

The Bee Line



Newsletter of the Maine State Beekeepers Association | www.mainebeekeepers.org

President's Comments:	3
Increasing Colony Numbers:	4
Sugar or Honey:	6
Report from the ABF Conference:	8
Annual Meeting/BoY Nomination:	10/11
Book Review:	13
SARE Grant Colony Update:	14
Foundation-less Beekeeping:	15
Notes from Further Afield:	16
Bee Schools/Buzzings:	18

Invitation from the MSBA Board of Directors Nominating Committee

Each year the MSBA nominates and elects Officers to its Board of Directors (President, Vice President, Secretary, and Treasurer) at the Annual Meeting. In addition, the Board is made up of seven At Large members—several of these positions will be opening up this year.

We invite anyone who is interested in serving on the Board to please contact the nominating committee by March 10, 2010:

- David Israel, 207-725-3139, disrael@bowdoin.edu
- Erin MacGregor-Forbes, 207-772-3380, queenbee@overlandhoney.com
- Larry Peiffer, 207-642-1089, webmaster@mainebeekeepers.org

We look forward to your input and energy on the MSBA Board!

What does the MSBA Board of Directors do?

by Roy Cronkhite

Why does the MSBA have a Board of Directors? As in most organizations, the MSBA needs officers and volunteers that work together so that the association may set and reach its goals. The goals of the MSBA are to promote education in matters related to bees and beekeeping, to assist its affiliate Associations and Chapters in promoting successful beekeeping in the State of Maine, to foster congeniality among the State's Beekeepers, and to perform all other

acts appropriate to a non-profit organization in serving its members. The honey bee was adopted by the Maine Legislature in 1975 as the official state insect, and it is part of this organization's objective to protect and foster the honey bee's beneficial use to the State of Maine.

Who are these people? Positions are as follows: President, Vice President, Secretary, Treasurer, President of each Chapter or Affiliate (or his/her delegate), most recent Past President, seven At Large members from the general membership, MSBA's Eastern Apicultural Society Director, the Editor of *The Bee Line*, the State Apiarist, and the National Honey Board Representative. A quorum for the Board of Director's meeting consists of five members. If only five are present, then three votes are required for passage and approval of items brought to vote, otherwise a simple majority is required unless otherwise stated in the Bylaws.

Why so many members? Just as the honey bee looks for genetic diversity, the founders of the MSBA were interested in having a spectrum of voices. There are the ex-officio members who have special skills and knowledge. There are the normal dedicated volunteers who become officers. There are the leaders of each chapter who may contribute a regional perspective of information or concerns. Finally, there are the At-Large members who represent the entire membership. In a word, diversity—to best reflect the membership and provide a balance of knowledge, interest and points of view.

What is an At-Large Director? There are seven At-Large Directors taken from the general membership. The term of membership for At-Large Directors is for three years unless a vacancy is being filled, in which case the replacement director's term

will be for the balance of the term. Any member in good standing who is interested in contributing time and effort shall be eligible for an open position.

When and where does the Board meet? Members meet on the third Thursday of most months, 7:00 to 9:00PM, at the Farm Bureau Association building at 9 Gabriel Drive in Augusta, approximately 1.4 miles north of the intersection of Route 95 and Routes 11/27. Any interested member of MSBA is welcome to attend.

What does the board do? The members of the Board meet to pool their ideas and provide leadership to the organization and handle any questions or situations that might come up. The Board is also responsible to hold an annual meeting. There have been years when Board members made all of the arrangements. Now, there is a rotation of state chapters who "host" by taking-on much of the work.

Board members volunteer, may travel a long distance, are not reimbursed, and have busy lives—there is an average of twelve people per meeting.

What does the President do? The President presides at Board meetings, and sees that other officers of the Association uphold their responsibilities. The President provides leadership and generally guides the Association in its activities and at the same time keeps the Board of Directors informed on all significant matters. The President acts on matters considered of vital interest to the Association only with Board approval—for instance, the President: nominates the standing committees (Legislative, Annual Program, Membership, Information and

MSBA BOARD...CONTINUED FROM PG 1

Education); may appoint committees or individuals for special purposes (such as managing special affairs, editing the Association's newsletter, or helping affiliate organizations); may appoint a special committee having expertise in a special subject and without regard to membership in the MSBA; and appoints a nominating committee.

What are the other officers responsible for?

Vice President: acts for and on behalf of the President in the President's absence. May be given specific responsibilities by either the President or the Board, and be charged with managing and performing such duties while remaining dependent on the Board for approval on review.

Treasurer: manages the financial affairs of the Association and provides detailed reports of financial transactions at each Board meeting. Provides a financial report at the annual meeting to inform the general membership of the Association's financial condition. The Treasurer shall be bonded.

Secretary: the custodian of the Association's records, communicating for specific purposes with persons or organizations as asked by

the Board or President, records and reports minutes for the record of Board meetings, and sends out meeting notices in a timely fashion stipulated in the Bylaws and requested by the President or Board. Prepares, in cooperation with the President, an order of business (agenda) for Board and Annual Meetings, and maintains a file of standing, special committees, and the members thereof.

Executive Committee (composed of the President, Vice President, Treasurer, Secretary, and Past President): acts for the Board, at the Board's direction, between Board meetings. The Executive Committee is to be given instructions by the Board on its responsibilities and may be authorized to act with full authority of the Board.

The officers shall be elected at the annual meeting by a majority vote of those members present. Terms of office shall be for one year or for the period between annual meetings. The President may serve not more than three consecutive terms of office.

For more information, please review the MSBA Bylaws or contact a member of the Board of Director. ▲

Sample Board Activity This Session

- Liability Insurance
 - Reviewed who is and is not covered.
 - Insurance for MSBA officers and Board.
 - Bonding for Treasurer and key positions.
- Anti-discrimination Policy
 - MSBA ensuring operation within the law, with an annual meeting and events open to all members without discrimination.
- Website Improvements
 - Members can now sign up for membership and annual meeting electronically.
 - Website accessed 1600 times in one month and from 26 different countries!
 - Non-spamming emails via Mail Chimp.
- Membership
 - Improved contact with new and renewing members.
 - Simplified membership form.
- New MSBA Logo—thanks Lori Harley!
 - Updated image, easily reproducible.
- 2010 Annual Meeting
 - York chapter will be hosting!
- Trade Show Booth
 - Collapsible professional-looking display.
- Library Services
 - New members are using library material, primarily DVDs and newer materials.
 - Donated copies of previous *Bee Lines* from Matt Scott to be converted into electronic versions accessible to members.
- Nomination Committee
 - Set-up to facilitate Annual Meeting elections for Board and Beekeeper of the Year.
- Communication Committee
 - Set-up to convey information to and from the Board, and consider *Bee Line* content.
- Appointments
 - Reappointed Carol Cottrill as EAS Director.
 - Filled two At-Large positions: Treasurer and Membership Director.
- Policy Manual
 - Reviewed previous secretaries' notes, reorganizing historical information for continuity amidst turnover to prevent repeating past work.
- Bylaws
 - Discussed minor changes; final deferred until next year.

See us in Brewer For your beekeeping needs!

We will have 3-lb. packages for pickup in mid-April.

Orders must be received and paid for by March 15.

Call for more information.

Harold and Hilda Swan

(207) 989-7803

R. B. SWAN & SON, INC
25 Prospect St • Brewer ME 04412

**Full line of
BEEKEEPING
SUPPLIES
available in
BREWER.**

Advice FREE!





MSBA Board

Executive Committee

President

Roy Cronkhite, 897-4043
roycronk@roadrunner.com

Vice President

Marc Plaisted, 582-8353
msplaisted@prodigy.net

Secretary

Erin Forbes, 838-4046
queenbee@overlandhoney.com

Treasurer

Charlie Merrill, 897-6128
merrillcc@gmail.com

Past President

Sally Greene, 926-3780
sagreene@maine.rr.com

Ex-Officio Members

Carol Cottrill,
EAS Director, Master Beekeeper
364-0917
carolcottrill@hotmail.com

Tony Jadcak,
State of Maine Bee Inspector
287-3891 or 287-7562
Anthony.M.Jadcak@maine.gov

Hank Nicolaus,
Maine Agriculture Committee
563-2555
handbnicolaus@gmail.com

Lincoln Sennett,
National Honey Board
437-2251
swans@uninets.net

At-Large Members

Lester Bourque, 557-0750
poochme@adelphia.net
Andrew Dewey, 244-9434
andrew@beeberrywoods.com

David Israel, 725-3139
disrael@bowdoin.edu

Julie Kilmer,
mamakin10@yahoo.com

Larry Peiffer, 642-1089
lpeiffer@sad6.k12.me.us

Noli Santos, 458-8569
nsantos@informe.org

Jean Vose, 563-7564
godslove@tidewater.net

MSBA Librarian

Carole Armatis, 368-4419

MSBA Chapters

Borderline Beekeepers

Ed Wilkey, 925-3203,
edwardwilkey@yahoo.com

Cumberland County Beekeepers

Ed Lewis, mittenhed@msn.com

Down East Beekeepers

Barb & Jim Reed, 244-3684,
or virginiaruth_2000@yahoo.com

Knox-Lincoln County Beekeepers

Al Maloney, 832-5162,
newaim@midcoast.com;
or Cheryl Rudy, 785-3055,
finalee@tidewater.net

Penquis Beekeepers Association

Tish Dutson, 997-3546,
tishdutson@yahoo.com

Sagadahoc County Beekeepers

Bob Budden, 725-8527;
or Sonia Woodrum, 375-8839,
woodrum1102@roadrunner.com

Tri-County Beekeepers

Jon Cullen, johndandkaren@pivot.net
or Adin Tooker, amtoker@gmail.com

Western Maine Beekeepers Association

Carol Cottrill, 364-0917,
wmba@roadrunner.com;
or Nick Kelley, 364-4121,
bakelley39@yahoo.com

York County Beekeepers Association

Ray Salmon, President, 699-8616,
Ryslmn@yahoo.com

Call for Content & Advertisers!

The Bee Line requests and welcomes member contributions! Please contact the Editor with your comments, photos, calendar events and articles for consideration for inclusion.

ALL CONTENT IS DUE 15 DAYS PRIOR TO THE PUBLISHING DATE.

Issues are published bimonthly:
Feb 15, Apr 1, Jun 1, Aug 1, Oct 1, Dec 1

EDITOR: Lori Harley

111 Alba Street | Portland, ME 04103
772-4445 | thebeeline@maine.rr.com

The Bee Line gives **advertisers** exposure to over 340 readers!

AD RATES, Per Issue:

Full Page \$60, Half Page \$30,
Quarter Page \$15, Business-Card Size \$10

Volume Pricing Available:

BUY 5 ADS & GET 6TH FREE!

Provide ad copy / ad to the Editor (hi-res PDF with fonts embedded; call for spec sheet). All advertising subject to approval. No medical or objectionable advertising accepted.

Presidents Comments

It has been an honor and a privilege to have been MSBA president in 2009. I'd like to thank all other Board Members, past and present, for their contributions to the Board and MSBA, as well as Skip Strong, past Membership Chairman (not currently a Board position). It has been interesting and exciting to be part of the decision-making process. It is incredible to sit at the table with the other members and exchange ideas and opinions that are part of working toward goals. These folks are all volunteers, with some traveling 1.5 – 2 hours one-way to attend the meetings. They do it for you, the MSBA member. Be sure to thank them when you can. Note the sampling of what the Board has been dealing with this session, listed on the page opposite.

The Annual Meeting is coming fast and sure to be the best one yet. York County, our newest Chapter, will be the host and is looking for a big turnout. Please come and join the lectures and festivities. There is a lot of interest in elections during the business meeting. Bring some money for the raffles! You can register for the Annual Meeting via the form on page 10.

We are taking nominations for Beekeeper of the Year and have included a form that you may use in this issue—see page 11.

Due to the closeness of this issue's printing to the Annual Meeting, please get your nomination in as soon as possible.

Roy Cronkhite 

Board meetings are open to all MSBA members.

Upcoming: 02/18/10 & 03/18/10 (7:00 – 9:00PM)
Maine Farm Bureau, 4 Gabriel Drive, Augusta

Increasing Colony Numbers: Package Bee & Nuc Considerations

by Tony Jadczyk, Maine Apiarist

There are several options available for new and established beekeepers when acquiring the first hive of bees, increasing hive numbers or recouping from colony losses. The options include: hiving a swarm of bees, the purchase of established colonies, the purchase of package bees and/or nuclei (nuc) colonies and the division of existing hives. At present, the two most common methods used by hobby beekeepers are package bees and nucs, while commercial beekeepers primarily use existing stocks for increase or replacement unless catastrophic losses occur.

According to *The Hive and the Honey Bee*, W.D. Achord made the first shipment of package bees in 1912 from Alabama to the north. The shipping cages were similar to today's package design (screened on two sides, wood on four sides) but shipped with candy as a food source instead of cans of sugar syrup. Package bees are primarily produced in southern areas with a prolonged spring that has ample pollen and nectar resources and are sold by the pound (approximately 3,500 bees/lb) with two- or three-pound choices the most popular options. The bees within the package are shook from production colonies at weekly intervals into large funnels either directly into the package or into a large shaker box and subsequently funneled and weighed into individual packages. The shaker box usually contains 10 – 15 lbs of bees shaken from 3 – 8 colonies. Therefore, the bees within the package usually come from more than one hive. Either prior to filling the package or shortly thereafter, a caged mated queen is inserted into the package and suspended near the feed can support. The queens within packages are not from the hives from which the packages are shook.

Prior to the mid 1980s, package bees were a popular method for northern beekeepers to restock hives after honey harvest and colony depopulation the previous fall. This

management strategy was common in northern honey production areas of both the U.S. and Canada, since the maximum amount of honey could be harvested without regard for sustaining wintered hives. In addition, during this time queenless booster packages were commonly shipped to honey production operations in order to increase the population of weakened wintered colonies. After the introduction of the tracheal and Varroa mites in the mid-1980s and the associated US/Canadian border closure, the demand for package bees decreased and many southern package bee producers went out of business. A review of advertisements in the beekeeping journals published in years prior to the border closure illustrates the rapid decline of the U.S. package bee industry. Fortunately, the package bee industry has experienced an increase in producers in recent years due to renewed domestic demand.

The continued border closure and advent of international package bee shipments from New Zealand and Australia to North America has resulted in a return to shipping bees with a sugar candy or sugared gel-like substance like the pioneers of this industry practiced.

Nucs (nucleus hives) are mini hives that contain a laying queen, one or more frames of brood, and one or more frames of honey and pollen. Nucs usually consist of three to five standard frames, with four- and five-frame nucs most common. In general, a three-

frame nuc consists of a frame of brood, a partial frame of brood/pollen, and frame of honey. Four-frame nucs usually have at least two frames of brood, a frame of honey, and frame of open comb/pollen; likewise, a five-frame nuc consists of a least three frames of brood, etc. A nuc should have sufficient numbers of bees to cover the brood in order to avoid chilling of brood.

There are basically two types of nuclei produced, and like package bees, the queen within the nuc usually does not come from the parent hive. Spring nucs are essentially splits or divisions from established colonies that consist of frames of brood that may or may not originate from the same parent colony. Spring nucs contain frames of brood, honey, pollen and a frame of empty comb or foundation. Most spring nucs are produced with an introduced mated queen; however, some producers insert a queen cell or allow

We've Raised The Bar On Quality Beehives.



Our Top Bar beehive offers a natural, sustainable, bee-friendly way of keeping bees, because it lets bees make their own pure, natural beeswax.

- Made of quality materials
- Easy to assemble
- Easy to manage



Order yours now!
To learn more about
natural beekeeping,
call us, or visit our
website today!

www.goldstarhoneybees.com

207.449.1121



Gold Star Honeybees

PO Box 1061 Bath Maine 04530



the bees to rear a queen in lieu of introducing a mated queen. Spring nucs are made in both southern wintering grounds and in the north. It is important that the producer evaluate both the queen's acceptance and her performance prior to sale.

Wintered summer nucs differ from spring nucs since the nuc is produced during late summer/fall and sold the following spring. Like spring nucs, the queens can originate from introduced mated queens, introduced queen cells, or queens reared by the nuc the previous summer. Advantages of wintered nucs include the presence of an established and proven queen with a history of wintering success.

The pros and cons of package bees versus nucs are well known. Following are several realities for consideration and remedial actions that may be applied.

Nucs

The advantage of nuclei concerns the fact that there is a laying queen, brood of all stages, and some food reserves present. Therefore, if weather conditions are favorable, the hive will build faster since there is no "dwindle period" after transfer into standard equipment. The odds are greater (but not guaranteed) that a nuc could produce a honey crop the first year. Wintered nucs have an added advantage in that any latent pathogens have ample time to be expressed prior to sale.

The disadvantages of purchasing nucs include: the greater cost compared to package bees; the logistics involved with pickup or delivery; and the additional cost of a deposit on nuc boxes and time/energy involved with returning them. In addition, when purchasing nucs there is a potential for acquiring brood disease, especially if the seller routinely uses antibiotics for disease suppression. Also, when purchasing nuclei there is a potential for chalkbrood, an elevated mite load, the presence of mites with multiple miticide resistance, the presence of viral pathogens and Nosema. There is also the possibility of acquiring brood comb contaminated with mite

treatment residues. Furthermore, at times, nucs are sold with very old dark brood comb or comb with an excess of drone cells.

Package Bees

It has been said for years that the advantage of package bees is that the new beekeeper grows with the package. Another advantage of package bees concerns price, which can be significantly lower than that of nuclei. In addition, the potential of contracting brood disease from the producer and excessive mite loads is minimal. Packages bees can be infected with Nosema, but this issue is usually negated since the bees are routinely fed sugar syrup treated with fumagillin after installation. In favorable conditions packages are capable of producing surplus honey their first year.

The disadvantage of package bees concerns the decline in adult bee population during the first month after installation. The population of a three-pound package (10,500 bees) can diminish by approximately one half prior to the first brood hatch. Therefore, if a package is installed on April 15th, the hive may not be back to the original population until May 22 or later, depending upon whether the package was installed on foundation or drawn comb. Another common occurrence with package bees concerns the queen—the beginning beekeeper often fails to recognize poorly mated queens and supersedure preparations that are common three weeks after installation. Finally, several years ago, the United States Postal Service ceased insuring package bee shipments to Maine's postal zone and will no longer reimburse for losses during transit. Fortunately, a number of northern beekeepers drive to southern states and return with truckloads of package bees for distribution. This practice results in rapid delivery of healthy bees that aren't stressed by the days that would have been spent in the USPS system.

Package/Nuc Bee Recommendations

- Consider starting with at least two hives—for comparative reasons and for the purpose of obtaining eggs in the event of queen failure.
- Install packages at dusk or during a light rain during the day, to prevent drift.
- If the queen within the queen cage is dead, don't despair since another queen is probably loose within the package. Check for eggs when comb is present 7 – 10 days.
- In 4 – 5 days, check to ensure the queen is released from her cage and remove cage if so. Check for eggs in 7 – 10 days.
- Prevent dwindle and mitigate supersedure impulse by inserting a frame of healthy capped brood from another colony within cluster at one week, when queen release and eggs are verified.
- Check brood pattern when brood is capped (pupal stage) to ensure queen is properly mated.
- Install package on disease-free drawn comb if available. This aids colony buildup.
- Feed package bees and nucs for the first few weeks, especially when using foundation. Package bees and nucs will often consume 20 – 30 lbs of syrup during the first month.
- If you want to try pedigree stocks such as Russian, VSH, MnHyG, or change race, requeen during the honey flow in June or July.
- Have fun. 🍓

Editors Note: Please be reminded that Tony Jadcak has provided many beekeeping reference materials available via the MSBA website—of particular note this time of the year: "Spring Management." Download as a PDF from www.mainebeekeepers.org/MSBA_Jadcak.shtml

Sugar or Honey?

by Joanne Romano

I found my research regarding honey (versus table sugar) and their benefits quite amazing. I gathered a good deal of information and wish to gather more, as there is more to be gathered. This article is designed to compare honey to refined sugar.

When I reference table sugar in this article, I mean refined white cane sugar (sucrose), as this is the most predominant sugar that we find in our local supermarkets. Both honey and sugar are carbohydrates (or sugars). Sugars are grouped primarily as monosaccharides (single sugar molecule), disaccharides (2 sugar molecules) oligosaccharides (3 – 10 sugars) and polysaccharides (greater than 10 sugar molecules). With the exception of the monosaccharides, all of the other saccharides consist of several sugars linked together. Although honey has some oligosaccharides, sugar and honey are considered to contain relatively simple sugars.

To credit both sugar and honey, and to refute the belief that consuming simple sugars would cause a quick rise in blood glucose levels and a heavy insulin demand, it has been shown that some complex carbohydrates raise blood glucose levels and have a higher glycemic index (GI: a measure of how quickly carbohydrates are broken down into glucose), significantly more so than certain simple sugars. Starchy foods such as white bread produce a higher glucose response than honey and sucrose. Regarding blood sugar levels, the amount of carbohydrate consumed seems to be more relevant than the type of carbohydrate consumed. I can observe this in myself, as I tend to eat too much pasta when I make my own spaghetti and meatballs. It's so good!

SUGAR

I don't have a lot to say about refined white table sugar, as there is not a lot to it regarding benefits. Table sugar contains sucrose (disaccharide) only, which is broken down

by an enzyme in the body to release glucose and fructose. So, table sugar consists only of sucrose and calories—it doesn't have antioxidant properties or antibacterial properties, nor does it contain minerals, vitamins, proteins, or amino acids. The processing of raw cane sugar strips it of its nutrients.

During the processing (milling) of raw sugar, sulfur dioxide is bubbled through the cane juice. This bleaches the previously brown or yellow raw sugar to produce the white sugar sold in our supermarkets. During the refining process of sugar, phosphoric acid and calcium hydroxide are added to capture and remove impurities.

HONEY

Approximately 95% of the solids in honey are sugars and the two primary sugars found in honey are glucose (also known as dextrose) and fructose (also known as levulose). Both of these sugars are monosaccharides and contribute to about 85% of the solids in honey. Other sugars are found in honey, to a lesser degree: ten disaccharides, ten trisaccharides, and a few oligosaccharides are found in honey. I don't process my honey other than filtering it through a 200 – 600 micron filter. I do heat it minimally to remove crystals—Frederique Keller of the American Apitherapy Association suggests not heating it above 90°F, to avoid any danger of destroying any of its 200 components, including its antibacterial properties.

Enzymes

The enzymes present in honey are almost all added by the bee when converting nectar to honey. Trace amounts of enzymes found in honey come from plants.

The predominant enzymes in honey are glucose oxidase, diastase (amylase), and invertase (α -glucosidase). The enzyme glucose oxidase, present in the pharyngeal gland of the bee, leads, ultimately, to the conversion of dextrose to gluconic acid. Gluconic acid is primarily responsible for honey's acidity. The acidity of a solution is based on its pH, which is based on a scale of 1 – 14. A pH

of 7 is considered neutral. A pH of less than 7 is considered acidic; the lower the number relative to 7, the more acidic a solution is. On average, honey has a pH of approximately 3.9. (The high sugar levels mask its acidity when tasting honey.)

The glucose oxidase enzyme has another function. It forms hydrogen peroxide when it acts on glucose. Hydrogen peroxide contributes to the antibacterial activity of honey. The hydrogen peroxide also helps to prevent fermentation of the nectar while it is being converted to honey by the bees.

The enzymes diastase and invertase in honey help break down sugars during digestion, so in effect, the human body has to produce less of its own digestive enzymes during this process. Only the enzymes in our own bodies break down table sugar.

Antibacterial Properties

As well as releasing hydrogen peroxide, honey has other antibacterial properties. It also acts as an antibacterial agent due to its acidity and high sugar content. Bacteria don't grow in an acidic environment. Thanks to the processing of honey by the bees, honey is a supersaturated solution (contains more sugar than it normally would at room temperature). Honey is also hygroscopic; it will absorb water from the air. It is due to honey's hygroscopic nature that it is able to kill bacteria that find its way into honey. Through a process called osmosis, any bacteria that wander into a jar of honey get the water sucked out of their cells. As the water is removed from the bacteria's cells, the bacteria cells dry out and die. Some bacterial spores that find their way into honey are not destroyed by the honey, due to their rugged external membrane. These spores will not affect a healthy human adult, but may be a problem for infants under 1 – 2 years and people with compromised immune systems.

Vitamins

Although small in quantity, honey does contain vitamins B₁, B₂, B₃, B₅, B₆, and C.



Ash or Minerals

Honey contains anywhere from 0.02 to over 1% minerals by weight. The minerals consist of potassium, sodium, calcium magnesium, iron, copper, manganese, chlorine, phosphorous, sulfur, and silicon. Darker honey tends to contain more minerals.

Protein and Amino Acids

Honey also contains proteins and amino acids in small concentrations of about 0.26%. They originate from nectar, bee secretions and pollen.

Antioxidant Properties

Honey contains phytochemicals. As well as the organic acids, vitamins, and enzymes in honey, the phytochemicals contribute to its antioxidant properties. Antioxidants are substances that may protect your cells against the effects of free radicals (molecules produced during digestion, or by environmental factors like tobacco smoke and radiation). Free radicals can damage cells, and may play a role in heart disease, cancer and other diseases. The darker the honey, the more antioxidant properties it has.

Prebiotic Properties

A prebiotic is a non-digestible dietary supplement that contributes to maintaining beneficial bacterial (*Bifidobacteria*) flora in our intestines while suppressing the growth of harmful bacteria. The oligosaccharides in honey may act as prebiotics. Research at Michigan State University indicates that adding honey to fermented dairy products like yogurt can enhance the growth of *Bifidobacteria*.

Medicinal Uses

Dr. Andrew Kochan of the American Apitherapy Society has noted that honey consumption is good for insomnia, anorexia, stomach and intestinal ulcers, constipation, osteoporosis and laryngitis. Some honeys help with dyspepsia and GI inflammation, and inhibit *H. Pylori* (the bacterial responsible for stomach ulcers). He notes that researchers have confirmed that honey does act as a broad-spectrum antibiotic, and it has antifungal and antiviral properties. He explains that honey can be applied externally on the body to help with athlete's foot, eczema, lip sores, wounds, bedsores

and burns. And finally, that honey can reduce the size of postoperative scars, treat cataracts and conjunctivitis, normalize the digestive microflora, calm the nerves, and facilitate sleep.

Although I am a beekeeper, I have not completely weaned myself from refined white table sugar. However, while shopping at the grocery store recently, I looked at a bag of white table sugar. As I pondered the sunrise over the rolling hills of the cozy little farm pictured on the front of the bag, an image of sulfur dioxide being bubbled through a vat of liquid cane sugar replaced the serene image and I found myself reaching, instead, for a bag of raw sugar. I am not a purist yet, but I am getting there! 🍯

Honey, a Reference Guide to Nature's Sweetener and Total Antioxidant Content of Alternative to Refined Sugar by the National Honey Board

Honey Composition and Properties (Rev. Oct '80) by J.W. White, Jr., and Landis W. Doner

Hive and the Honey Bee by Dadant

Journal of the American Apitherapy Society (Apr/Jun '09): *Honey* by Andrew Kochan, MD (6/08)

American Apitherapy Association: *Apitherapy* CD

Honey, a Source of Beneficial Enzymes by Todd Hardy

Crystal Bee Supply

12 Elginwood Road

Peabody, MA 01960

Telephone 978-535-1622 Fax 978-536-3156

**Authorized dealers for Mann Lake, Brushy Mountain and Maxant Industries.
Equipment for your hive assembled or unassembled on site.**

Package Bees

3 lb package with a marked queen \$88.00

First shipment can be picked up April 16 or 17

Second shipment can be picked up May 7 or 8

A deposit of \$45.00 per package is required to reserve you package(s), final payment is April 1, 2010.



Report from the American Beekeeping Federation [ABF] Conference

by Erin MacGregor-Forbes, Master Beekeeper

I have been a member of the American Beekeeping Federation for several years now, but this was my first time attending the meeting. I was convinced to do so by Dave Mendes at a dinner after the SNEBA conference (see page 16). It doesn't take too much arm-twisting to get a Mainer to agree to go to Orlando in January.

The meeting and all activities, January 12 – 17, were within a big hotel resort complex. In addition to the ABF, other groups were at the meeting: the Canadian Honey Council, Apiary Inspectors of America, and the Canadian and American Associations of Professional Apiculturalists.

The conference is big, with nearly 800 beekeepers in attendance. There were four concurrent sets of meetings going on for Shared Interest Groups (SIG), as well as the general sessions. The SIGs included Commercial Beekeepers, Package Bee & Queen Producers, Honey Producer-Packer, and Serious Sideline. Researchers and Apiary Inspectors were also meeting and presenting to their own groups. I mostly bounced back-and-forth from the general assembly to the Sideliners SIG.

On opening day, the keynote speaker was Dr. Yves Le Conte, from the French National Institute of Agricultural Research. He talked about the current research going on in France and other parts of Europe with regards to bee health. He also described a fight the French Beekeepers had to get “Gaucho,” a pesticide used on sunflowers, banned in France. He likened that struggle to “David against Goliath.” The beekeepers

united with the scientific community and successfully fought the chemical company Bayer to stop the sale of Gaucho and Regent in France. The beekeepers fought the Bayer in the courts, winning four victories at different levels. “The beekeepers lobbied the public to become aware of the plight of the bee.” Le Conte told us. The largest French beekeeping group, the National Union of French Beekeeping, has over 22,000 members out of an estimated 70,000 total beekeepers in France, most of whom have 5 – 10 hives. Compare that to our largest group, the ABF, with about 1,000 members—we need to organize better.

Dr. Le Conte discussed the connection between increased colony losses in many different countries around the world and the need for increased communication between researchers. Dr. Le Conte is part of COLOSS, an organization of Bee Researchers and others working to improve colony health, with the following missions:

1. to establish international standards for monitoring and diagnosis to create reliable data about honeybee colony losses, comparable between countries and years;
2. to identify the factors/mechanisms underlying the massive worldwide colony losses;
3. to conduct systematic investigations of the interactions between factors, based on proper scientific methods with set experimental standards;
4. to design and disseminate emergency measures and sustainable beekeeping methods and management schemes.

There are quite a few US researchers on the COLOSS team, including Dr. Jeff Petis and Diana Samatarro (remember her from your bee school text, *The Beekeeper's Handbook*?). I am glad to know that at the researcher level, our US beekeepers are extremely collaborative and cooperative. I found it amazing and humbling to be in a room with some of the greatest minds in beekeeping, all working together to promote bee health and better beekeeping practices. It certainly makes you realize that the struggles facing honey bees are complex and comprehensive. If cell size or natural comb were the answer

to the honey bee problems, these people would have certainly found that long ago.

On Thursday morning, I attended the “Ladies Auxiliary Breakfast,” the title of which I found to be sexist and insulting, but the actual meeting was a blast. Many of the ladies, including myself, were not “auxiliary,” but the actual beekeepers. This was my opportunity to meet the Honey Queen and Princess candidates (read Ambassadors)—this program promotes beekeeping and honey awareness all around the country. I hope that we might bring one of them to Maine for the Fryeburg Fair, but more about that another time.

Thursday afternoon I was with the sideliners, learning about setting up mentoring programs, teaching queen rearing on a group/club level, and comb honey production. I hope that the MSBA or local clubs pick up on some of these ideas. Mentoring programs are the best way to teach beekeepers, young and old. Queen rearing is the key to sustainability in beekeeping. Comb honey is real, raw, unadulterated honey for sure, as there is no way to fake comb honey.

Friday, I was back in the general assembly. The day was full of researchers and beekeeping experts discussing many different aspects of bee health. Talks included: Varroa-Sensitive Hygiene (Dr. Jeff Harris), Causes of Mortality in Beekeeping Operations (Dennis VanEngelsdorp), The Pesticide Connection (Maryann Frasier), Bees and Pesticides 2010 (Dr. Marion Ellis), Hive Products: From Folklore to Pharmacopoeia (Richard Jones, IBRA, United Kingdom) and What's New (Randy Oliver).

Dr. Jim Tew was the speaker for the Scholars Recognition Luncheon on Friday. Anyone who has heard Dr. Tew speak will understand immediately why he is one of my favorite speakers—he is funny, bright, engaging, and makes me remember what I love about bees and beekeepers.

Friday afternoon, there was an auction of the honey that had been entered in the ABF Honey Show and I bought a bunch of jars

...CONTINUED ON PG 13



SERVICE ■ QUALITY ■ SUPPORT



At BRUSHY MOUNTAIN BEE FARM we sell the highest quality beekeeping supplies in the nation — all at competitive prices! From beginner to professional we have every item to fill your needs!

- Woodenware
- Foundation
- Tools
- Protective Clothing
- Drugs & Chemicals
- Bottling Equipment
- Containers
- Hobby supplies
- Much more!

ORDER TOLL-FREE :

1-800-BEESWAX

1-800-233-7929

www.brushymountainbeefarm.com

FAX ORDERS: 1-336-921-2681

Customer Service 1-336-921-3640

Send for our FREE catalog.

www.beeequipment.com

BRUSHY MOUNTAIN BEE FARM, Inc.

610 Bethany Church Road, Moravian Falls, NC 28654

Bee Culture

THE MAGAZINE OF AMERICAN BEEKEEPING

Don't miss even one exciting issue of *Bee Culture* magazine filled with everything you want to know about:

- Bees • Beekeeping • Beekeepers
- How-To's • Honey Report • Profiles
- Recipes • Funny Stories • Research
- Something for Everybody

www.beeeculture.com

Bee Culture Magazine

623 W. Liberty Street, Medina, OH

Take advantage of our incredible discount because you are in the MSBA:

SAVE 20%!

Or call 800-289-7668, ext. 3220 with credit card.

SERVICE

Always Friendly ♦ Always Knowledgeable

Mann Lake Ltd.

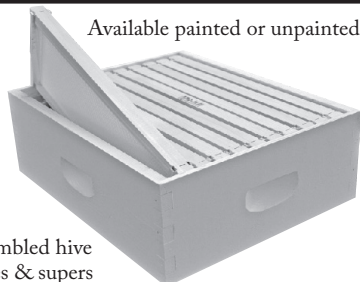
800-880-7694

501 South 1st Street

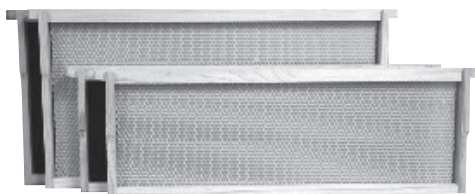
Hackensack, MN 56452

www.mannlakeltd.com

Available painted or unpainted.



Assembled hive bodies & supers



Assembled frames



Max Pro Feeder with cap & ladder system

- ♦ Woodenware
- ♦ Foundation
- ♦ Books
- ♦ Hand tools
- ♦ Protective clothing
- ♦ Feeders
- ♦ Feeds & medications
- ♦ Extracting equipment
- ♦ Honey containers
- ♦ Container labels

PRODUCTS DESIGNED FOR BUSY BEES LIKE YOU!

We have a knowledgeable sales staff ready to assist you with all your beekeeping needs. Feel free to call us with any questions you may have—we're happy to help!

MAINE STATE BEEKEEPERS ASSOCIATION ANNUAL MEETING

March 27, 2010

Le Club Calumet, 334 Northern Avenue, Augusta, Maine

HOSTED BY YORK COUNTY BEEKEEPERS ASSOCIATION

We are honored to have two great speakers this year:

Jennifer Berry, University of Georgia Bee Lab & Cindy Bee, Master Beekeeper

Meet Other Maine Beekeepers and Learn About Beekeeping!

T E N T A T I V E P R O G R A M S C H E D U L E

8:00 – 9:00	Registration and Coffee†	1:00 – 1:15	SARE Farmer Grant Update, Erin Forbes and Larry Peiffer
9:00 – 9:15	Welcome Roy Cronkhite, President, MSBA	1:15 – 2:15	Cindy Bee, Talk #2
9:15 – 10:15	Jennifer Berry, UGa Bee Lab: Comb Contamination Research	2:15 – 2:30	Break
10:15 – 10:30	Break	2:30 – 3:30	Jennifer Berry, Talk #2
10:30 – 11:30	Cindy Bee, Master Beekeeper: Removing Bees from Buildings	3:30 – 4:30	Raffle and Door Prizes
11:30 – 12:15	Business Meeting: Annual Report, election of officers, MSBA awards	† Juice, coffee, tea, bottled water and baked goods will be available in the morning.	
12:15 – 1:00	Lunch‡	‡ Buffet: ham, baked haddock, vegetable lasagna, baked beans, garden salad, deviled eggs, french bread, coffee, tea, milk, bottled water, dessert.	

Raffles & Tickets There will be raffles to benefit the Association. You are invited to bring an item for the raffle table (not necessarily bee-related) and will want to purchase tickets for your favorite items. Everyone who pre-registers receives one free raffle ticket at the registration table.

Directions From I-95 North & South: Take Exit 113 (Route 3: Augusta/Belfast) to the first traffic light. Go right on Route 104 south (West River Rd.) toward Augusta. The Calumet Club is located on the right at the top of the hill 0.4 miles from the light.

Please register online via Paypal at www.mainebeekeepers.org, or with the form below, by March 15.



Jennifer Berry is Apicultural Research Coordinator and Lab Manager at the University of Georgia. She's actively involved in all aspects of honey bee research and education for the state of Georgia. Her primary areas of

research have been a queen breeding program and Integrated Pest Management work for varroa mite control. Jennifer travels extensively and speaks to local, state, national and international beekeeping associations. She also writes a monthly article for *Bee Culture* magazine. Jennifer has conducted research on Small Cell Comb and Varroa mites as well as wax analysis studies with regard to pesticide residues. Jennifer's Queen Breeding program is a long-term program selecting for mite- and disease-resistant queens.



Cindy Bee is a third-generation beekeeper and Master Beekeeper. Cindy's full-time job is beekeeping with a primary focus on live colony removals from buildings. Available this spring, Cindy has written a book on bee removals, and is

extremely active in the Georgia beekeeping community and in education and outreach.

Erin Forbes & Larry Peiffer will present a brief update on their SARE grant project comparing colonies started from packages vs. colonies started from Northern-raised overwintered nucs. Their talk will include information regarding their full grant project presentation workshop which will be a free workshop presenting the full results of the project scheduled for May, 2010.

NAME / S (PLEASE PRINT)

STREET

CITY / TOWN

STATE

ZIP

PHONE

CELL

EMAIL

Annual Meeting 2010 Registration

Registration _____ @ \$30.00 each Total: \$ _____

2010 MSBA Dues: ☐ new ☐ renewing

Single Membership _____ @ \$15.00 each Total: \$ _____

Family Membership _____ @ \$22.50 each Total: \$ _____

Grand Total Enclosed: \$ _____

Please make check payable to the MSBA, and send to:

MSBA Annual Meeting
c/o Peggy Pride
19 Lizotte Road
Lebanon, Maine 04027

Registration Deadline:


March 15, 2010

Chapter(s) you are a member of: _____

Beekeeper of the Year Nomination

The candidate for the award must be a member in good standing of the MSBA and shall be nominated by a local Chapter or by a member of the MSBA Board of Directors. The candidate must currently own or manage honeybee colonies in the state of Maine.

prior
(3)



via mail: 240 Haines Corner Road, Livermore Falls, ME 04254
or via email: roycronk@roadrunner.com

			DATE SUBMITTED	
NOMINEE NAME				
STREET		CITY/TOWN		STATE ZIP
PHONE		EMAIL		

☐ MSBA (MAINE STATE BEEKEEPERS ASSOCIATION) ☐ EAS (EASTERN APICULTURAL SOCIETY)
☐ MAINE MSBA CHAPTER AFFILIATION(S) _____ ☐ OTHER _____

[illegible]

MSBA CHAPTER

BEES-N-ME

Master Beekeeper: Rick Cooper

Equipment and Supplies

Dealer of a full line of woodenware and supplies from Brushy Mountain Bee Supply, Betterbee, Humble Abodes, Walter Kelley, and Dadant.

Tools, woodenware, extractors, smokers, protective clothing, containers, labels and more!
Also Beekeeping classes and workshops.

All your equipment and supply needs!

Italian Queens for Sale!

Gentle, productive strain. \$20.00 each, available most of the year, please call for availability.

For more information please contact
Rick Cooper, (207) 666-5643
1075 Post Road, Bowdoinham, Maine 04008
www.bees-n-me.com honeybee@gwi.net

Order by March 1 — Available in Mid-May

Strong 5-Frame Nucs

Available in Mid-May

Hygienic Queens are
selected for Hardiness, Cleanliness,
and Honey Production



Sunshine Apiary, Inc.

PLEASE CONTACT US FOR PRICING. ORDER BY MARCH 1.

Contact: **Paul Dumont**
humbleabodes@prexar.com

Toll-free: **1-877-423-3269** (877-4BEE BOX)
(207) 549-5501 HumbleAbodes

www.humbleabodesinc.com | 636 Coopers Mills Road, Windsor, MAINE

SWAN'S HONEY

Distributor for MANN LAKE and GAMBER CONTAINER also BETTERBEE, HUMBLE ABODES, and MITE AWAY II

SIGN UP FOR OUR BEE SCHOOL STARTING IN MARCH

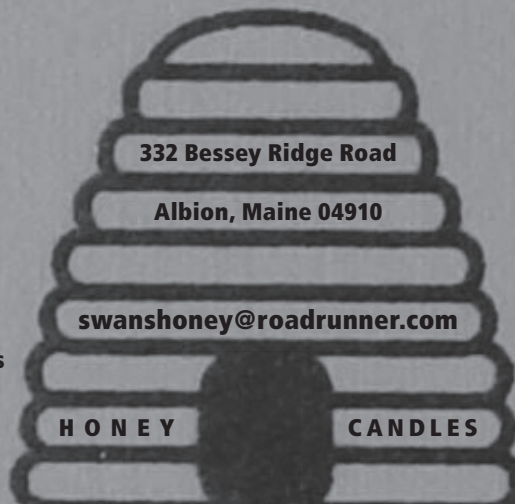
FULL line of
containers,
glassware, &
BEEKEEPING
supplies.
Please visit
our brand
NEW store.



Lincoln Sennet

"SWAN'S has the
lowest prices for jars
because they buy
containers by the
semi-trailer load!"

- 46 different glass jars/bottles
- Bulk corn syrup



5-Frame Nucs

\$95 plus
a \$30 deposit
on wooden nuc box
(refundable
upon return)

OR

\$105 with a
cardboard nuc box

(207) 437-2251

Store Hours: M – F: 8 – 3 [beginning late April, SAT: 9 – 12]

ABF CONFERENCE....CONTINUED FROM PG 8

from all around the country. I even managed to get a jar of the prize-winning Sourwood honey from Virginia Webb who won the 2009 International Honey Show at Apimondia in France this past September.

Saturday daytime was filled with hands-on workshops. I attended one on Apitherapy. Saturday evening we had the Final Banquet which was a superb meal and the company was fantastic. The Honey Queen and Princess were crowned and there was a live auction of many items, including a wolf pelt donated by an Alaskan beekeeper, and some gorgeous artwork. Dr. Medhat Nasr was given an award for service by the Canadian Beekeepers, and David Mendes was elected President of the ABF.

I went to the ABF conference knowing that I would not see many of the familiar faces I know from the regional club meetings that I regularly attend. I told myself that this would be a good opportunity which would force me to meet new people. It certainly was that! I made some great new friends including a third-generation beekeeping supplier from New Zealand, and many others. In the evenings we laughed and drank and talked about bees—I hung out with researchers, other sideliners, bee inspectors, equipment suppliers, Mexican Beekeepers, the Ontario Tech-Transfer team “bee girls” and so many others. I even saw our own Matt Scott at the conference!

I highly recommend ABF to anyone who is serious about wanting to learn about bees and beekeeping—it was a great conference and a great bunch of beekeepers. Next year, it will be in Galveston, Texas, January 4 – 8. Details will be available on their website, www.abfnet.org. 🐝

Q: I have no feel for what my bees have left for food in the hive. The hives are definitely lighter than they were in early November, and the bees are alive, but I can't tell what's left for honey just by hefting the hive.

A: At least by early- or mid-March, listen to the hives (a stethoscope or a drinking glass can help)—can you hear if the cluster is in the bottom or top deep? If in the bottom deep, they will be fine. If they are in the top deep, it's because they have eaten the food in the bottom and have moved up—to find out how much they have left, carefully peel-off the outer cover. Don't remove or disturb the inner cover, as this would break the propolis seal (it being cold, they can't break cluster to repair a broken seal, so would have an unwanted breeze). Pour a couple cups of white granulated sugar in a horseshoe shape around the vent hole, the bottom of the “U” pointing *away* from the front notch, keeping the way clear for continued ventilation and escape. Check in a week or two. If they *did* take the sugar, they needed it, so you'll need to replenish it thereafter, as they will have become dependant on you to feed them. – Larry Peiffer

- B O O K R E V I E W -

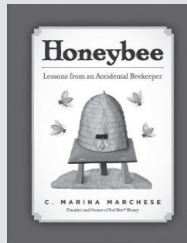
Honeybee: Lessons from an Accidental Beekeeper

by C. Marina Marchese

W. Adam Stearns I take my reading about beekeeping in the winter months very seriously. My latest read was a book suggested to me by my very good friend Dick Maron—*Honeybee: Lessons From An Accidental Beekeeper*, by Marina Marchese. Marina is an active member of the Back Yard Beekeepers Association, providing club members with an excellent Soap Making workshop each year during the winter months when bees are not so active. Marina also serves on our board of directors at BYBA.

Marina's book is a wonderful read. She takes the reader through the sometimes agonizing decision of actually becoming a beekeeper at a very personal level, and provides insight throughout the book of just how taking up the art of beekeeping literally changes a person's life. All of us who have been beekeepers for years still have vivid memories of hiving our first package of bees or hiving our first nuc. Marina eloquently shares her first experience in this endeavor in a way that would make any “wanna-Bee” become convinced that beekeeping is for them, in spite of the “hazards” associated with one end of our little girls. Marina describes how she was introduced to beekeeping, and all of the fun things that can happen when the lid comes off that first package!

The book then goes on to describe how beekeeping literally changed the author's life. Marina gave up a fast-paced job in the big city to make beekeeping, and the myriad of activities associated with it, her meaning in life. The book also provides new beekeepers with a good foundation of the requirements of the art of beekeeping, walking the reader through the activities associated with each season in a way that will not dissuade the reader from our wonderful craft.



Every beekeeper has experiences in life that compliment their own contribution to the body of knowledge of our craft. Marina is no exception. Her experiences in her old work, as well as interests/expertise in qualifying wines and other foods, provide wonderful insight into the world of honey tast-

ing as a Honey Sommelier. Marina describes how classifying wine, a product varying in quality due to plant variety, terroir, and weather conditions, isn't that much different than classifying honeys, which depend on the very same things. She provides a wonderful listing of 75 honey varieties (single flower source), providing plant characteristics, plant bloom time, terroir, honey color, tasting notes and wonderful food pairings. Marina also briefly discusses uses for the other beehive products: propolis, pollen and wax.

This is not a “how to” book, but rather a chronicle of a personal journey, and the wonderful learning and life change that took place along the way. I highly recommend this book for those who may be considering becoming a beekeeper. When at that crossroads, I read *The Queen and I* by Ed Weiss. In my opinion, the emotional draw to beekeeping that I got from reading Ed's book is exactly the kind of impression that Marina's book will give to anyone who might consider joining our ranks as stewards of the wonderful *Apis Mellifera L.* Our beekeeping clubs should have this book on hand for “new-Bees” and “wanna-Bees” as they work to understand this wonderful craft and decide if working with Honey Bees is for them. For more advanced beekeepers, this book, with a cup of warm tea and honey, allows for time to reflect back on those personal first experiences that make us come back for more each spring!!!



SARE Grant Colony Update 02/01/10—Biddeford Yard

by Erin MacGregor-Forbes, Master Beekeeper

In winter, no news is good news as far as honeybee colonies are concerned.

As of our last check this past weekend, all of the SARE colonies are alive and no major events have occurred in the bee yards since the last update in December.

I'll confess, I'm a bit of a "nervous Nellie" when it comes to my bees. With the bees in my home yard, I tend to walk past the hives every day and just give a listen. I don't knock on the hives, I just press my ear up against the hive and listen. They're quiet, but once you've got your ear trained, you can hear them. This hasn't been the case with the SARE colonies. There is only about a 50' trek from the plowed parking lot to the hives, but when I am in "work shoes," 50' through snow is enough to keep me away from the hives. No listening, no peeking, just looking from the parking lot and hoping all is well.

I did finally last weekend go down to the SARE yard on Saturday—this time I had my boots and gaiters (and the newly adopted, newest member of the Overland team, Nitro, a retiring Maine State Police dog—more on that later). I listened to and

actually took a quick under-the-inner-cover look at my most worrisome hive. They were fine. And the others I put my ear to, also fine. Hooray!

This is not to say by any means that the story of winter has been written, because it hasn't. February, March and April are the hardest months on bees. The colonies are likely just starting to rear brood again now, so their previously very low consumption rate of stored honey will dramatically increase over the next several months as the colony size begins increasing—as the workers start feeding the eggs and larvae.

February and March are characterized by cold—often bitter colds much worse than what we see in December and January. And then will come April, with its warmer days and weather for flying, but little or nothing for the bees to gather until the Maples and Poplars start. But now I've gotten ahead of myself.



Over the past few months I've spent a good number of hours compiling the SARE inspection data for the interim and final reports. I am also working on the Power Point presentation for the outreach project. Larry and I will *not* be presenting final results at the Annual Meeting in March, per a suggestion from Tony Jadcak, our State Apiarist and Project Technical Consultant. I had originally proposed that we would present final results at the Annual Meeting. Tony rightly pointed-out that many colonies are lost in March and April and that the project's final strength evaluation should not be made until May. So we have extended our end date until May. We will find a meeting space (hopefully on the USM campus if Cooperative Extension can help us with that) and arrange a time to present the SARE colony final results in mid to late May. This will be a free workshop, open to all. I hope to have the date, time and details finalized for announcement at the Annual Meeting. And I hope that many of you will attend, as we will certainly have lots of good information to present and some fantastic stories to tell.

So, like all of you, I am keeping my fingers crossed for the SARE colonies, and all of our colonies. I am hoping for a moderate winter with a few flying days each month.

In January, I got my wish. Here's to a great 2010 for honeybees. 🍄

Foundation-less Beekeeping? Why on earth would you keep bees with no foundation?

by Christy Hemenway

First of all, what exactly does it mean—foundation-less beekeeping? It simply means that no foundation is used inside the beehive. Top bar hives are a great example of foundation-less beekeeping. So is a conventional hive where the bees have drawn all their own comb without using foundation as a guide. There are other types of foundation-less hives as well—Warré hives for example, and of course custom-built hives. Whatever the choice of equipment, the bees make all the honeycomb used in the hive, out of their own natural, virgin beeswax, made from the wax glands in their abdomens.

Besides not being an additional item for the beekeeper to purchase and install, there are some interesting concepts involved with the keeping of bees on their own beeswax without any foundation, both pro and con.

One of the most important factors in favor of natural wax is that there is no chemical contamination of the wax through beekeeper insertion of contaminated wax foundation. Jennifer Berry, the Research Coordinator at the University of Georgia Bee Lab, will be speaking at our Maine State Beekeeping Annual Meeting on March 27th about her comb contamination research.

Jennifer had some very interesting stuff to share at EAS last year about what happened when she set out to test the effects of sublethal doses of the two most common beekeeper-approved miticides on colony health in her two-year study *Assessment of Current Miticide Use on Honey Bee Longevity and Colony Health* [www.reeis.usda.gov/web/crisprojectpages/213332.html]. While preparing to establish the colonies used in this study, she had tests done on the foundation wax she was preparing to use and discovered it *already* contained detectable levels of the very miticides she was preparing to test for!

How can that be? Well, consider that coumaphos and fluvalinate are wax-soluble chemicals. They are the two most commonly used pesticides, and are found in preparations such as Apistan and Check Mite+. Wax-soluble means that these chemicals “dissolve” into the beeswax and remain there. When a beekeeper treats his/her hive, year after year, these chemicals accumulate in the wax, building up with each treatment.

Worse than that though, is to learn that coumaphos and fluvalinate also survive the process of being melted down, and so are remade into new foundation. So when you purchase new beeswax foundation from a US beekeeping supply house, it is very likely that it will already have detectable levels of miticides, right out of the box (Jennifer found that 100% of the samples she tested were contaminated!).

So what did Jennifer do? She used small “starter” strips of uncoated plastic foundation for the study colonies. As you can read in the February 2010 *Bee Culture* article about Jennifer, she currently uses unwaxed plastic foundation in all of her own colonies.

Jennifer’s study was in response to the CCD Action Plan prepared by the CCD Steering Committee having included an objective of testing the sublethal effects of those two miticides on worker bee longevity and colony health. This objective has been given “urgent priority.” Other researchers around the world are also studying these miticides and what sublethal effects they have on queen bees, worker bees, and brood raised in contaminated comb.

Allowing bees to make their own wax without foundation also allows bees to make their honeycomb cells in whatever size they want them to be and to put them in locations within the hive that suit their purposes. Some people believe that allowing the bees to vary cell size within the hive may improve colony health. I am one of those people.

So, if you don’t want to use foundation, what do you do? Isn’t it difficult to get bees to draw straight, removable honeycomb

(i.e. inspect-able)—without using foundation? Isn’t natural comb very fragile? Doesn’t it take a long time? Doesn’t the amount of energy it takes the bees to make their own honeycomb reduce honey production significantly? Good questions, all. Natural wax has its problems, too.

Since the ability to inspect the honeycomb inside the hive is required in order to inspect for disease, it is imperative to have some confidence that the comb the bees build naturally will be straight enough that it can be removed for inspection.

There are several ways to ask the bees to do this—though none of them is guaranteed to work all of the time. (Even with foundation, most beekeepers have seen that bees will often do what they please in spite of our best attempts.) The most important thing is to offer them a place that makes it easy for them to “build here” and ensure that there is a strong nectar flow on when you are asking them to build comb.

A one-piece beveled top bar works very well as a guide to get the bees to draw straight comb, a strip of wax or wood inserted into a groove in a flat top bar also works, and drawn comb on each side of a blank bar or frame will work most of the time. You can also cut the old comb from an already drawn frame, leaving a “starter strip” of wax at the top.

Bees are said to draw their own comb faster than they will draw foundation. The remarks often made by beekeepers about the “acceptance rate” of foundation should probably be telling us something. Richard Taylor states in *The How-To-Do-It Book of Beekeeping* that “Foundation, even composed of pure beeswax, is not intrinsically attractive to bees. Swarming bees offered the opportunity to cluster on foundation or some branch, show no preference for foundation.”

Michael Bush, who lives in Nebraska and keeps bees without foundation, provides suggestions about foundation-less beekeeping, including tips on getting bees to draw inspectable foundationless combs, on his website [www.bushfarms.com/bees.htm].

NOTES FROM FURTHER AFIELD

Southern New England Beekeepers Assembly [SNEBA] Conference

by David Israel and Erin Forbes

Living in New England, where the states are small and close together, we are fortunate to have many state and regional conferences nearby. Attending state and regional conferences is really a great way to expand one's horizons on what is new in beekeeping and meet others who share a passion for all things related to our favorite stinging insect. Conferences are a great way for beekeepers to get together to learn what is going on in beekeeping—the MSBA Annual Meeting is only one such opportunity.

Along with half a dozen or so Maine Beekeepers, we attended the Southern New England Beekeepers Assembly (SNEBA) Conference in Hamden, Connecticut, on November 21, 2009. The Conference theme was “Survivor Bees for the Surviving Beekeeper” and the meeting was sponsored by the Connecticut Beekeepers Association and Wicwas Press.

The featured speakers were Dr. Larry Connor, Wicwas Press; David Mendes, commercial migratory beekeeper from Ft. Myers, Florida, and President of the American Beekeeping Federation; and Randy Oliver, commercial beekeeper focusing on almond pollination and running the website www.scientificbeekeeping.com.

The conference was billed as “An all day event presenting current research and practical information in lecture and panel discussion

form.” Regional beekeeping associations were represented and a couple vendors of beekeeping equipment and supplies were on hand (it is always nice to see the gizmos from the catalogues).

Tons of great information was offered throughout the day—with three speakers in

an 8-hour conference, it was a whirlwind event. We saw a number of beekeepers we've met at other regional conferences, including Michael Palmer of Vermont (Northern Bee Breeder who spoke at our Annual meeting several years ago), Anne Frey (Master Beekeeper from New York), and many other beekeepers from Connecticut, New York, and Massachusetts. Highlights follow.

David Mendes began beekeeping when he was 12 years old. A full-time commercial beekeeper since 1977, he currently has 7,000+ hives for crop pollination and honey production.

David spoke about the need for preparation for the entire year of beekeeping. He likened what he does to running a marathon across the country with his bees—he stressed the need to think well in advance of today. The question, David asserts, is not “what is going on with this colony now,” but rather “what do these bees need to look like 2–3 months from now, and how are we going to get there?”

Every year David and his bees go to pollinate almonds in California, then Florida to “rest” (in the past they'd be making honey in Florida), then to pollinate blueberries in Maine, cranberries in Massachusetts, then the bees again move to the south for cucurbits and to get ready for the following February almond bloom.

David counseled that well-fed bees are healthy bees, and he shared different methods for scaling-up feeding for thousands of hives, including how to make clusters of home-made syrup feeding stations from 5-gallon buckets with holes drilled near the rim. He locates his feeding stations 100 yards from his hives to provide food for the colonies and to keep the bees fed during dearth periods when the bees are preparing for the blooms.

David also uses a mortar mixer (new) for the large-scale production of pollen substitute patties which he feeds his bees before they hit the road. His batch recipe is as follows (in the event any of us ever scale up this high):

100 lbs sugar	1 gallon water
25 lbs brewers yeast	1 gallon honey
12 lbs dried eggs	3 cups canola oil
Mineral supplement	3 cups lemon juice
Mineral Salts	½ cup Honey B Healthy

David does all this feeding and prepping so that when the bees get to California, they are strong. Bees in the US are not naturally built up strong enough for the almond bloom, as there is no place warm enough and providing enough nectar and pollen for the bees to be built up naturally. Feeding must be done to get the colonies ready for a pollination effort in February (the almond bloom).

For honey production, David is doing his best at staying away from the “poison” that is being used on citrus in South Florida. (to combat a new disease imported from China – commonly known as “citrus greening” or “yellow shoot disease”.) Dave is locating his holding yards “in the woods”—in Northern Florida, away from commercial agriculture ventures to reduce the risk of pesticide poisoning of his bees. This means that he is giving up an orange blossom honey crop, but he feels that his colonies are healthier when kept away from the citrus.

Later in the day David put on his American Beekeeping Federation (ABF) hat and spoke of the need for beekeepers of all apiary sizes to work together to get the governmental support of scientific research and pesticide testing that will benefit us all. The mantra that the government would not help “hobbyists” resonated throughout the day. The vast majority of us are “small scale”—



Dr. Larry Connor of Wicwas Press and Anne Frey of SNEBA

a much better term. The American Beekeeping Federation is trying to reach out to the many small-scale beekeepers to increase its membership and thereby increase its influence in Washington. Dave is doing a great job as a spokesperson and certainly caught the attention of many who otherwise thought that the ABF was not “their people.”

Randy Oliver, California Commercial Beekeeper and self-studied bee-health expert, was a passionate and frenetic speaker. His talk was so far-ranging and covered so many topics that we will just bullet-point some of them from our notes:

- Randy noted that the total dollar value of almond pollination contracts actually exceeds the total value of the US honey crop annually. These almond contracts are supporting other agriculture, which rides on the “coat tails” of the almonds.
- Good colonies require good management, excellent nutrition, and a low level of parasites in the hive—there is no magic formula, just good livestock husbandry.
- With almond pollination contracts going sky-high, colonies that would otherwise be too weak to survive are overwintered (with beekeeper support/feed), as they are worth so much. That leads to people keeping bees they should not and leads to the spread of virulent diseases, viruses and parasites that would otherwise die-out with the colonies. Then there is a huge convergence of colonies all in the almonds—the diseases and viruses are spread among the colonies, and then the colonies leave and go back to other parts of the country, carrying and spreading these diseases.
- The protein dynamics of the hive are important—well-fed bees are healthier bees. Signs of good nutrition are drone brood, swarm cells, and larvae “swimming in jelly.”
- Bees need a mixture of pollen sources, especially as they did not evolve in North America. Monoculture and Round-up prevent this—beekeepers should be aware of nutritional (pollen/protein) stress in their pollination contracts and feed accordingly.
- As the hedgerows between farms and fields are gone, we now have a “corn desert” in many places.
- In a dearth, ½ gallon of syrup and 1 lb of protein per week will hold bees over.
- If you can, raise your own queens—if you can’t now, learn to.
- When they can, bees protect themselves on the colony level via:
 - Antimicrobial royal jelly;
 - Intact integument—viruses cannot penetrate the skin of the bees;
 - Bees tear-out compromised brood to protect the colony;
 - Bees with Nosema will raise the temperature of the brood nest, making a “fever” to kill Nosema;
 - Bees also combat Chalkbrood by raising the temperature of the hive;
 - Bees use propolis—they “co-opt” the plants’ immune systems to protect the colony;
 - *The wound from the varroa mite causes costly immune response for the rest of the bee’s life.*

3 lb Package Bees for Sale



ITALIAN BEES

trucked direct from Georgia
for scheduled pick-ups
in Maine [Kennebunk,
Yarmouth,
Gardiner & Hope]:

**Second
Week
in April**

Call for pricing
after the 1st of the year.
Orders Pre-Paid

Contact Dave Smith 831-5085

sparkys@tidewater.net

SPARKY'S APIARIES 130 High Street, Hope, ME 04847

Dr. Larry Connor was master of ceremony and kept the day moving fast and on-track. Dr. Connor has been a researcher, a bee breeder, and is the author of many books on beekeeping, including the “essentials” series, *Bee Sex Essentials*, *Queen Rearing Essentials*, and *Increase Essentials*.

Dr. Connor presented two short talks and among the pearls of wisdom he shared during “Developing a Live or Let Die Beekeeping Plan on a Regional Basis” and “Local, Tolerant & Survivor Stock Options” were that every hive needs to have one locally raised nuc to back it up, and that club queen-breeding programs will be the key to sustainability for those of us in the north. He notes that one in six natural swarms will survive just one year. Beekeepers can raise the odds of survival substantially with good management and sustainable beekeeping practices. Dr. Connor is promoting campus bee education—teaching beekeepers how to manage colonies, rear queens, and make nucs through hands-on colony management in a group yard.

By the end of the day we were exhausted, but very glad to have had the experience and the opportunity to learn. It was a long, late-night drive home, but well worth the effort. We encourage you all to explore the beekeeping conferences nearby and afar—get in touch, we’d love to carpool! 🍌

BEEKEEPING SCHOOLS & WORKSHOPS

Cumberland County CE

5-Week Bee School

Instructors: Master Beekeeper Erin MacGregor-Forbes & Geoff MacLean
Mar 3 -31, 2010

Wednesdays, 6 – 8:30PM

Room 303, Payson Smith Hall,
USM Campus, Portland

FMI: Colleen Hoyt, 780-4205
or choyt@umext.maine.edu

Register by Feb 22; \$75

Ellsworth

5-Week Bee School

Feb 23 - Mar 23, 2010
Tuesday evenings

FMI: Andrew Dewey, 244-9434
or andrew@beeberrywoods.com

Gray

5-Week Bee School

Mar 3 – 31, 2010
Wednesdays, 6:30 – 8:30PM
Maine Forest Service Bldg., Gray
FMI: Colleen Hoyt, 780-4205
or choyt@umext.maine.edu

Register by Feb 24; \$75

Oxford County CE

5-Week Bee School

Feb 19 – Mar 19, 2010
Fridays, 6 – 7:30PM

FMI: Barbara Murphy, 743-6329
or bmurphy@umext.maine.edu

Rick Cooper

3-Week Bee School

Saturdays, 9AM – 3PM
Class 1: Feb 20, Mar 6 & 20, 2010*
Class 2: Feb 27, Mar 13 & 27, 2010*
*Package installation Apr 17

BEES-N-ME in Bowdoinham

FMI: Rick Cooper, 666-5643
or rick@bees-n-me.com

Swan's Honey

4-Week, 2-Open-Hive Bee School

Instructor: Lincoln Sennett
Mar 17, 24, 31 and Apr 14, 2010
Wednesdays, 6:30 – 9PM
TBA: 2 Sat. open-hive demos in May
\$60 (includes *The Backyard Beekeeper*)

2-Night Advanced Bee Class

Instructor: Lincoln Sennett
Mar 18 & 25, 2010
Thursdays, 6:30 – 9PM
\$30 (includes *Increase Essentials*)

332 Bessey Ridge Road, Albion
FMI: 437-2251 or
swanshoney@roadrunner.com

York County CE

5-Week Bee School

Instructors: Master Beekeeper Erin MacGregor-Forbes & Larry Peiffer
Feb 22 – Mar 29, 2010 (incl. * date)
Mondays, 6 – 8:30PM

FMI: YCCE, 324-2814
or frankw@umext.maine.edu

Maya's Apiary

5 Frame Nucs
available Spring 2010

Maine raised Queen Bees
available Mid-Summer

Call for Pricing



Peter Kucharski
Augusta, ME 04330
(207) 621-8639

mayasapiary.com

Brown's Bee Farm

239 Greely Road,
North Yarmouth, ME

Beekeeping Supplies

Pre-order for spring 2010:
3LB Italian package
bees w/queen

Full line of woodenware
Beeswax foundation
Smokers
Hand Tools
Medications
and more

Contact us: Stan Brown
Home 207.829.4246 Cell 207.232.1016
Karen Thurlow-Kimball
Home 207.846.4449 Cell 207.329.9934
beekeeper@maine.rr.com
Shop open by appointment—just give us a call!

BUZZINGS

Submit all announcements and news at least 15 days prior to publication date (see page 3).

Kennebec County Bee Club

Interested in forming a greater-Augusta area bee club? Please contact Roy Cronkhite, 754-2628 or roycronk@roadrunner.com.

DADANT & SONS

- Quality
- Service
- Value

136 Rt. 17C (EAST)
P.O. Box 267
WAVERLY, NY 14892-0267

Since 1863

*Your one-stop shopping center
for beekeeping supplies.*

Ph. (607) 565-2860 • Fax (607) 565-3710

Toll Free Order Number 1-877-532-3268

www.dadant.com

- Woodenware—Hives
- Extracting Equipment
- Protective Clothing
- Bee Medications
- Hand Tools
- Beeswax Foundation
- Books
- Smokers
- Mite Treatments
- Honey Containers
- Honey Handling Products
- Plastic Frames & Foundation

Made in the USA...in MAINE—FOR beekeepers, BY beekeepers! Watch for our EXPANDING LINE!



**HUMBLE
ABODES**
INCORPORATED

Manufacturers of Quality

Apiary Woodenware

FRAMES

- Full 3/8-inch sidebar
- Groove & wedge top bar
- Interlocking top & bottom bars
- Two grades: Select & Commercial

BOXES

- Ten frame in three sizes
- Authentic box joints
- Pre-drilled
- E-Z grip 6-inch hand holds
- Three grades: Select, Commercial & Budget

PRICING

Product availability and ordering:

Toll-free: **1-877-423-3269** (877-4 BEE BOX)
(207) 549-5501

FAX: **(207) 549-5512**

Visa & MasterCard accepted

Look for our products at these local suppliers:

SUPPLIERS

- Bees-N-Me, Bowdoinham, 666-5643
- R.B.Swan & Son, Inc., Brewer, 989-7803
- SWAN'S Honey, Albion, 437-2251
- Brown's Apiaries, N. Yarmouth, 829-4246
- Country Thyme Apiaries, Steep Falls, 675-3445

Open House
Saturday, March 20, 8 - 12
Box & Frame Assembly Demo
Refreshments



Maine State Beekeepers Association

THE BEE LINE | Newsletter of the MSBA

Lori Harley, *Editor*
111 Alba Street
Portland, Maine 04103-1701
www.mainebeekeepers.org

Join the Maine State Beekeepers Association today!

LAST NAME	FIRST NAME	MIDDLE INITIAL
STREET	CITY/TOWN	STATE ZIP
PHONE	CELL	EMAIL

Membership Type

- | | |
|--|-----------|
| <input type="checkbox"/> Annual Individual | \$ 15.00 |
| <input type="checkbox"/> Annual Family | \$ 22.50 |
| <input type="checkbox"/> 5-Year Individual | \$ 68.00 |
| <input type="checkbox"/> 5-Year Family | \$ 100.00 |
| <input type="checkbox"/> Lifetime Individual | \$ 180.00 |
| <input type="checkbox"/> Lifetime Family | \$ 270.00 |
| <input type="checkbox"/> Extra Gift Contribution | \$ _____ |

Total Payment \$ _____

Cost

Current Age	# of Years Beekeeping	Most # of Hives	Current # of Hives

Please make check payable to:

Maine State Beekeepers Association

Send to:

Erin Forbes, *Membership*
188 Capisic Street
Portland, Maine 04102-1704
queenbee@overlandhoney.com
207-838-4046

PRIVACY POLICY: Member information *will be* provided to other MSBA Members unless specified otherwise here: ☐ No, please do *not* share my contact information with other MSBA Members.



HONEYBEES NEED YOU!

This is a ☐ new / ☐ renewing membership (check one). How did you find out about the MSBA? _____