and farmer's markets. Consider:

- Selling blocks of wax for use by other candle makers and crafters. Once word gets out that you have these available (often by selling wax at craft shows and farmer's markets), it may turn into a steady sales stream.
- 2012 was a tough year for bees, causing a shortage of wax for foundation. Many foundation-supply companies may be looking to purchase wax. (See sidebar.)
- Furniture makers and hunters are another market for beeswax. Bob uses ice cube trays as a mold for the size of wax blocks they desire.
- Allergy medical professionals may be interested in candles made from local beeswax—a tip shared by one audience member. Her allergy doctor prescribes her candles for people to burn daily for an hour before they go to sleep.

Melting wax tips include:

- Wax is really, really hard to get off of any surface; don't render wax in the kitchen or any other place where you don't want to have to deal with it when you spill some. And, you will spill some.

Wouldn't it be great to have this much wax to sell?

Kelley's obtains much of their wax from chemical-free hives in the Pacific Northwest. Lab tests have shown it is about the purist foundation practical.

We caught up with Jane Burgess, Kelley's CEO, who said Kelley's is always interested in purchasing clean wax from chemical-free hives. Payment may be in credit, cash, or wax working (finished foundation for raw beeswax—must have 100 pounds). To sell us your wax, call for the going rate of purchased, clean beeswax,

1.800.233.2899.

When you send your wax, be sure to include your name, address, city, state and zip code, with information on whether you would like credit, cash, or wax working done. A telephone contact number is always helpful.

- Use dedicated equipment. It is nearly impossible to clean wax and residues from equipment, so cookery picked up at garage sales and dedicated to wax melting is ideal.
- Wax melts at about 140 degrees—depending upon its composition. Heat only until it melts; higher temperatures cause discoloration and alter other properties of the wax.
- Use a double-boiler. One you've made yourself is fine. A double-boiler protects the wax from scorching, and is safer.

Mold/candle insights:

- Wax will take the color out of anything except glass and stainless steel—keep this in mind when selecting containers to be used as molds.
- Cooling down wax too quickly causes cracking.
- Network with other candle makers and bee clubs. Sharing molds is a great way to process a lot of wax in a short time, and minimize your investment in molds.
- Bob recommends rubber molds for their durability, noting they are worth the additional investment.

Other insights:

- Storing: Beeswax does not deteriorate with age, so it may be stored until you have sufficient quantities to justify working with it. However, unrendered wax is a wax moth magnet. Rendering isn't a cure-all; two audience members shared that they've had wax moths burrow into processed candles and rendered, stored blocks of beeswax.
- Bees consume 8-10 pounds of honey to produce a pound of beeswax!
- Safety first! Never leave melting wax unattended, keep fire extinguisher handy, and avoid using a gas flame. And, put your cell phone aside.

Questions or comments about this article? Please go to kelleybees.com/blog.

Upcoming Events

2013 AHPA Convention
January 8 - 12
The 44th Annual Convention of the American Honey Producers Association will be held at the Sheraton San Diego Hotel & Marina in San Diego, California

Eastern KY Winter Beekeeping School
January 19
At the First Federal Center Building on the campus of Hazard Community & Technical College

2013 North American Beekeeping Conference & Tradeshow
January 8 - 12
Hershey® Lodge Hershey, Pennsylvania

Allen County Beekeeping School
February 2
Scottsville, Kentucky

Southeast Beekeeping School
February 9
Williamsburg, KY

Northeast Beekeeping School
February 23
Morehead, KY

Arkansas Beekeepers Association Spring Conference
March 1 - 2
At the UA Cooperative Extension Service Auditorium in Little Rock, Arkansas

Audubon Bee School
March 2
Henderson, KY

Bluegrass Beekeeping School
March 9
Frankfort, KY

Beekeeping in Western Montana

By Jim Hamilton

Editor's Note: *Jim wrote the immensely popular story on his secret life as a bee for our December issue. As readers have told us they enjoy hearing about beekeeping in areas different from their own, we asked him to tell us about beekeeping challenges in an area different than most of us experience. All photos are courtesy of Jim. Thanks Jim!*

Winter in the Bitterroot

In Western Montana, more and more hobbyist bee folk are showing up because of the open space and interest in a meaningful endeavor. Those of us living in the Pacific Northwest share some of the same issues confronting apiarists everywhere: varroa mites and colony collapse disorder (CCD). Our growing season is shorter than beekeepers further west and along the Great Basin, but with an ample supply of knapweed (where allowed), sage, alfalfa, clover and wildflowers, our bees usually survive for another season.

What makes beekeeping difficult in our neck of the woods are bear predators, dry summers coupled with forest fires, early cutting of hay and alfalfa, and undependable dandelion bloom in the spring because of cold weather. We are supplied with California bees which don't arrive until the first week of May. Depending on the weather, this sometimes is too late for adequate buildup before the honey flow. Many of our apiary partners travel to the state of Washington to obtain nucs in April for earlier hive setup, and this has resulted with mixed outcomes. Some people have had good success and others less than a satisfactory harvest, possibly because of weak queens or varroa infestation.

Summer in the Bitterroot, as Jim sets off to mow around his hives

I live in the Bitterroot Valley of Western Montana and am fortunate enough to be surrounded by grain fields, fruit orchards and neighbors with vegetable and flower gardens. During my first season as a beekeeper two years ago, I had two hives that produced over 100 lbs. of good honey. This past year, I was lucky to harvest barely 40 lbs. of marginal honey because of a wet, cold spring and dry summer. Persistent forest fire smoke in the valley caused anemic plant growth and lethargic bees. I lost one hive in September, probably from mites or CCD.

An invasive perennial plant, Leafy spurge (Euphorbia esula), is a weed that our bees love to feed on. Unfortunately, the honey produced from this species is colored dark brown and has an unpleasant taste. Knapweed, a thistle-like plant, is also quite invasive but the honey produced is very flavorful. The Scots allegedly brought this weed over while emigrating from the homeland and planted it to our north in Alberta and Saskatchewan.

While we're unsure what this really is, it is such an interesting photo that we wanted to share it!

I belong to two beekeeping clubs: the Big Sky Beekeepers in Missoula and Beekeepers of the Bitterroot headquartered in Hamilton, MT. We are also lucky to have the services and assistance of the internationally-recognized Bee Research Institute headed by Dr. Jerry Bromenshenk at the University of Montana. Despite all the challenges presented by living where we do, most of us are like farmers everywhere and are already talking about "next year."

Questions or comments about this article? Please go to kelleybees.com/blog.

A-Bee-Cs

Thinking About Keeping Bees?

Part 2: Varieties, Where to Put Them, and How to Get Them

In **Part 1**, our December 2012 issue[1] , we covered some initial beekeeping considerations and outlined costs and time factors.

We also made these assumptions for this series of articles, and they continue. They are:

This is one of Flottum's many books on bees; proudly carried by Kelley's. See Kim's articles in previous issues of this newsletter for the best type of bee for you.

- Assumption 1: You will purchase equipment.
- Assumption 2: You will use a Langstroth hive.
- Assumption 3: You will purchase bees.

There's a who, when, how, where and why to every good story, and the same will hold true for your beekeeping story. If you're reading this, you've likely already answered "why". Whether it is for honey, money, to help save the planet, or something else, your reasons for want to keep bees are personal and admirable. The world needs bees.

Part 2 focuses on the who, where, when, and how to get started keeping bees.

Who—Or Rather, What Kind of Bees?

When you purchase honeybees, you'll need to specify the variety, from options like Italians, Carniolans, Russian Hybrids, etc. Each variety has distinctive traits that impact factors like honey production, cold tolerance, gentleness, etc. Which bee is best for you depends on many things, like your geographic location and what kind of beekeeper you will be. Industry expert Kim Flottum, editor of Bee Culture magazine and author of many excellent bee books, reviewed bee varieties for us about a year ago. Please reference both the 2012 January and February issues of this newsletter for his helpful articles.

You may also want to talk to local beekeepers and clubs for their recommendations. Chances are, if you talk to say, a half dozen people, you'll get approximately that many different answers. Like many things in beekeeping, there are few definitive answers. But, learning why beekeepers have their preferences will be helpful information in deciding which variety is best for you.

Where—Should You Set Up Your Hive(s)?

We're addressing "where" next, because if you don't have a good place for bees, you shouldn't and possibly can't have them.

So, what's a good place for bees?

Good question—so many places are. Thriving hives may be found atop buildings in downtown Louisville, Kentucky, and rural cabins in Canada, public parks in Florida, backyards in South Carolina, alleys in Chicago and to the beautiful farmlands of Pennsylvania and the near desserts of Arizona. And ultimately, it is the bees who decide if their location is a good place or not.

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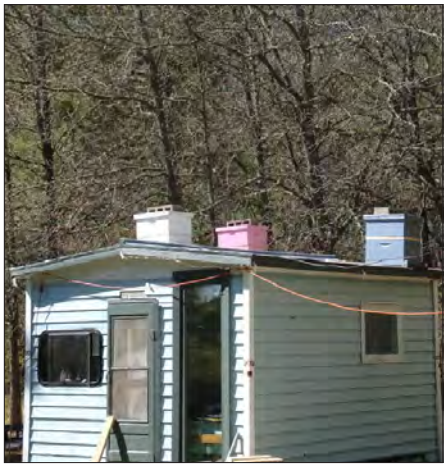
1 Available at www.kelleybees.com, along with all other back issues.

Hives overlooking Louisville, photo courtesy of Lani Basberg

Hive in a field of longhorns,
photo courtesy of Sherry Decker



Hives up high in Minnesota, because of
bears; photo courtesy of Tim

Along in fence row in the Midwest,
photo courtesy of Charlotte Hubbard

They also appreciate wide open fields, photo courtesy of Herb Lester

Some Placement Guidelines

To encourage bees to live happily where you want them, there are considerations for hive placement that are helpful. The hive should:

1. face the morning sun to get the hive warm and working early in the day
2. have sunlight in the afternoon, perhaps dappled to reduce summer's heat if it gets too intense in your location
3. be near water, preferably within a half mile, but not where it is too wet and humid in the summer
4. allow for the bees to easily enter and exit, like planes at a busy airport
5. not be placed where it is a public nuisance or outright hazard / temptation. For example—not next to an elementary school, or where curious passer-bys might be tempted to investigate
6. be sheltered from prevailing winds if you have tough winters
7. be placed where it is legal according to human laws—check your local ordinances, restrictions, etc.
8. be where you can tend to it. Too far away or too difficult to get to in certain seasons may result in them not getting the attention they deserve.

And Why They Are Only Guidelines

I was once on a Q&A panel at a beekeeping meeting, and answered the question of "what's the best place to locate a hive?" with the guidelines above.

My co-panelist, a man who does swarm removal, laughed hysterically at my answer, and rightfully so. He's removed hundreds of hives, and knows bees will build where they want to build. He's removed them from dark, damp buildings, from northern-facing structures, and captured wild hives in heavily forested areas he could hardly get to because of the dense foliage. He's seen them build so deep in structures that they fly several feel through duct work to enter the hive. Only bees can tell you if a location is ideal or not.

Unfortunately, they don't tell you in a memo; they will communicate it with an awful thing called "absconding."

How Much Room Do They Need?

Please see the article in the Healthy Bees section of this newsletter for thoughts on that subject. It also includes additional insights on a good location for bees.

When—Should You Order Bees?

So, you've decided you want bees, and you know the kind you want and where you'll put them when they arrive. Next comes ordering your bees. When does this need to be done?

In about the next 10 minutes. Seriously.

The way to obtain package bees (or nucs) works is like this:

1. There are only a certain number of bees available throughout the season (generally April through May.) When you order your bees in, for example, January—you're not getting them immediately, you're simply reserving them to ensure they'll be available when you want them.
2. Select a date for either picking them up or having them shipped to you.
3. You need to order your bees as soon as possible because dates sell out. You don't want to find out too late that there are no bees available for any of the dates that work for you.

When—Should You Obtain Them?

So how do you decide what date(s) you should obtain bees? There are two major factors:

1. Your location and
2. Your availability.

1. Location Partially Determines Delivery Date

Now to detirmine when to order your bees....

Typically southern USA locations have ideal honeybee weather earlier; northern (Indiana, Ohio and northward) tend to order bees for delivery toward the end of April and later. Check with local beekeepers for their advice. Generally speaking though—sustained temperatures should be over 45 degrees, allowing for bees to take supplemental liquid feed during the critical first weeks.


New packages don't like waking up to this. We're fairly sure this established colony wasn't delighted by it either! Photo courtesy of Jane Burgess

We have to speak generally, because weather varies widely, and sometimes wildly, from year to year. A package installed in Wisconsin mid-April of 2012 had already missed some of the blossom season; in previous years it would've encountered snow storms. It is dicey no matter when you get the package.

Aim for later rather than earlier. That first warm spring day in April in Massachusetts has everyone in the north wishing they'd selected an early delivery date. But, those warm days in the north don't usually continue. A subsequent hard freeze to a newly installed colony that has not unified and has no stores could be dangerous. It is probably best to select a date later rather than earlier or have two different dates if you're obtaining multiple packages, because unexpected nasty spring weather can diminish a colony's chances for success.

2. Your Availability Also Determines Delivery Date

Package bees require TLC in the beginning, so be sure to only obtain them when you know you can care for them. That care has three critical components:

1. Care upon getting them home—even while still in the box they are packaged in they need attention to minimize the stress of their transport
2. Installing them—which should be as soon as practical, weather permitting, and
3. Care for them when they're first installed in the hive, to get them well on their way to being all they can, well, bee.

Nucs are fairly self-sufficient for a while, although supplemental feeding may be helpful if the weather isn't cooperating.

How—Should You Get Them?

When you order, you'll need to specify whether to have them shipped or if you'll be picking them up. If you're obtaining bees from Kelley's, and we hope you are (we have excellent bees and we bring you this free newsletter), you might want to consider picking them up (nucs are available for pick-up only, so you can skip the rest of this section—because we'll see you anyway!).

A bee's eyes view of our Clarkson location.

There are two great reasons to pick-up your bees at Kelley's:

1. Bees tend to do better when you pick them up than when they're shipped. You can provide the most efficient trip, and better control temperature and variations.

2. You'll get a free breakfast, a chance to see our headquarters, chat with beekeepers, see an installation demonstration, and generally have a great time.

Of course, there's also a good reason to have them mailed: the look of the faces of the folks at the Post Office when you thankfully arrive to take away the box of stinging insects!

And Marking the Queen?

Another question you'll need to answer while ordering package bees is whether to have the queen marked or not. If so, a marker is used to dot the top side of the queen.

Like Waldo, once you find her she's easier to spot. Finding her the first time sure is easier if she's sporting an attractive dot.

Spotting the queen will likely be one of the most challenging things about beekeeping for a beginner, so having her marked, while it costs a few more dollars, is helpful. Sean Burgess, Kentucky's State Apiarist, notes "I recommend a mark be put on your queen. This is especially important to aid new beekeepers to help locate the queen from the thousands of other bees in the hive. When doing inspections it is important to be aware of the queen's location so you don't accidentally injure her."

Your future as a beekeeper will likely be very sweet, just like this frame of honey with the capping freshly shaved off.

In Summary

So, it is January 2013. You've decided to keep bees, determined you have a good location, and now you've ordered them.

Salute! You've just taken the first step on a grand, often extremely addictive adventure!

You can catch your breath for a bit, because for most of our readers, you don't have to have the apiary ready yet. Bee arrival is a few months away.

February's issue, Part 3, will discuss hive options (like 8- or 10-frame, and plastic frames or wood, etc.) so you can determine what you want to order. We'll also cover preparing the hive and its location.

March's issue, Part 4, will cover considerations for bee transport, what to do when you get them home, and their installation.

Questions or comments about this article? Please go to kelleybees.com/blog.

BeeCause

"Living Lab" Adds Hive of Activity to Trail Lineup

Larry Pate, left, and Bob Morris prepare an observation hive for installation. The smoke sedates the bees while their hive is moved to a new location.

Larry Pate and Bob Morris move the glass-incased observation hive into the bird blind. The bees can come and go into the hive through a special entryway while remaining safely separated from students observing hive activities for educational purposes.

Larry Pate watches bees come and go through a special bee entry portal into the hive.

Honey from the nature trail beehive will not be harvested. Once established, the bees will use the honey to survive through the winter.

With or without children, the bird blind at the Boston School Nature Trail has been buzzing with activity.

An observation beehive has been added to the school's educational lineup for the nature trail. While the bees have been busy getting established in their new home; middle school science teacher Erica Baker has been working on plans to incorporate hive activities into the science curriculum.

"There are a lot of things that can be taught with bees," she said. "Functions and communities. Pollination. Life stages, and the anatomy of a honey bee" were all mentioned as part of the educational possibilities.

Bees can safely be observed through the clear glass walls of the observation hive. The bees come and go through a small tunnel in the bird blind's wall that helps to keep them safely tucked away from physical contact while allowing them to be seen.

The school's 21st Century Learning Center "Wild Activities Adventure Club" utilizes the bird blind for after-school activities. Plans call for the FFA chapter at Thomas Nelson High School to help maintain the hive.

Nelson County School Board member Larry Pate, along with Bloomfield Elementary School Principal Bob Morris, both experienced beekeepers, worked together to set the hive up this past August.

The Walter T. Kelley Company, a supply company for beekeepers, donated educational materials and equipment to help establish the hive.

The trail, started in 2009, has been steadily adding to its educational lineup.

Originally conceived as a living laboratory, the trail has been developed on District-owned forested property directly behind Boston School.

Questions or comments about this article?
Please go to kelleybees.com/blog.

Bringing Back a Bee-Friendly World

By Jerry Haus, Development Officer, Bee Research and Discovery Center; College of Food, Agricultural and Natural Resource Sciences, University of Minnesota

Artist's concept drawing.

Bees fascinate and inspire people, young and old. Bees improve our health and nutrition through pollination of fruits and vegetables. They produce honey, a delicious natural sweetener and an effective burn and wound remedy. They collect tree resins, called propolis, which have remarkable antimicrobial properties that benefit human and bee health. In short, bees are vital to our lives, however bee health is failing due to a paucity of bee-friendly flowers, chronic exposure to pesticides, and debilitating diseases, and parasites. Now more than ever bees need our help.

Join us in our effort to bring back a bee friendly world.

Our vision at the University of Minnesota is to create two facilities—a research lab and a bee discovery center—to showcase the beauty and complexity of the bee society and their direct connection to food, agriculture, floral landscapes, and medicine.

Research Lab: The Essential Core

A state-of-the-art research lab on the St. Paul campus will anchor the Bee Center program. A new lab space can be compared to the cluster of bees in a hive. A successful research program, like a healthy bee colony, is productive, efficient and resourceful. The research lab will centralize and facilitate the important bee research projects at the University of Minnesota. It will expand and enhance our internationally recognized research program and provide substantial benefits to the university through increased federal funding and interdisciplinary and international collaborations.

Discovery Center: What Research Can Do For You

Visitors will be invited into a unique destination at the Minnesota Landscape Arboretum, the Discovery Center, which will have great potential for capacity building, increasing the university's reputation as a leader in

environmental and agricultural research and education. This will be an exciting new public attraction, providing a portal to explore the tangible benefits of university research.

The Discovery Center will include informative exhibits on current research topics. The range of topics will include:

- Human health benefits derived from bees and bee products (honey, propolis, venom)
- Biology of the fascinating social behaviors of bees
- Ecosystem services provided by bees as key pollinators of our fruits, vegetables and flowers
- Cultural importance of bees throughout the world and history
- Bees as a portal to sustainable stewardship of our environment

In addition, the Discovery area will be a place for the public to safely experience bees and beekeeping while learning to appreciate the importance of bee welfare. Both school groups and adults will observe a beekeeper handling colonies in a garden setting, view live seasonal demonstrations of how honey is harvested and extracted in a food grade facility.

Bee Landscaping

The Discovery Center will be surroundings will be artfully landscaped with bee-pollinated trees, shrubs and gardens. Here the public can experience floral landscapes from the perspective of a pollinator and appreciate how pollinators, in turn, shape our environment. Landscape designs will teach how everyone can help to improve habitat and promote bee health and diversity.

The Bee Research and Discovery Center will be a unique bee centered experience, connecting research with public educational space.

* * *

To learn more about our on-going efforts, you may want to check out these links:

http://www.beelab.umn.edu/Research/

http://www.beelab.umn.edu/Vision/index.htm

https://makingagift.umn.edu/onlinegiving/enterOnlineGiving.do?owner=O_BEE&desc_source=UWXX_CFAN_SITE

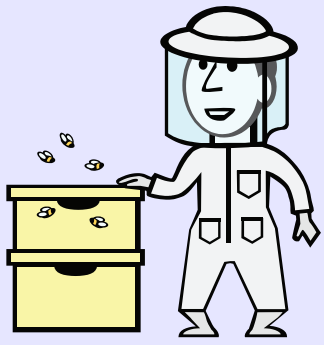
To help support us, go to www.kelleybees.com, where you'll find a link to our home page starting in January. The Walter T. Kelley Company will donate a dollar for every contribution readers make, up to $300/month.

Questions or comments about this article? Please go to kelleybees.com/blog.

Beek Hint

Dreaming of splits and checking brood patterns? Well-known beekeeper Dana Stahlman shared this tip at the Kalamazoo, Michigan Bee School last February, and it might help you chase away the winter-missing-your-bees blahs.

"Your smoker, and your hive tool(s), can use the occasional good cleaning to keep them working well. This is a good time of year to do that."



FAQs

Please note: *Correspondence submitted to the Kelley Bee News Modern Beekeeping newsletter (or subsequent publications) becomes the property of the Walter T. Kelley Company. We reserve the right to print or not print any correspondence and it may be edited for length and/or clarity. It may be published or republished in any format or medium and/or licensed to others for publication. If we publish your correspondence, we may attribute it to you and may include your name and city, unless you expressly request that you remain anonymous.*

Q: What kind of vehicle do I need to pick-up my package of bees in April?

A: No special vehicle is necessary. Package bees are in a sealed container. If transporting in an open bed truck, please make sure that the bees have a wind break (i.e. up against the cab of the truck).

For those of you picking up nucs, make sure they'll have good ventilation on the journey. They're an active hive requiring good air flow.

Bees on a feeding frenzy in early December in Michigan. Crystallized honey was smeared on a brick. They did save the bigger chunks for last, but they disappeared.

Q: Can I feed my bees crystallized honey?

A: Yes. Honey is the best thing to feed bees, and there's nothing wrong with crystallized honey, although sometimes, according to Lady Cerelli, Ambassador for the Center for Honeybee Research in North Carolina, bees will leave the bigger chunks alone or leave it for last."

Q: Painting my hives seems wrong and unnatural. What else can I do? Melissa, Indiana

A: We turned to Kentucky State Apiarist Sean Burgess for an answer, who shared these options:

1. Don't paint, although the boxes will deteriorate more quickly.
2. A water based stain—rolled or brushed, like Kelley's ECO Wood, which is a powder mixed with water that makes a stain.
3. A dip—some people melt paraffin and beeswax and dip their equipment. I have never done this, it would require a lot of wax and paraffin as you have to have depth to cover the boxes.
4. Copper napthenate

All of these options seem a lot more labor intensive than applying two coats of good exterior latex, with the exception of maybe staining.

ECO Wood Treatment
Excellent alternative to paint! This wood treatment is non-toxic, made of natural elements, and is maintenance free. Apply once and you're finished. Will not peel, fade, or wear off. Creates a natural patina look that will vary in color depending on wood species.

Q: Should I have my queen's wing clipped?

A: That's a beekeeper preference issue, but Kelley's doesn't recommend it. And, starting in 2013, we no longer offer it as an option. This anti-swarm measure isn't recommended because it is possible the bees may perceive the queen as damaged and may try to supersede her. When bees go into swarm mode they will swarm regardless if it is with the old queen and may swarm with the recently mated virgin. There are much better methods of swarm prevention.

Questions or comments about this article? Please go to kelleybees.com/blog.

Sweet as Honey

As a follow-up to Part 1 in our series on starting beekeeping, Tom from Indiana shared this comment. Tom, we salute you for your pay-it-forward approach.

Newbees need to know that popping off the top cover to find bees pouring out the hole is a wonderful thing.

"I think the first consideration is to have a mentor. This expedites the transfer of knowledge, develops fellowship and fun, and imparts techniques that work for the local area. It will decrease initial startup costs, particularly in extracting the honey, because most mentors will share the use of their extracting equipment until the newbee stays with beekeeping.

I start newbees all the time. I start them with a complete hive, including bees, at no cost to them. They buy their own protective gear and tools, etc., and use my extracting equipment. The commitment they make is to start three newbees in a similar manner when they feel they can manage it. "

We asked for your experiences with top bar hives in our article, 'A Taste of Top Bar Hives' in the December issue. Greg shared his thoughts; thanks Greg!

"I maintained a home-built Kenya TBH based on a popular design for a year, even though a local expert beekeeper told me no one had ever made it through a winter in our central Massachusetts region (not true, I suspect). I did with immense effort, in the mildest winter in memory.

Good parts: The window was the best part. Don't miss it! Second was no need to smoke, maybe because only one comb gap was open at a time during inspections. It was a great way to see what bees do in a less structured environment.

Bad news: You see what bees do in a less structured environment—requires constant care to keep comb tidy enough to inspect. I had to invent my own means of doing lots of stuff, particularly emergency feeding, despite essentially world-wide advice and ideas via the internet. Do not underestimate this challenge!

But the reason I moved them to a Langstroth after a year was that my TBH was constantly saturated with moisture, mold starting almost immediately. Either the screened bottom was open and the hive chamber was essentially open-air, or it was 95% humidity inside with condensation and mold everywhere. I tried lots of stuff to ventilate, nothing worked. The horizontal orientation just didn't allow climate control. I have only a dappled-sun site under trees, and would not consider using it again unless I could try it in a dry spot with full sun. Lots of people don't report this problem at all; I conclude that the hives are very sensitive, and can vary greatly due to subtle differences in bees, environment, hive design and management.

Summary: they are fascinating, but the hives are difficult to manage and require ingenuity and experience from the beekeeper. "

A honeybee's wings stroke 11,400 times per minute.


Don Forte's Frame Stand.


Don Forte's Apiary Table.


The Apiary Table is a helpful companion.

Near-octogenarian beekeeper Don Forte, who caught "bee disease" about four years ago, shared these apiary assisting devices he engineered to make life in the apiary easier.

The frame stand is fashioned from rebar, along with other scrap metals. The arms may be of any size if you'd like to offload more frames.

He invented his apiary table to save his back. He wanted to build something easily portable and collapsible, and then noticed the frame for that has already been invented—the walker. He fashioned a hinge and a top, and the rest is history.

Don said these assists were born out of need; it isn't easy for someone of his age to pick up full hive bodies. As it isn't easy for plenty of us to do that, of many different ages, we appreciate Don's sharing his solutions. If you have questions, or would like Don to craft one for you, you may contact him at dforte2000@aol.com.

Don also shared that he encourages everyone to join the Nashville Area Beekeeping Association, noting they're a great group of helpful folks.

If you're looking for honey from a particular area or floral source, or have honey to sell, you may want to check out www.HoneyLocator.com. It hosts an online directory of honey suppliers and other services.

The 2013 Kelley's catalog carries many new products, but it still doesn't offer protective clothing for animals. That's sometimes required, check out http://abcnews.go.com/Technology/slideshow/photos-amazing-animals-8537483

"Thank you for the Newsletter Index. It is a great tool.

Thank you also for your continued great service." D. Wilson

Readers, we now have an index of every issue to date, located on our website.

We love the National Honey Board's slogan:
"One ingredient. The way nature intended."
Exactly.

Featured Products

Cat # S054

Cat # S052

Cat # S055

New! Women's Powder Blue Cotton Coveralls

These 100% cotton coveralls are tailored for women featuring elastic gathering at the waist. Features 2 front and 2 rear pockets. Available in a hooded veil, hat/veil combination, or zippered square or round veil. Available in sizes S-XL.

Cat # V65H

Cat # V25H

New! Ventilated Jackets

Our ventilated jackets have three layers of mesh to allow air circulation while offering sting protection at the same time. Great for summer days or hot climates. Available with a hat/veil combination or hooded veil. Features a zippered front, elastic sleeves and waist, and a zippered veil.

New! Ventilated Coveralls

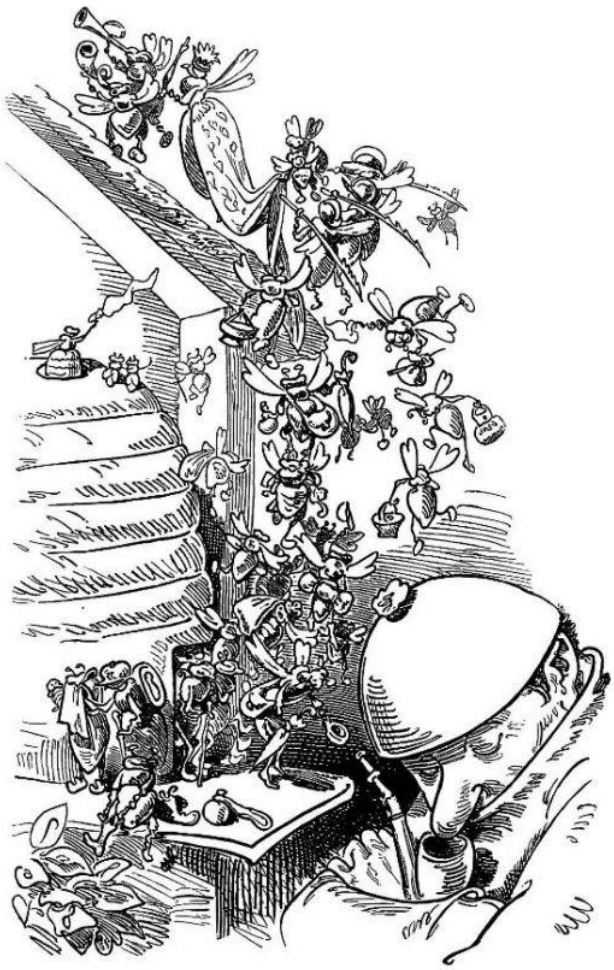
Our Ventilated coveralls have 3 layers of mesh to allow air circulation and sting protection at the same time. Great for summer days or hot climates. Available with a Hat/Veil Combination or Hooded Veil. Features a zippered front, elastic sleeves and waist, velcro leg closures, and a zippered veil.

Foraging for Fun

The Swarm

from 'Buzz a Buzz' by Wilhelm Busch (original in German, 1872)

Up children up, to swarm prepare
The honey thief sits stinking there.
And we who love the scent of roses
Have stale tobacco in our noses.
We toil, we sweat from early May
To lay up for a rainy day.
Our cells we fill, and at the Fall
He sulphers us, and takes it all.
So let us one and all deride
This honey thief, this Bee-i-cide.
Up children, up! To swarm prepare
Whilst Master Dull sits snoring there.
A devil he, upon my troth:
Buzz! Buzz! Hum! Hum! The swarm is off!



The Swarm from Buzz a Buzz by Wilhelm Busch

Special thanks to Dale C. of Chicago, who shared this insightful poem and fanciful picture with us.

Beekeeping New Year's Resolution:

This year, I will remember to wear my veil whenever I'm in the bee yard. OK, not in say January through March, that'd be pointless, and probably not so much in April … but starting right after probably six bees remind me I should always wear my veil!

The following are courtesy of British beekeeper Stuart Ching, author of 'The Eke'.

Honeybees learned in days long gone
How to construct the hexagon
Better it would have been by far
If they had learned to use a jar

A four-year old boy and his family were all enjoying a picnic when a bee started buzzing around them. The little boy was very upset and his mother tried to calm him. "Sweetheart, that bee is more afraid of you than you are of it," she said. "Look how much bigger you are. Besides, if that bee stings you, her sting will fall out and she will die."

Her son considered this for a moment, "Does the bee know that?"

Laws of Beekeeping Demonstrations

Under the most rigorously controlled conditions, the equipment will do exactly as it pleases.

If it works, something has gone wrong.

Once messed up, anything done to improve it makes it worse.

If anything just can't go wrong—it will anyway (and at the worst possible time).

Nothing is as easy at it looks.

Everything takes longer than you think.

Nothing is impossible for the beekeeper who doesn't have to do it for himself.

If everything is going well, there is something which has been overlooked.

You will always find a queen in the last place you look.

When it goes right nobody remembers—when it goes wrong nobody forgets.

If the explanation is so clear that no one can misunderstand, somebody will.

There is no problem when, looked at in the right way, does not become more complicated.

Don't worry about every mistake made—they make up for the things done and got away with.

Don't be afraid to ask dumb questions, they are a lot easier to answer than dumb mistakes.

Our 2013 Catalog

We'll be mailing our 2013 full-color, free, 100+ page catalog in early January. It contains dozens of new products, dozens of price cuts, and everything you need for a successful year in the apiary.

If you haven't ordered recently, you might not be on our mailing list. Email sales@kelleybees.com to get on the list to receive your catalog mid-January.

Dronings from a Queen Bee

Bigfoot is a Beekeeper

By Charlotte Hubbard

Dad contemplating critical worldly matters.

Remember, you read it here first.

This summer I spent two blissful hours marking queens at my out-apiary, located in bee heaven, which is my Dad's fruit and vegetable farm.

You veteran beekeepers are probably thinking "Wow, how many hives does she have? You can mark a lot of queens in two hours!"

Well, maybe you can.

I cannot. "Two hours of marking queens" consists of 118 minutes of looking for queens, and two minutes dotting them with yellow. I repeatedly told the worker bees that if they'd flag the queen for me, I'd be in and out of their hives so much faster. (Of course, if bees were going to do what I wanted, there are a few things higher up my wish list, like "no stinging.")

In the two hours I was in and around the (embarrassingly, just, um) eight hives, the bees were seemingly as content as I was. No one buzzed loudly or even considered chasing me to the car, which has occasionally happened. After closing up the final hive, I shed my protective clothing and drove off with a big, contented smile on my face.

I stopped by the farmhouse to visit my octogenarian father. He was busy solving the world's problems under a sprawling maple tree in the backyard ... or maybe just cat-napping. His face matched my smile as I made my way across the yard to see him. "Bees must be doing well," he commented, "I can see you're happy."

My smile didn't last long. I disturbed a honeybee in the lawn, and she flew into my sandal and nailed my right foot. I launched myself into the empty lawn chair near Dad and removed the stinger. We both laughed at the irony of working a quarter million bees without any issues, and then getting stung on an innocent stroll across the backyard.

We had to laugh. I knew what lay ahead, and knew there wasn't much that could be done about it. Nature and venom would have to run its course. I'd be spending the next few days hobbling on a foot the size of Miami.

Dad was right. My bees were doing good ... except for, er, that particular one.

Within a couple of hours, I had a big toe on either side of my foot, the "new" big toe being the one formerly known as the little toe.

Twelve hours later, even with ice and elevation, my foot and ankle were so puffy that it was painful to walk. Luckily it was the weekend, and I took the hint and found a couch and the remote control.

While channel-surfing, which can be done on just one foot, I wandered by a "scientific" documentary on Bigfoot. This tall, hairy creature is said to inhabit the woods of the Pacific Northwest, where it enjoys salmon, berries, and (gasp!) honey. There have been very, very few sightings of this shy critter; the few times it has been seen it is always wildly racing away. However, plenty of its huge footprints have been found over the years. The enormous prints, for which the critter is named, have been as large as two feet long, and eight inches wide.

Putting down my iced tea, I looked at my size 12 swollen foot, nearing eight inches wide. And hadn't I dashed wildly across my Dad's yard?

Remember, you read it here first. I've concluded that there really isn't a Bigfoot species wandering the Pacific Northwest, but instead just some tall, honey-loving guys living off the land who lack shoes and razors. These shy guys rob bees without the benefit of Kelley's protective clothing and decent footwear, and have been glimpsed racing away after grabbing honey. Undoubtedly stung on their feet, they leave really big footprints until the swelling goes down ... which is why only some footprints have been found.

Bigfoot mystery solved. Perhaps next month I'll solve the mystery of where queen bees hide when you open a hive to look for them.

Questions or comments about this article? Please go to kelleybees.com/blog.