



# THE BEELINE

Founded 1908

Volume XXXI, No. 119

October 2007

## **MSBA Fall Meeting & Honey Show Nov 10, 2007**

**at**

**Maryland Dept. of Agriculture  
Annapolis, MD**

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## **President's Message**

*by Carol Johnson*

Another year has passed and my term as president of MSBA is at an end. I have enjoyed serving as president to such an outstanding group of folks as Maryland's beekeepers. We are, I must say, a unique group of people so different in many ways but, all with the intense interest in one small creature...the honey bee.

There are so many obstacles which have arisen in the last decade for beekeepers. At this time the public's attention is focused on the difficulties facing the honey bee and beekeepers, we must use this interest to the advantage of the honey bee. We must use this interest to help pressure our legislative representatives to fund more research, other organizations, such as the Farm Bureau, to include honey bees and beekeepers in any action taken on behalf of farmers.

We need support from anywhere we can get it. Fruit growers, flower growers, the public, school children. MSBA can lead this campaign on behalf of the honey bee, with your help. Please let the new MSBA leadership know that you are willing to help. Volunteer.

I would like to thank all of the Executive Board Members, the County Vice Presidents and the Membership for all your support the last two years and I look forward continuing to work for MSBA in the future.

I would, in closing, like to mention one special individual who stands out for his exceptional efforts on behalf of MSBA and that individual is **Greg Clark**. Greg has been an outstanding volunteer over the last three years. He has taken on so many major projects... MSBA's booth at MDA Open House for the last three years, Chairman of the honey show at the November Meetings, and done such an outstanding job that it is difficult to express my gratitude to him and Kendall. **THANK YOU BOTH FOR THE OUTSTANDING JOB YOU HAVE DONE ON BEHALF OF MSBA.!**

*Mark your calendars:*

**COMING EVENTS**

The following events were announced at the MSBA Board meeting . Please note that the dates may be tentative and subject to confirmation of location approvals:

**MSBA MEETING SCHEDULE**

**Annual Meeting and Honey Show**

Nov 10, Md Dept of Ag. Hq, Annapolis, Md.

(Vendors are welcome at meetings. Please notify Carol Johnson, President or David Morris, Secretary one week prior to meeting date. It is requested that vendors donate an item to be a door prize when attending MSBA meetings. )

**Upcoming Local/ National / International Meetings:**

**The 2008 National Beekeeping Conference : Jan 8-12 , Sacramento, CA**

**EAS 2008 Short Course and Conference**

August 4 - 8, 2008  
Murray State University, Murray, Kentucky

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**Fall Meeting:**

**Nov 10, 2007**

**Directions to MD Dept of Agriculture, Annapolis:**

Directions: Take Rt. 50 East to Annapolis. In Annapolis, take Exit 22, Rt. 665 to Riva Rd. Follow the Riva Rd. exit onto Riva Road South. Go 4/10 miles to Harry S Truman Pkwy and turn right, at the light. Go 1.2, miles to 50 Harry S Truman Hwy; the MDA building is on the right. Look for the yellow "BEE MTG" signs and the cows.

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**Lunch Menu:**

**Lunch service will not be arranged for this meeting.** Meeting attendees should plan to bring their own lunch or go to nearby fast food establishments.

Coffee & refreshments will be provided during breaks.

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Please note: If you Beeline mailing label says Member Thru: 2006 -- Your MSBA membership is past due. Please mail you \$10 membership dues to Jon Bealer , 702 Monkton Road Monkton, MD 21111-1114

# Maryland State Beekeeper's Association Annual Honey and Honey Cookery Show Rules and Premium List

## General Rules

- 1) Entries will be accepted **from 8:30 a.m. until 10:00 a.m. sharp** on the day of the show. Entries must remain in place until released by the show chairman.
- 2) Entries will be accepted from anyone attending the MSBA meeting (MSBA members and non-members). Entries from exhibitors not present at the MSBA meeting (entries brought to the show by someone else) will only be accepted if the exhibitor is a MSBA member.
- 3) Only one entry will be allowed in each class from any household, partnership or beekeeping establishment.
- 4) The exhibitor will select the class for his/her entry. (Assistance will be provided in selecting the correct class when making entries). The chairman of the show reserves the right to make a final determination and change, if necessary, entry classes. Classification of sweet and dry mead may be changed by judges (correct classification **may** be determined by chemical tests after the bottles of mead are opened).
- 5) No exhibitor's name or label will be allowed on any entry except in designated classes.
- 6) The decisions of judges are final. Judges may withhold prizes for insufficient merit or award a lower prize at their discretion. Entries that do not comply with the rules or class description may be disqualified.
- 7) The show chairman reserves the right to adjust any class and/or premiums offered. (For example: if sufficient entries are made for one stated color class for extracted honey to create two color classes, then two separate classes would be created with appropriate ribbons and cash awards).
- 8) Competition between local bee clubs is encouraged. An award will be presented to the local bee association who's members earn the highest number of points based on the number of quality products entered in the show. The following point system will be used: 1st prize - 3 points, 2nd prize - 2 points, 3rd prize - 1 point. If clubs are tied, the 1st place winner will be the club with the most 1st place awards in the show. If a tie still exists, the club with the most exhibits in the show will win.

## Premium List

|                     |                       |
|---------------------|-----------------------|
| Individual Classes: | Ribbon and Cash Award |
| Division Champion:  | Ribbon and Cash Award |
| Best in Show:       | John V. Lindner Award |
| Best Club Showing:  | Plaque                |

## Division I HIVE PRODUCTS

- 9) All entries must be the product of the exhibitor's bees and have been produced within a 12 month period prior to entry.
- 10) All honey exhibited must have been gathered and ripened in a natural way by honey bees.
- 11) An entry consists of 1 jar, container, frame, block, etc.
- 12) All extracted, chunk and finely granulated honey, and pollen pellets must be exhibited in 1 lb. glass or clear plastic jars, except Class 1. Beekeepers entering the first time in class 1 only may exhibit honey in 1 pint glass canning jars or 1 lb. glass or plastic honey jars.

**PREMIUMS**

| <u>Beekeepers entering for the first time</u>               | <u>1st</u> | <u>2nd</u> | <u>3rd</u> | <u>4th</u> | <u>5th</u> |
|---|------------|------------|------------|------------|------------|
| Extracted Honey   | \$12       | 9          | 6          | 4          | 2          |
| <b><u>Beekeepers with 10 colonies or less</u></b>           |            |            |            |            |            |
| Extracted Honey - Water White thru Extra Lt.                | \$12       | 9          | 6          | 4          | 2          |
| Extracted Honey - Lt. Amber                                 | \$12       | 9          | 6          | 4          | 2          |
| Extracted Honey - Amber thru Dark Amber                     | \$12       | 9          | 6          | 4          | 2          |
| Extracted Honey - Dark                                      | \$12       | 9          | 6          | 4          | 2          |
| <b><u>Beekeepers with 11 colonies or more</u></b>           |            |            |            |            |            |
| Extracted Honey - Water White thru Extra Lt.                | \$12       | 9          | 6          | 4          | 2          |
| Extracted Honey - Lt. Amber                                 | \$12       | 9          | 6          | 4          | 2          |
| Extracted Honey - Amber thru Dark Amber                     | \$12       | 9          | 6          | 4          | 2          |
| Extracted Honey - Dark                                      | \$12       | 9          | 6          | 4          | 2          |
| <b><u>Open to all</u></b>                                   |            |            |            |            |            |
| Comb Honey - Square Section                                 | \$12       | 9          | 6          | 4          | 2          |
| Comb Honey - Round Section                                  | \$12       | 9          | 6          | 4          | 2          |
| Cut Comb Honey in clear plastic box                         | \$12       | 9          | 6          | 4          | 2          |
| Chunk Honey in wide mouth 1 lb. jar                         | \$12       | 9          | 6          | 4          | 2          |
| Finely Granulated Honey in regular or wide mouth 1 lb. jar  | \$12       | 9          | 6          | 4          | 2          |
| One Shallow or Full Depth Frame Honey                       |            |            |            |            |            |
| - must be protected with plastic wrap or suitable container | \$12       | 9          | 6          | 4          | 2          |
| Beeswax Block 2 lbs. minimum                                | \$12       | 9          | 6          | 4          | 2          |
| Dry Pollen Pellets in 1 lb. honey jar                       | \$12       | 9          | 6          | 4          | 2          |
| Division Champion: Ribbon                                   | \$10       |            |            |            |            |
| Division I Total: \$505.00                                  |            |            |            |            |            |

**Division II ARTS AND CRAFTS**

- 13) All entries must have been made or produced by the exhibitor.
- 14) Label for Honey Container - One marketable container of honey, any size, any form, WITH LABEL designed by the exhibitor and affixed to the container. The container, unless opaque, must contain honey. Commercial stock labels are prohibited. Apiary and/or exhibitor name is permitted on the label.
- 15) Presidents Prize - Any creative or artistic endeavor prominently featuring the honey bee, beekeeping or pollination.
- 16) Photography - A single black and white OR color print 5" x 7" minimum, suitably framed or mounted, pertaining to beekeeping.
- 17) Equipment or Gadget - Any original tool or equipment useful in beekeeping. A written description giving details of construction, materials, cost and labor MUST ACCOMPANY THE ENTRY.
- 18) Honey Wine - Entries must be a least 12 months old and shall be exhibited in unlabeled standard 750 ml. or "fifth" wine bottles. Exhibitor must state whether entry is straight (honey-and-water "must" only) or augmented (honey-and water "must" plus fruit juices, herbs, spices, etc.) Allowed ingredients in all classes - sulfiting, yeast nutrients/energizers, tannin, citric acid or acid blends.
- 19) Gift arrangements/packs must include one or more products of the hive but may also include other items that enhance the appeal or promote the use of hive products. Personal gift arrangements should be suitable for personal gift use regardless of commercial applications, and should be in a box, basket or other suitable container. Mailable gift packs should be suitable for commercial applications and will be judged on mailability.

|  | PREMIUMS   |            |            |            |            |
|--|------------|------------|------------|------------|------------|
|  | <u>1st</u> | <u>2nd</u> | <u>3rd</u> | <u>4th</u> | <u>5th</u> |
| Four Molded Beeswax Candles  | \$12       | 9          | 6          | 4          | 2          |
| Four Dipped Beeswax Candles  | \$12       | 9          | 6          | 4          | 2          |
| Four Rolled Beeswax Candles  | \$12       | 9          | 6          | 4          | 2          |
| Artistic Beeswax - candles, figurines or other forms, at least 1½ lbs. | \$12       | 9          | 6          | 4          | 2          |
| Label for Honey Container  | \$12       | 9          | 6          | 4          | 2          |
| President's Prize  | \$12       | 9          | 6          | 4          | 2          |
| Photography \$12   | 9          | 6          | 4          | 2          |            |
| Equipment or Gadget  | \$12       | 9          | 6          | 4          | 2          |
| Honey Wine - Sweet Mead, one bottle                                    | \$12       | 9          | 6          | 4          | 2          |
| Honey Wine - Dry Mead, one bottle                                      | \$12       | 9          | 6          | 4          | 2          |

|   | PREMIUMS   |            |            |            |            |
|---|------------|------------|------------|------------|------------|
|   | <u>1st</u> | <u>2nd</u> | <u>3rd</u> | <u>4th</u> | <u>5th</u> |
| Honey Wine - Augmented Mead, one bottle         | \$12       | 9          | 6          | 4          | 2          |
| Personal Gift Arrangement of honey bee products | \$12       | 9          | 6          | 4          | 2          |
| Mailable Gift Pack of Honey Bee Products        | \$12       | 9          | 6          | 4          | 2          |

Division II Champion: Ribbon \$10  
 Division II Total: \$406.00

**Division III YOUTH DIVISION**

| <b><u>Exhibitors age 18 or under</u></b> | PREMIUMS   |            |            |
|--|------------|------------|------------|
|  | <u>1st</u> | <u>2nd</u> | <u>3rd</u> |
| Extracted Honey (As in Div. I)           | \$12       | 9          | 6          |
| Bee Crafts (As in Div. II)               | \$12       | 9          | 6          |
| Honey Cookery (As in Div. IV)            | \$12       | 9          | 6          |

Division III Total: \$81.00

**Division IV HONEY COOKERY**

- 20) Entries in all classes must use honey for 50% or more of the sweetening with the following exceptions: frostings, fillings, glazes, dusts and meringue may contain up to 100% sugar. Honey used in entries does not need to have been produced by the exhibitor. Non-beekeepers are encouraged to enter honey cookery.
- 21) Mixes and packaged prepared foods are not permitted.
- 22) Each honey cookery entry must be accompanied by TWO copies of the recipe for the entry. The ingredients in the entry must match the recipe. Recipes must not contain the exhibitor's name or other personal identification. Please identify the origin of the recipe (e.g. "personal", "National Honey Board") Plates and protective covers must be supplied by the exhibitor.

|  | PREMIUMS   |            |            |            |            |
|--|------------|------------|------------|------------|------------|
|  | <u>1st</u> | <u>2nd</u> | <u>3rd</u> | <u>4th</u> | <u>5th</u> |
| Cake - One unsliced cake that may be unfrosted, frosted, filled, glazed or dusted.   | \$12       | 9          | 6          | 4          | 2          |
| Cookies - 12 drop, refrigerator, rolled or filled cookies that may be unfrosted, frosted, glazed or dusted.                | \$12       | 9          | 6          | 4          | 2          |
| Cookies - 12 bar or sheet cookies (brownies, date bars, baked granola, etc.). May be unfrosted, frosted, glazed or dusted. | \$12       | 9          | 6          | 4          | 2          |
| Pie - One unsliced pie.  | \$12       | 9          | 6          | 4          | 2          |
| Candy - 12 pieces. May be cooked, uncooked, or may be candied peels and candied fruits.                                    | \$12       | 9          | 6          | 4          | 2          |
| Yeast Bread (Non Sweet) - One unsliced loaf or 9 rolls.  | \$12       | 9          | 6          | 4          | 2          |
| Yeast Bread (Sweet) - One unsliced loaf, coffee cake, tea ring, or 6 Danish or sweet rolls.                                | \$12       | 9          | 6          | 4          | 2          |
| Quick Bread (Sweet) - One unsliced loaf. Examples are: banana bread, nut bread, etc.                                       | \$12       | 9          | 6          | 4          | 2          |
| Quick Bread (Other) - One unsliced coffee cake, tea ring, 6  |            |            |            |            |            |

|   |      |   |   |   |   |
|---|------|---|---|---|---|
| doughnuts or 6 muffins.   | \$12 | 9 | 6 | 4 | 2 |
| Jellies, Jams, Preserves or Conserves - 1/2 pint or 1 pint in a jar, sealed with lid or paraffin.                                 | \$12 | 9 | 6 | 4 | 2 |
| Condiments, Salad Dressings, Barbecue Sauces - One half-pint or one pint in glass jar. Examples are: catsup, pickles or relishes. | \$12 | 9 | 6 | 4 | 2 |
| Any other entry - honey cookery   | \$12 | 9 | 6 | 4 | 2 |
| Division Champion: Ribbon   | \$10 |   |   |   |   |
| Division IV Total: \$406.00   |      |   |   |   |   |
| Grand Total: \$1,398.00   |      |   |   |   |   |

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Speakers:

**Robin Mountain**, a native of South Africa, comes from a professional beekeeping family. Robin first came to the United States in 1982 and worked for the Weavers in Texas and Kona queen breeders in Hawaii. Back in South Africa, in the mid-1990's the Cape Bee was moved into the major beekeeping area of central South Africa by beekeepers who had taken hives to the Cape for pollination. The Cape Bee caused the collapse of the entire beekeeping industry, including his family's business. Returning to the US in 1999, he began to work with Strachan Apiaries in CA., then moved on to a position as Extension Associate in Apiculture at Kentucky State University, and then became the Dadant supplier in Kentucky. As if that doesn't keep him busy enough he also is the Chairman of the Heartland Apicultural Society, President of the Kentucky Beekeepers Association, and organizes beekeeping trips to South Africa.



**Dr. Robert Berthold** is well known for his beeswax crafts, his three day beekeeping short courses and his mead. A professor at Delaware Valley College in Doylestown, PA for three decades, he has given many talks on beeswax crafting and "wrote the book" on the subject, "Beeswax Crafting", published in 1993 by Wicwas Press. Bob will talk about and demonstrate the best techniques to create clean wax, beautiful candles and other beeswax castings.

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**The MSBA Website has moved:**

<http://www.msbeea.org/main/home.html>

# Maryland State Beekeepers' Association Fall Meeting, Elections, & Honey Show

November 10, 2007

Maryland Department of Agriculture, Annapolis, MD

|         |  |  |
|---------|--|--|
| 8:30am  | Refreshments, Coffee, Donuts, etc.   |  |
| 9:30am  | Opening and Welcome  | Carol Johnson<br>President                                     |
| 9:45    | Md. Apiary Inspector's Report  | Jerry Fischer<br>Md. State Inspector                           |
| 10:00   | Rumble in the Jungle: Working with Capensis and Scutallata in South Africa       | Robin Mountain<br>Frankfort, Ky.                               |
| 10:50   | Break  |  |
| 11:10   | Israeli Acute Paralysis Virus - Is it CCD?<br>Update from the Beltsville Bee Lab |  |
| Noon    | Business Meeting and<br>Annual Elections   | Carol Johnson<br>Toni Burnham                                  |
| 12:15pm | Lunch  |  |
| 1:15    | Beeswax Crafting for Gifts and Profits   | Dr. Bob Berthold<br>Delaware Valley College<br>Doylestown, Pa. |
| 2:15    | Break  |  |
| 2:30    | A Dealer's Perspective of the Bee Industry                                       | Robin Mountain   |
| 3:30    | Marketing your Hive Products   | Panel Discussion   |
| 4:30    | Announce Honey Show Results  | Carol Johnson  |
|         | Adjourn  |  |

###

## Beekeeper George Imirie Dies at Age 84

Founded Montgomery County Beekeepers Association, Worked on the Atom Bomb



George Wady Imirie, Jr. age 84 of Rockville, Maryland, who tirelessly promoted beekeeping and public education about bees, passed away on September 6. Mr. Imirie founded the Montgomery County Beekeepers Association (MCBA) in the 1980's and led it until his retirement in 2004.

For many years, he and his sons thrilled adults and children alike at the Montgomery County Fair by giving demonstrations with a live hive of honeybees inside a screened room. George wore only shorts and a t-shirt, and sometimes doffed the t-shirt. The Maryland State Beekeepers Association, which he had served as president, named the yearly award for distinguished educational activities in Maryland "The George Imirie Award."

He was an Eastern Apiculture Society (EAS) certified Master Beekeeper and was a stalwart promoter of that certification program. He advocated an involved, scientific approach to hive management and was well known for urging people to be "beekeepers not bee-havers." His opinionated and blunt "Pink Pages," a monthly publication, was read by beekeepers all over the world.

George Imirie began keeping bees at the age of nine, following in his father's and grandfather's footsteps. He earned degrees from the University of Michigan, George Washington University, and American University. During World War II he worked on the Manhattan Project at Oak Ridge and Los Alamos and worked on the atom bombs dropped on Hiroshima and Nagasaki. After the war he took up his family auto parts business, founded in 1916, and built up his apiary (bee yard).

In recent years, despite having several strokes, Mr. Imirie continued beekeeping using an electric scooter to get around. When the beekeeping community arranged with the state of Maryland to produce automobile license plates with a beekeeping logo, he was given the prototype, which he proudly affixed to his scooter: Bee 001.

In 1999 he contracted throat cancer, which caused his previously booming voice to become a raspy whisper. However, that didn't stop him from running the monthly beekeepers meetings, where he would quiz both neophyte and experienced beekeepers on their scientific knowledge, correcting them if they were not completely accurate. "You had to know your material if you were going to give a presentation and he was in the room. He had a low tolerance for ignorance and error. His high standards made us all better beekeepers, and we will miss his guidance," said David Bernard, President of the MCBA.

Mr. Imirie's death comes soon after the sudden death of his son, Arthur, of a heart attack on July 20. He is survived by his sons Allan, Aaron, and Alexander, three grandchildren, and five great grandchildren. The Montgomery County Beekeepers Association is contributing a donation in his honor to Casey House Montgomery Hospice in Rockville, where George spent his last days.

# # #

### **MSBA Elections will be held at the November meeting.**

The nomination committee is accepting nominations for all offices. Please contact Toni Burnham with your recommendations for nomination to MSBA Offices to serve during the next year.

Toni Burnham

(202) 543-3907

[phang@yahoo.com](mailto:phang@yahoo.com)



## Grass Roots Bee Breeding in Maryland

### Part 1

Before Colony Collapse Disorder, Varroa mites, parasitic mite syndrome, and tracheal mites, keeping bees felt more fluid and fun. Besides losses to swarming, keeping them fed and avoiding American Foul-brood, a beekeeper had a fairly smooth ride through the seasons. Presently though, listening to beekeepers plot their Varroa treatment strategy, or how they moved all their bees to screened bottom boards, I feel remorse that I hardly appreciated the “old days” other than counting off a successful honey crop or noting a poor year and planning to make the next one better. Yet, all beekeepers are biologists somewhat, when we keep bees, and if we try using some of biology’s basic principles, maybe we can restore the feeling of the “old beekeeping days” back into our beekeeping today.

I have not treated my bees for mites (Varroa & tracheal) for over seven years, and each year, I am able to produce more honey, make more comb, and expand my operation somewhat. My bees’ production follow the seasonal whims, but overall, I spend less time concerned about how to keep them healthy, and more time selecting healthy colonies. I am not a commercial beekeeper, and thus I can afford to lose colonies without jeopardizing my income—one year I lost almost all of my colonies, an extremely sobering experience that steeled my resolve to try and overcome some tough contemporary beekeeping problems: mites and poor colony health.

Selection is the important concept here—as in any system in nature, the bee colony that has the best combination of workers with the best equipment to survive today’s mite and disease filled landscape while making honey, comb, and increase, is the bee colony I want to use when making queens! Simple! Yes, in idea, but bees mate on the wing, and evaluating colonies for good workers sometimes takes two seasons, may require overwintering nucs, and certainly copious record-keeping. However, it can be done and people are indeed doing it.

We simply test our colonies for mites throughout the season, and breed from the colonies that are good producers, over winter well and have the least number of mites.

We’ve been following this scenario for the last ten years. We are fortunate enough to have the technique and equipment to use Instrumental Insemination to control our matings and can thus make judicious crosses within the framework of our breeding program. Managing virgin queens pre-insemination is interesting and can be challenging initially. Post-insemination care and introduction of Inseminated queens is tricky. However, experience is a great teacher and our II breeder queens have done very well the last few years.

Mite testing for selection is fairly straightforward. Use your federal tax dollars! Point your web browser to:

<http://gears.tucson.ars.ag.gov/rf/abj/varroa.html>

and

<http://gears.tucson.ars.ag.gov/publ/tolerant2.html>

These two articles explain how selecting colonies with lower mites/bee will produce bees that are more tolerant to Varroa, and how to actually test for this. We use this exact testing procedure in our program. Our mite tolerance results for 2007 for one breeding line was about 6 mites per 100 bees. This is an acceptable mite count and we will continue to use this line in our breeding program.

*Cont on pg 11*

## **NEWS FROM THE APIARY INSPECTORS OFFICE**

Jerry E. Fischer Sr., State Apiary Inspector,  
Maryland Department of Agriculture  
Phone: 410-841-5920 Cell: 410-562-3464 Fax: 410-841-5835  
E-mail: [fischeje@mda.state.md.us](mailto:fischeje@mda.state.md.us)

**APIARY STATISTICS:** Registration of bee colonies is mandatory and re-registration will be in the first week of December. Please remember to complete forms and return in a timely manor.

Registration as of September 2007:

1087 Beekeepers  
1460 Apiaries  
8212 Colonies

**COLONY AND HONEY CONDITIONS:** Considering the high loss of bees, beekeepers have kept the numbers up to the average, with approx. 900 packages (out of state) and 225 Nuc,s (in state) of bees re-established this spring. Bees continued to look good during the first part of year, but with the drought we have noticed a reduction of winter stores in most colonies.

A beekeepers goal is to keep a healthy productive colony and success is over wintering a colony. Lets get back to basic and achieve these two facts.

**BEE DISEASE AND PESTS:** The parasitic mites (Varroa and Tracheal) and the hive beetle are and will continue to play havoc with our bees. It is recommended to monitor and treat with a approved control and only as prescribed by label, keeping your bees below the threshold level. SHB now being found in 13 counties.

**COLONY COLASPE DISCODER (CCD):** Unless you have been in solitary confinement this past year you know the attention honey bees and agriculture has received. Because of CCD, through the news media (countless newspapers, magazine articles, TV and radio) everyone knows more about the importance of honey bees than at any time in my memory. **WHAT is CCD?** A disorder of honey bees in which colonies rapidly and unexpectedly die. Characterized by rapid loss of adult bees from hives leaving behind brood, a small number of young workers and the queen. The disorder has spread to at least 28 states, effecting large commercial

migratory beekeepers, losses between 30 -90% with many surviving colonies being too weak to pollinate crops. CCD Working Group has identified a number of factors being examined ( migratory beekeeping practices, nutritional deficiencies, known and unknown pathogens, parasitic mites, genetic diversity in breeding stock, systemic pesticides and improper use of mite control products). One or a combination of these factors may cause CCD, no specific cause of CCD has been identified at this time.

Even though I have stated Maryland beekeepers loss approx. 35-40 % of their bees during the winter of 06-07, losses were due to the unusual weather conditions and hive management. Even the three large beekeepers in the state has had no loss of bees due to CCD.

**BEE LAW CHANGE: Maryland State Law** was changed during this past year.

Section 5-505 (a) (2) (ii) Based on an inspection by that inspector within (remove – the preceding 2 months. add – A time period as determined by the department). This change was made to provide flexibility in the timing of the inspection requirement for honey bee colonies and equipment moving into Maryland from other states. This will reduce the amount of time inspectors will spend inspecting a very few commercial beekeepers' colonies going to other signatory states, allowing our inspectors to put emphasis on smaller bee yards and increasing the percentage of inspections during the year.

**ETHYLENE OXIDE FUMIGATION (ETO):** This past winter of 2006-2007 was only the second time since 1978 that fumigation of ETO was not done. Special permission with the EPA is required (special 24-C label) to fumigate bee equipment. The EPA is re-evaluating the use of the chemical Ethylene Oxide being used in all industries. Use was stopped last year and they have been receiving comments from the users of and persons (industries) that it may affect until the 1<sup>st</sup> of October. A decision will be made if and what use ETO will have in the future. Will keep you posted.

**MARYLAND STATE FAIR:** Department of Agriculture would like to thank everyone that partici-

pated in the state and county fairs during 2007. This is the best way to introduce our industry to the general public. The display of exhibits and entries has shown a particular interest with many questions due to the high loss of bees contributed to the new phenomenon CCD, which has affected many commercial beekeepers.

The state fair exhibitors and entries has increased every year for the past three. Exhibitors were up by 13 and entries up by 22 over last year.

The quality of entries have been very high, which shows beekeepers are taking interest in the education of our industry to the public (Or is it the BLUE RIBBON and the money).

# # #

### *Grass Roots Bee Breeding cont fm p9*

Evaluating bee stock is a "numbers game". The more stock that can be evaluated and tested, the greater the chance of finding queens/colonies that show desirable traits suitable for beekeeping in the Mid-Atlantic region. Since we don't run a 5000 colony operation, we choose to leverage a selection strategy where we use insemination to control matings with already established lines. We've collaborated with bee breeders throughout the U.S.A. and by testing their stocks, and then using the most suitable in carefully planned crosses, we're seeing great results for mite tolerance and hardiness.

The lines we're working with currently, are a combination of several different Varroa tolerant strains (VSH/SMR, HIP Project) and the Minnesota Hygienic line. We've also tested strains from Old Sol Apiaries in Oregon and Arnold Apiaries out of Tennessee. Initial results are positive, and several breeder queens from each source will be incorporated into our program. We also have plans for a dark line, to begin in 2008.

Testing our crosses to determine which are the most suitable to use as the next generation breeders, is our greatest challenge. There are only so many nucs and splits we can make as sideliners. However, if we are able to pool this effort with others, we will be able to accomplish a more thor-

ough selection, and then share the positive results. This bee breeding management style is common in Europe.

Would you consider working with us? What benefits would this have for you? Besides the obvious benefit of having good locally produced queens heading some of your colonies, and potentially having to treat less, while making good honey crops, you'd be part of something that could potentially benefit beekeepers in Maryland. Queens that do well here will make daughter queens that do well here. We worked with several local beekeepers this season (2007) and although not all the results are in, they were satisfied with the queens they tested, and we were able to receive excellent data on the crosses. I am sure all who worked with us in 2007 will want to continue in 2008.

By selecting colonies that perform well without mite treatments, using them and other similar stocks for several years, while continually selecting the best colonies for production and hardiness, one may move their bee population toward mite tolerance. This can be practically achieved with Instrumental Insemination, ensuring that specific parents are crossing to produce specific offspring, that may then be selected from.

Since we do not have a large population (1000 or more colonies) to make our selections from, we have utilized other bee breeders' proven lines and made crosses with them and our lines—facilitating the selection process. Our hope is to involve beekeepers like yourself in the continued selection process, by having you receive virgin queens or queen cells, we've arranged to produce for you and having you mate them and then evaluate the colony that the queen heads, for one season. From this "Grass Roots" collaboration, the selection process may move forward more quickly and positive results may be seen sooner!

I hope you'll think about this idea and consider working with us in the coming seasons.

Adam Finkelstein  
[adamf7@gmail.com](mailto:adamf7@gmail.com)

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THE BEELINE  
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Address corrections requested

Entry Form for Honey Show:

**Maryland State Beekeepers Association Annual Honey and Honey Cookery Show**

Name (PLEASE PRINT CLEARLY) \_\_\_\_\_ Exhibitor # \_\_\_\_\_

Address \_\_\_\_\_ County \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_ Phone \_\_\_\_\_

Local Club Affiliation \_\_\_\_\_

Are you attending this show?  YES  NO Are you a 2007 MSBA member?  YES  NO

Your exhibitor number is shown at the top of this form. Put an exhibitor number sticker on each entry. For bottled honey, put one sticker on the face of the jar and one sticker on the lid. Put a PINK class number sticker on each entry. For bottled honey, put the sticker on the lid of jar.

Please circle the class number below for each class you are entering.

Division I HIVE PRODUCTS

PREMIUMS

|  |      | 1st | 2nd | 3rd | 4th | 5th |       |
|--|------|-----|-----|-----|-----|-----|-------|
| Beekeepers entering for the first time                 |      |     |     |     |     |     |       |
| Class 1 Extracted Honey                                | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Extracted Honey - Beekeepers with 10 colonies or fewer |      |     |     |     |     |     |       |
| Class 2 Extracted Honey - Water White thru Extra Lt.   | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 3 Extracted Honey - Lt. Amber thru Amber         | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 4 Extracted Honey - Dark Amber                   | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 5 Extracted Honey - Dark                         | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Extracted Honey - Beekeepers with 11 colonies or more  |      |     |     |     |     |     |       |
| Class 6 Extracted Honey - Water White thru Extra Lt.   | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 7 Extracted Honey - Lt. Amber thru Amber         | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 8 Extracted Honey - Dark Amber                   | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 9 Extracted Honey - Dark                         | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Extracted Honey - Open to all                          |      |     |     |     |     |     |       |
| Class 10 Comb Honey - Square Section                   | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 11 Comb Honey - Round Section                    | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 12 Cut Comb Honey in clear plastic box           | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 13 Chunk Honey in wide mouth 1 lb. jar           | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 14 Finely Granulated Honey                       | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 15 One Shallow or Full Depth Frame Honey         | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 16 Beeswax Block 2 lbs. minimum                  | \$12 | 9   | 6   | 4   | 2   | NP  | _____ |
| Class 17 Dry Pollen Pellets in 1 lb. honey jar         | 12   | 9   | 6   | 4   | 2   | NP  | _____ |

Division Champion: Ribbon \$15

\_\_\_\_\_

Entry Form for Honey Show cont:

Division II ARTS AND CRAFTS

|                                      |      |   |   |   |      |       |
|--------------------------------------|------|---|---|---|------|-------|
| Class 18 Four Molded Beeswax Candles | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 19 Four Dipped Beeswax Candles | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 20 Artistic Beeswax            | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 21 Four Rolled Candles         | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 22 Label for Honey Container   | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 23 President's Prize           | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 24 Photography                 | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 25 Equipment or Gadget         | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 26 Honey Wine - Sweet Mead     | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 27 Honey Wine - Dry Mead       | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 28 Honey Wine - Augmented Mead | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 29 Personal Gift Arrangement   | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 30 Mailable Gift Pack          | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Division Champion: Ribbon            |      |   |   |   | \$15 |       |

Division III YOUTH DIVISION age 18 or under

|   |      |   |   |   |      |       |
|---|------|---|---|---|------|-------|
| Class 31 Extracted Honey (As in Div. I) | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 32 Beecraft (As in Div. II)       | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 33 Honey Cookery (As in Div. IV)  | \$12 | 9 | 6 | 4 | 2 NP | _____ |

Division IV HONEY COOKERY

|   |      |   |   |   |      |       |
|---|------|---|---|---|------|-------|
| Class 34 Cake   | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 35 Cookies - 12 drop, refrigerator, rolled, or filled | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 36 Cookies - 12 bar or sheet cookies                  | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 37 Pie  | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 38 Candy - 12 pieces                                  | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 39 Yeast Bread - Non Sweet                            | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 40 Yeast Bread - Sweet                                | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 41 Quick Bread - Sweet                                | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 42 Quick Bread - Other                                | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 43 Jellies, Jams, Preserves or Conserves              | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 44 Condiments, Salad Dressings, Barbecue Sauces       | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Class 45 Any other entry, honey cookery                     | \$12 | 9 | 6 | 4 | 2 NP | _____ |
| Division Champion: Ribbon                                   |      |   |   |   | \$15 |       |

Received: \_\_\_\_\_ Total Premiums to be paid \_\_\_\_\_

| 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | Score Card | Entries Released | Premiums Received |
|-----------------|-----------------|-----------------|------------|------------------|-------------------|
|-----------------|-----------------|-----------------|------------|------------------|-------------------|

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301-223-9662****WE CARRY A FULL  
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EQUIPMENT  
FOR ALL YOUR  
BEEKEEPING NEEDS.**Check these Links:

The Carl Hayden Bee Lab has an interesting Power Point presentation on their primary research efforts:

- The Megabee Diet: updates on this feed supplement indicate the status of development and production.
- Requeening of European Bees in Africanized bee areas.
- The mechanisms of varroa locating larvae and the identification of chemicals involved in this process.
- <http://www.trainingway.com/signon/autosignon.asp?aid=99-guest-01&apw=bees>

Beltsville Lab e-Updates: contains synopsis of CCD efforts to date:

[http://www.ars.usda.gov/sp2UserFiles/Place/12000000/e-Update/e-update\\_Oct07.pdf](http://www.ars.usda.gov/sp2UserFiles/Place/12000000/e-Update/e-update_Oct07.pdf)

MAAREC podcasts on CCD:

<http://podcasts.psu.edu/node/262>

Note: use Control <Ctrl> and click on the links to navigate to the links from the e-version of the Beeline.

**Local news:**

**Upcoming MCBA meeting November 14, 2007,  
Brookside Nature Ctr., Wheaton, MD**

**CMBC Annual meeting November 6, 2007**

**Frederick County Beekeepers Association:**  
every first Wednesday, monthly at 7:30, PM at the  
Fountain Rock Nature Center.

**Howard County Beekeepers Association**  
Monthly meetings: Second Tuesday each month in  
dining hall at Howard County Fairgrounds, West  
Friendship, MD



***About the E version of the BEELINE:***

The Beeline encourages news and articles submitted for publication that would be of interest to the general membership of MSBA.

Articles submitted from members and from local clubs may be included in the Beeline Electronic version, if there is not enough space in our 12p. mailed version. MSBA members may submit small classified ads for personal beekeeping items to be placed on a space available basis. Members submitting ads for their businesses must submit WORD formatted ads, 1 page or less. Business ads will be placed in the electronic version of the Beeline. Submissions to the Beeline are made to the Editor.

MSBA members may receive the electronic version of the Beeline by providing their email address to the MSBA Treasurer. The electronic version of the Beeline will be posted to a 'blind address' on the website and the membership will be sent an email announcing the link to the newsletter. The on-line newsletter is in PDF format which can be read on-line /downloaded as desired.

Links to recent past editions of the Beeline are posted to the website.



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FOR AVAILABILITY AND PRICING  
###*



**Essentially George: From George's PINK PAGES January 2001**

Editor's note: This summarized George's Beekeeping techniques as printed in the Pink Pages collection. George's beekeeping advise and mentoring will be missed.

**Special Paper for Tennessee Beekeepers**

I was honored (and SURPRISED) in October when the Tennessee Beekeepers Assn. presented me with a KEY to the City of Oak Ridge plus a Certificate of Honorary Citizenship, just because I was sent by the Army in 1944 to X-10 Laboratory to work as a scientist to purify plutonium. I only had 30 colonies of bees at that time, and I had taught my father how to look after them while I was serving our country and "winning the war". Hence, being a "two-way street", I thought I might surprise you with some knowledge about how to have a record crop of honey, diminish swarming, and save the bees from some "mysterious" unknown death. Many know that BREVITY is not one of my virtues, so this will be a l-o-n-g paper. Some know that, as a typical scientist, there is no "gray area"; but everything is either "black or white". I am BLUNT, not to hurt your feelings, but make you MAD so that I make you THINK! This year of 2001 begins my 69th year in scientific beekeeping, having kept 8 different races of bees to PROVE which was the best race for the Maryland suburbs of Washington, DC, having worked with the Africanized bees in South America, and having made talks and demonstrations at the request of various associations over most of the U.S. and some overseas.

During most of these years (until I suffered several strokes), I kept about 135 colonies and produced between 10,000 and 12,000 pounds of honey each year; and although I did not need the money, I learned how to sell the honey that averaged 132 pounds per honey production colony each year. Unfortunately, with the exception of better control of American Foul Brood done by the state bee inspection laws started in 1922, there really has not been many changes in beekeeping during this century past. In fact, up until 15 years ago when the tracheal mite was first found in the U. S., bees were kept "just like Daddy kept bees". But DADDY did NOT have mites, Africanized bees, PMS (parasitic mite syndrome), small hive beetles, viruses, or the almost universal public FEAR of a bee sting. Today, in 2001, we have all of these beekeeping problems PLUS there are almost no feral bees left and new queens are being badly superseded; and this has resulted in a major reduction of bee colonies in the country and many less beekeepers. American beekeepers, always very independent and resistant to any change in long used established procedures, simply REFUSED to accept any treatments recommended by scientists, but used "homeopathic" substitute "medicines" or time of treatment; and this resulted in the death of their bees, cost of annual replacement, and discouragement to the point that they gave up beekeeping or changed over to raising pigeons, growing tomatoes, or capturing butterflies.

During these past 15 years most of us have many "new" things that "Daddy" never had, or used, like: microwave oven, computer or word processor instead of a typewriter, mobile phone, fuel injection rather than a carburetor on your car, no-till farming rather than constant hoeing, e-mail instead of 33 cent stamps, getting cash with an ATM card rather than going inside a bank, and let's not forget organ transplants. TIMES CHANGE and THINGS CHANGE, and you have a choice: Either fall behind the rest of the world or LEARN and USE the new material or program. I don't think you are the type to ask your friendly neighborhood butcher to remove your appendix, or ask the service station gas jockey to repair the "blown" automatic transmission in your Sunday Cadillac. That being the case, there is no reason to try and keep bees "like Daddy kept bees" or take suggestions from other neighboring beekeepers who has probably had to buy new package bees to replace the dead colonies that he has suffered for several years.

Lastly, before I tell you the new things necessary to upgrade your beekeeping, let me tell you about READING MATERIAL or BOOKS. Since almost every new beekeeping problem

has surfaced within the past 15 years: tracheal mite in 1984, Varroa mite in 1987, Africanized bees entering Texas in 1990, small hive beetle in 1998, then no book published prior to 1984 even mentions these items because they were unknown in the U.S. Since it takes several years to investigate these new problems and recommend treatment plus the year or so for publishing this work, it is pretty fair to say that regardless of the acceptance of a book or fame of the author, a book is more or less OBSOLETE if it was written much before about 1992. In that regard, I believe that the 1992 REVISED EDITION of the HIVE AND HONEY BEE written by perhaps the worlds 31 best bee scientists and professional beekeepers and published by Dadant might be the finest bee book ever written.

All is not lost as we enter this new millennium, because many very important things have been discovered in these past 15 years due to the feverish work done by the bee scientists, researchers, queen breeders, and extension agents to overcome all of these new problems. In spite of the difficulty of funding money for research, the problems caused by the mites, Africanized bees, and public fear of being stung FORCED research to be more specific about securing gentle bees, swarm reduction, and requeening with a specific stock of honey bees rather than allowing the bees to requeen themselves. These very things are encouraging people to UPGRADE their knowledge about beekeeping. As an "old" scientist, I predict that research done in the 21st century will be redirected to determine more about honey bee PHEROMONES, and armed with these new findings about the part played by pheromones in the life of honey bees, the results will be better beekeeper management, improved handling techniques, healthier bees, and higher crop yields! I am jealous of that future that perhaps I will never see.

My home is in Maryland just 15 miles north of the WHITE HOUSE in Washington, DC, so I can't talk to you about specific dates in seasons, but I will use general terms and you will have to interpret the time or month it fits into your area whether it is Knoxville, Nashville, or Memphis. My Maryland weather is close to that of Oak Ridge, Saint Louis, or San Sacramento where we have a cold, but short winter, a very early major nectar flow from April 15 to June 15 and almost nothing afterwards until possibly goldenrod in September. No saleable honey is made in Maryland after June 15th, so timing is very important, because all the crop has to be made in less than two months shortly after a cold winter. However, what I am about to say is true regardless of your location.

#### WHAT ARE THE ABSOLUTE NECESSITIES TO MAKE A GOOD HONEY CROP?

- A) Healthy bees with little or no mites, Nosema free, and a YOUNG vigorous queen
- B) A surplus amount of DRAWN COMB in the supers just before the nectar flow
- C) A very large number of foraging age bees available at nectar flow time
- D) Elimination of those conditions that cause swarming

ITEM A) - A YOUNG VIGOROUS QUEEN - More and more highly successful beekeepers have started to requeen every 12 months to attain larger honey yields, some migratory operators even requeening twice a year. Because of Maryland's very early honey crop, Steve Taber convinced me 52 years ago in 1948 to switch from the Italians I had used for 15 years to Carniolans in order to take advantage of their renowned "explosive" early spring buildup. Unfortunately, the Carniolan is equally well known for its high propensity to swarm. Recent bee research has PROVEN that in addition to the egg laying ability of a queen, her production of the queen pheromone is of vital importance in swarm prevention. Among other things, the pheromone is the "glue" that binds thousands of worker bees into one single functioning unit; but the queen's ability to produce that pheromone diminishes a little each day from the day of her mating. Hence, although a second season queen might be able to produce 1500 eggs per day, but NOT being able to produce

enough queen pheromone to bind this large group of workers into a single functioning unit, the bees swarm, and a good honey crop is lost. Researchers have shown that a second season queen is three times more apt to swarm than a first season queen. It doesn't make good sense to take a chance on losing a 100 or 200 pound honey crop because you were too cheap to requeen with a high quality queen that costs \$10. Further, I much prefer September requeening rather than spring requeening, because the queen can arrive in the mail at my house on the exact date that I ask, the queens are better bred because of better larval feeding, the presence of more drones for breeding, and the queen breeders are not under that intense spring pressure of getting lots of queens delivered "yesterday". Further, perfectionist that I am, the Imirie Requeening Method (described at the end of this paper) guarantees almost 100% acceptance plus it has BOTH the old queen and the new queen laying in the same colony for about 6 weeks in September and October which builds a large group of young worker bees to enter the winter inactive season!

**HEALTHY BEES** with little or no MITES (tracheal or Varroa) - Contrary to what some people think, the tracheal mite (*acarapis woodi*) is STILL HERE in the U. S. Since it is microscopic and hence not seen by humans, the bees are assumed clean and not infected by this pest. When the colony is found dead, usually in January, with just a few dead bees in the hive, but plenty of honey still present, generally the tracheal mite has "won" again. Of course, the beekeeper blames the death on El Nino, cold weather, high wind, lousy queen, or the revenge of his mother-in-law; and to further confuse himself and neighborly beekeepers, he does not perform an autopsy on the dead bees because he doesn't have a microscope or know the technique to look for tracheal mites. The technique of isolating the trachea of a bee is easy to learn, and the gift of a pound of honey to the high school science teacher will usually allow you the use of a microscope to be an "apian forensic scientist". It would have been so much easier (and cheaper too) to PROPERLY TREAT and KILL the tracheal mites before they overwhelmed the worker bees in December or January. Just put 50 grams of Menthol (cost about \$1.50) on top of the brood chamber frames in WARM or HOT weather, which is probably August, but no later than September 15th. Now hear this: Menthol does NOT work at temperatures lower than about 84 degrees, because menthol sublimates (change from a solid into a gas) at a temperature of 84 degrees! There are lots of beeHAVERS out there, who not wanting to lose any of their August or September honey crop installed Menthol in October and their bees died. Of course, they told everyone that Menthol treatment does not work. Menthol DOES work, and it KILLS tracheal mites, but it has to be used at the right time, not when it is convenient for you. Although Menthol is the approved government treatment for tracheal mite treatment, Dr. Diana Sammataro has pioneered the use of PLAIN (no Teramycin) grease patties to CONTROL the degree of tracheal mite infection in a colony so that the mites are not strong enough to kill the bees. The grease patties do NOT KILL the mites, but "confuses" the mite in selection of a host bee to infect. Unfortunately, the use of grease patties is labor intensive in that they must be used CONTINUOUSLY (without interruption) from mid summer to early winter. However, they can be used even during a nectar flow. Grease patties are made by mixing 2 pounds of granulated sugar with 1 pound of Crisco, make into hamburger size patties on a piece of wax paper, and place the patty on top of the brood frames. I have used Menthol on August 15th on up to 100 colonies for over 10 years and have never lost a colony to tracheal mite infection, whereas other neighboring beekeepers who ignored the proper timing of application, lost many colonies. Early in 2000, the government approved a second chemical, APICURE, for the treatment of tracheal mites, but unfortunately it was recalled because the plastic package developed leaks. I hope APICURE will be available in 2001, because it can be used at temperatures less than 84j, and hence could be used in September or October perhaps. The VARROA MITE - Far worse than the tracheal mite because it multiplies so rapidly, but at least, it is not microscopic and can be easily seen. One should thoroughly understand the LIFE CYCLE of the Varroa mite to properly control the mite infection of a honey bee colony. UNLIKE the tracheal mite which lives almost its entire life INTERNALLY in an adult bee, the Varroa mite is born with a bee larva, matures to adulthood nursing itself on the honey bee pupa

in its capped cell, emerges into our world when the new honey bee emerges, and then attaches itself to some adult bee and lives externally on that bee eating the hemolymph (blood) of that bee. Hence, the greater the number of honey bee LARVAE and PUPAE in a colony, the greater there is a source of food for the varroa mite to multiply! (That is a VERY IMPORTANT fact that you should know!) Further, the female mite usually lays 2, 3, or even 4 female mite eggs in one bee larva cell, meaning that as every new bee emerges from its capped cell, maybe 2, 3, or even 4 new adult female mites might accompany the bee into the bee society. It should not take rocket science thinking to understand that the most effective time to kill mites is when there is little or no bee brood (November 15 to December 31 in MD), and this allows healthy, non deformed bees to be "born" in late winter and early spring. In Maryland, brood production is being shut down rapidly beginning about October and generally is stopped by November 15th. Hence, I place 2 strips of Apistan in each brood chamber on October 1st and ABSOLUTELY remove them on the first 45-50 degree day after November 15th. Leaving strips in a colony more than 6-8 weeks leads to the creation of mites resistant to Apistan, and a beekeeper who would be this inconsiderate of other beekeeper's bees, or just too lazy to remove the strips, should be publicly tarred and feathered as well as named on nationwide e-mail if it was my decision to make. We have already lost a wonderful miticide, Miticur, due to a group of beekeepers who thought they knew more than the scientists and just plain ignored the printed rules for the proper use of Miticur. It would appear that the same thing might be happening now in the use of Apistan, as we have heard of a few isolated spots that Varroa mites are apparently resistant to Apistan. Bee research has positively shown that Varroa mite growth is temperature dependent, meaning that in those areas that have the LEAST winter and cold months, Varroa mite growth is enhanced. Honey bee colonies in places known for warmth like Texas or Florida might have to be treated with Apistan 2 or even 3 times each year to control mites, whereas colonies in the colder climates of New York or the Dakotas probably require only one treatment each year. In any event, DON'T GUESS AT THE MITE INFECTION OF YOUR COLONIES - TEST FOR MITES IN MARCH AND JULY. Being a scientist, I don't like doing anything half way, and hence I don't like the ether roll test, so I make a STICKY BOARD test on all my colonies on March 1st and particularly July 1st. There are many, many cases reported in the literature that a colony of bees that had been treated the previous year with Apistan, made a record crop of honey in late spring and early summer, but was found dead of massive Varroa mite infection in August. If I lived in an area that had a nectar flow from summer clover or alfalfa in July and August, but my July 1st test for Varroa was high, I have a decision to make: Do I NOT treat and take a chance of losing the colony, or do I remove all supers for just 2 weeks, make an quick emergency treatment with Apistan for 2 weeks, and re-super? The cost of new bees and aggravation of building up a new strong production colony is much greater than cutting my honey production back maybe 25-50%, so I would make the 2 week Apistan treatment, do a regular 6-8 week Apistan treatment in the fall, and save my bees for next year. People seem surprised when I say "TEST" for mites. Gosh, you test yourself with a thermometer for a fever, the doctor tests your blood pressure, the optician tests your eyes, the vet tests your dog for worms, you test your garden for the pH of your soil, pray tell me why you won't test your bee colony for mite infection that is going to kill your bees unless the mite population is controlled? You can't keep bees like Daddy kept bees any more! You MUST CHANGE to be successful!

**NOSEMA DISEASE** - This important disease, although rarely killing a colony, weakens the health of the bees that shortens their lives dramatically and reduces their activity so they just can't make a good crop of honey. Nosema is a disease of the gut and causes the bee to suffer diarrhea. I ask you - How much work can you do when you have the "runs"? Researchers have estimated that approximately 60% (over half) of all the bees in the country suffer some Nosema disease in the spring after a winter confinement, but treatment is generally ignored. For the cheap price of about \$2 per colony, you can feed a colony 2 teaspoons of Fumidil-B dissolved in 2 gallons of 2:1 sugar syrup in late fall, and your bees will be free of Nosema disease next year. I don't take any chances of hurting my honey crop, so my colonies get the \$2 Fumidil-B treatment every fall. Regardless of the price of honey, \$1/pound or \$4/pound, my

healthy bees make more pounds of honey for me to offset the cost of the Fumidil-B treatment.

Item B) SURPLUS AMOUNT OF DRAWN COMB in the supers before the nectar flow.

First, I will talk about the WHY, WHEN, and HOW of installing supers of DRAWN COMB for extracted honey production. The use of foundation or anything that requires comb building is a totally different program, and I will talk about that separately. However, I want to impress upon you at this time that foundation can NOT be used as if it were empty drawn comb, nor can you mix foundation and drawn comb in the same super without bad results. Fix in your mind that it is not HONEY that foraging bees bring home; but bees collect thin, watery nectar, temporarily store it until they get the time to ripen it into thick, viscous honey, and then store it in capped cells.

When a nectar flow gets under way and improves, swarming season is OVER and the bees mentally shift programs from swarming for reproduction purposes to nectar collecting to make honey for winter feed. However, if there is not enough super space for the bees to store all of this thin, watery nectar (maybe 20 pounds per day) until they have time to ripen the nectar to thick, viscous honey, they are going to SWARM. A swarm during a nectar flow is 100% FAULT of the beekeeper in failing to provide enough super space when needed; and is totally different than a swarm in swarming season which is caused primarily by brood chamber congestion. In Maryland, I know that a nectar flow is going to get underway in mid to late April, so I put ONE super of drawn comb in place early, about April 1st, followed by 4 more supers of drawn comb put on ALL AT ONE TIME about May 1st. Research, notably by Dr. Tom Rinderer of Baton Rouge Lab, has proven that the hoarding instinct of honey bees makes the presence of lots of drawn comb a challenge to the bees and they work harder and faster producing a higher yield of honey than having empty drawn comb supers added one at a time as needed. I use 5 or sometimes 6 supers, because I know that my bees will normally produce 3 full supers or maybe even 4 supers of capped honey during that major nectar flow; but they need the space of at least 5, or maybe 6 supers, to store all that thin watery nectar until they have time to evaporate the water from the nectar to convert it to honey. Some will say, "I only have 3 supers, why can't I just extract the bottom one and use it as the 4th empty super, etc?" It takes a lot of time for the bees to fully cap all ten (or nine) frames in a super, and if you extract uncapped honey, that honey is not yet ripe and may ferment. After all my time and hard work, I am not going to let the cost of 1 or 2 supers cause my bees to swarm, thereby losing some of my honey crop and maybe the bees. Hence, when I planned on increasing my colonies from 50 colonies to 60 colonies, I bought 50 more supers, so each of the new 10 colonies had at least 5 for use every spring; and I rarely had a swarm.

HOW TO INSTALL SUPERS OF FOUNDATION - Using foundation requires less supers for the same amount nectar collection than using drawn comb, because the bees have to eat about 8 pounds of honey (equal to maybe 30 pounds of nectar) to develop the energy to produce and construct one pound of wax comb! Further, using foundation requires more labor time and frequent inspection to establish the need for another super. Bees, in their genetic way, can't think like humans or change like humans (I hope you can) and hence do things in the same manner of their ancestors back with Adam and Eve in the Garden of Eden. All bees work within the limits of what we call BEE SPACE, the discovery of Dr. Langstroth that enabled him to develop the first removable frame hive. Bee Space is about 5/16", which is the travel space for a bee, meaning that they will build comb or fill up spaces smaller than 1/4" or larger than 3/8". This concept is very important in drawing foundation into comb! Even if you prefer and use only 9 frames in a body, you must use 10 frames of foundation to build the comb, or you will have a mess because you violated "bee space". This is the same reason that you cannot mix drawn comb frames with frames of foundation in the same super, nor can you install 4 or 5 supers of foundation all at the same time, because the bees will build comb in the strangest of places and you will have one great big mess that you cannot separate and the foundation is totally ruined. The only proper way to install supers of foundation is to put just one super of 10 frames in place, wait until about 6 of its center frames are drawn and partially filled with nectar, reposition those frames by moving the filled frames towards the outer box walls

and placing the undrawn frames in the center. At that point, put the 2nd super of 10 frames of foundation on top of the 1st super, and so on for the 3rd and 4th supers. Redundantly, I say getting foundation drawn into comb requires more of your labor time and a lot more inspections to determine the correct timing for another super installation. I want to point out an absolute fact here that beeHIVERS just don't seem to understand: There is NO WAY that you can make bees draw foundation unless they have an immediate need for a wax cell, such as storing nectar, pollen, or a place for the queen to lay an egg, and therefore, there MUST, and I repeat, there MUST be a nectar flow on (or a sugar syrup substitute) for bees to draw foundation! I cannot overemphasize this fact!

Another point: Collecting swarms at a time of year AFTER the main nectar flow often is a waste of time and money, because the old queen is probably going to be superseded rather soon anyhow, and you will probably have to feed a LOT of sugar to get them through the winter, etc., etc.; but I ALWAYS get in my car and go out to collect a swarm. Why? A swarm has no home, but more important is that it has NO COMB and has to build comb in a hurry so it can survive. Hence, I catch a swarm, put it on 10 frames of foundation, and feed it heavily with 1:1 sugar syrup for the sole purpose of drawing that foundation into drawn comb for use next year. I usually divide up bees and brood among other colonies and destroy the queen. Another point: I never feed honey to bees. Sugar costs about 30-35 cents per pound, whereas I can sell honey for at least \$3.50 per pound. A swarm is desperate for food that they have to consume to have the energy to produce wax and construct comb. Remember, bees have to eat 8 pounds of honey to make one pound of wax.

#### Item C) LARGE NUMBER OF FORAGING AGE BEES AVAILABLE AT NECTAR

FLOW TIME. Many apian followers don't understand that from the day a worker bee egg is layed, 40 days (almost 6 weeks) elapses before that worker bee makes its first nectar gathering flight! 40 DAYS! Why? The gestation period of the honey bee is 21 days, and its genetically programmed life has it doing "house duties" like comb building, nursing larvae, pollen packing, ripening nectar into honey, and serving guard duty at the hive entrance for the first 18 days of its life before it ever makes its first nectar gathering flight, which occurs on the 40th day after the egg was layed. For example, in Maryland, if the black locust bloom opens on April 25th, the egg of the bee that forages for that black locust nectar has to be layed 40 or more days before, or March 15th at the latest, when there might have been 6 inches of snow on the ground and baseball season has not yet opened. If you came to this meeting to LEARN, and I hope you did, then don't you ever forget the importance of this particular 40 days that may decide the yield of your honey crop!

Most people don't understand how to get a queen to lay eggs in the cold weather of February. Let me shock you! The queen does NOT make that decision! Her daughters, the worker bees, make almost all colony decisions and they totally control the queen's actions by how much they feed her, how much comb they build, and how many cells they CLEAN AND POLISH to receive her eggs! Further, worker bees won't do any of these things until there is pollen and nectar for food! In walks Mr. Smart Beekeeper, who creates an artificial nectar flow by feeding 1:1 sugar syrup (1 pound of plain sugar dissolved in 1 pint of water) and even supplies a pollen substitute like Mann Lakes Bee Pro. When these artificial nectar and pollen substitute are put in a hive, as I do about February 1st, the worker bees are fooled in to thinking that "early spring" is here, the strong nectar flow will soon start that will supply next winter's food, so "we gals better wake up our queen and get her laying eggs in a bigtime way". They start eating large quantities of the 1:1 sugar syrup, ignoring all that stored honey that is like emergency "hard tact" compared to thin delicious nectar. (You did not know that nectar is the bees choice of food rather than honey, did you?) Eating all these calories and microscopically exercising raises the body temperature of the bees so they can warm the brood area to a maternity room desired temperature of 91-96 degrees, start "stuffing food down the queen's gullet" which activates the queen's egg laying "appara-

tus", and finally clean and polish cells into which the queen can lay eggs. Early spring population increase has been started in the cold of February and snow may be all over the hive tops! Feeding this 1:1 sugar syrup continues well into dandelion time to keep that queen laying.

#### ITEM D) ELIMINATION OF THOSE CONDITIONS THAT CAUSE SWARMING -

First, let me point out that swarming is the natural program of honey bees for two purposes: to increase the population of honey bees over the world, and for bees to spread away from home into new territory, thereby providing pollination throughout the world. Back in the 19th century, the lack of sound knowledge about swarming often made it necessary to maybe 10 colonies in order to produce a total of 100 pounds of honey each year. The main goal of the 20th century bee scientists and professional apiculturists has been to determine the primary reasons for swarming and formulate colony management techniques to either prevent or diminish the tendency of bees to swarm. Much helpful knowledge has been made particularly in the last 50 years to control swarming so that a colony can be expected to produce 100 pounds or more of honey year after year in most parts of the country. The following points have been firmly established:

a.) There is a definite SWARM SEASON for all *apis mellifera*; which is generally defined as that period in the spring when brood rearing is at its peak, which, in most areas, is the 4-6 week period just ahead of a major nectar flow.

b.) Some races of *apis*, notably Carniolans, genetically have a higher propensity to swarm than other races. The same can be said about different stocks (strains) of the same race. Swarming may not be a problem for a skilled beekeeper, but can be a major problem for the unskilled or careless apiarist.

c.) (This will surprise you.) The Number ONE reason for swarming is congestion in the BROOD CHAMBER! This has nothing to do with any activity in the supers, which is a totally different problem.

d.) (This will also surprise you.) The Number TWO reason for swarming is the age of the queen. In addition to laying eggs, the queen has to be able to produce enough queen pheromone to "glue" or seal all of 40,000 - 60,000 progeny together as one single functioning unit, and her ability to produce that pheromone diminishes a little each day of her life. Colonies headed by a queen less than one year old rarely swarm, if the beekeeper has eliminated all other causes of swarming.

e.) It is NOT natural for bees to swarm during a nectar flow, because, in doing so, they are leaving the very thing that they are working so hard to collect to provide for colony survival in the coming winter. However, there MUST ALWAYS BE enough super space to temporarily store the thin watery nectar until the bees can evaporate the water from it and ripen it into honey. If the space is not available when they need it, they will swarm. Many beekeepers have concluded that swarming is a "sudden happening", or that there are few warning signs for the beekeeper, and therefore, swarming is just one of those unfortunate problems in beekeeping. None of this is true? When the BROOD AREA becomes badly congested with nurse bees feeding larvae, little or no nectar or pollen storage space available, foraging age bees pushing their way to and from as they travel out to forage, and PARTICULARLY no laying space for the queen, the bees initiate their swarming program which is not difficult to recognize if the apiarist knows what to look for. For a period of up to 12 days before a swarm issues, bees have to build swarm cells, produce lots of royal jelly to feed this potential new queen larvae, reduce or even stop feeding the queen (and hence egg laying) so she reduces weight in order to fly with the swarm, send out scouts looking for a nearby place to have the swarm cluster in order to organize, and finally gorge themselves with honey to carry along to their new home. Hence, not much work is done "out in the field" and the bees just sort of "hang around" the hive

waiting for the "signal" to swarm. This is the swarming program done in SWARM SEASON before a nectar flow.

Swarming during the nectar flow is NOT caused by brood chamber congestion, but caused by lack of super space to store the incoming nectar. In this case, the bees will build burr comb in any space they can find that is not travel space and fill it with nectar.

What techniques are used to try and prevent swarming? In the SWARM SEASON prior there will be no problem using Menthol when it should be used to kill the tracheal mites. There are about 4 different methods used for harvesting, but only two methods are fast and easy, while the other two methods are either too slow or cause stinging.

Theoretically, by inserting a Porter Bee Escape in the inner cover hole, the bees will leave the supers through this one way device and enter the brood chamber; but the bees will not leave the supers unless they are chilly and want the warmth of the cluster below, so the Porter Bee Escape is not a satisfactory means of getting bees out of the supers except in Northern states. Most new hobbyist harvest the honey using a bee brush to brush away the bees off of a frame, and these bees can become very angry and reciprocate with a sting. You would too, if someone knocked you out of your chair with a broom. In these times of public fear of bees, don't upset your neighbors by making your bees mad, or you may find yourself facing a new town or county ordinance that says "Beekeeping is Prohibited in this Area". The best two harvesting methods are the use of a Fume Board with a chemical, or to use a \$250 bee blower. If you can afford a bee blower, remove a super, stand it on end near the hive front, and blow the bees out of the super on to the grass. Unlike humans, bees don't get mad, because they do not understand that they are being robbed. I have a bee blower, but I much prefer to use the Fume Board with Chemical method. A fume board is much like a framed inner cover with a piece of absorbent cloth covering the inner cover face. Sprinkle one or two teaspoons of chemical all over the cloth, place the fume board on the top super cloth side down, wait 3-4 minutes, remove the super now empty of bees, and go to the next super. My partner, Ann Harman, and I use two fume boards and we can remove 20 supers per hour, one each three minutes? What are these chemicals that are used on the fume board? The most well-known is BEE-GO, which is butyric anhydride that has an odor worse than rotten eggs, vomit, or skunk musk, and it does not wash away very easily; but it WORKS. Another name is HONEY ROBBER, which is nothing more than Bee-Go with the addition of Oil of Cherries to mask the odor of butyric anhydride, but it still STINKS! I much prefer benzaldehyde, which has the odor of oil of almonds, a very delightful odor; but benzaldehyde is very difficult to find. Both butyric anhydride and benzaldehyde work extremely well to remove bees from supers, and they cost about the same, but anything that contains butyric anhydride "STINKS" grossly, but most honey producers use it. I think Mann Lake Bee Co. might be the only supplier left still selling Benzaldehyde, because the Federal Taxes on all of these fume board chemicals is so high that most just sell Bee-Go.

**PROTECTING YOUR DRAWN COMB** - After you have extracted your honey, you have a sticky mess and drippy frames. Don't put them outside and start all the bees within 3 miles robbing and killing each other in addition to neighbors calling the police about your stinging bees. Before dark, select your strongest colony, remove the telescoping top but leave your inner cover in place, add a total empty hive body on top of the inner cover, and then put 5 or 6 of these wet drippy supers with frames on top of the empty hive body, put on the telescoping top and seal all cracks that robber bees might enter. In just a few days all of your supers and frames will be totally clean of honey and dry, and the drippy honey is all nicely stored away in the strong colony below, and nobody was bothered in the slightest. Now, what are you going to do with that DRAWN COMB?

**DRAWN COMB IS A BEEKEEPER'S MOST VALUABLE POSSESSION**, and yet beekeepers let the wax moths destroy it before next season. There is no excuse for this! Select the place that you are going to store these supers for the next 6-9 months, stack them 10 high with a teaspoon of para-dichloro-benzene (PDB) on the frame top bars of each super with 3-4 teaspoons on the highest super, cover the stack and seal the cracks between the supers with masking tape. The PDB might have to be



replaced about monthly until the temperature stays below 45-50 degrees most of the time. Next April, or when ever you need them, just let the supers "air out" for 1-2 days before installation. Make sure that the chemical you use is paradichloro-benzene, and can be found in some drug stores or hardware stores as a type of moth crystals or in urinal blocks used to deodorize men's urinals. PDB is NOT expensive and totally protects your drawn comb.

**MARKETING HONEY** - Unfortunately, most beekeepers are lousy salesmen and don't like "selling" in general, some even thinking it is the next thing to being sinful. In 67 years, I have never sold a jar of honey, creamed honey, comb honey, or a honey stick; but I am a powerful salesman of the **DESIRE** to eat George Imirie's Honey. Not only do I divide my extracted honey by color and source, but I sell chunk honey, creamed honey, cut comb honey, 4 x 4 section honey, honey sticks, and beeswax candles. Further, to "cover all tastes", I buy and sell the specialty honeys that I can't make in Maryland, like Orange Blossom, Tupelo, eucalyptus, sour wood, alfalfa, and blueberry; and I do this on the theory of "one stop" shopping. Informative signs cover my booth, e. g., "Never put Honey in the refrigerator", "Buy this National Honey Board Cookbook", "Buy now, we will hold, you can pick up later", "Buy this Christmas Gift today, put in your freezer until Christmas Time". You **MUST** have a nice **OBSERVATION HIVE** which attracts the children, who in turn fetch the parents with money, and you willingly "talk yourself to death" about the life of a bee, and the importance of their pollination to human food supply. This helps the people that are frightened of bees because of the darn "killer bee" movies, and aids in their knowing how important our bees are. None of my honey is cheaper than \$3.50/pound, and people come to my booth or my home and pay this instead of buying Sue Bee Honey at \$2.59 at the grocery store. **SELL YOURSELF AND YOUR PRODUCT KNOWLEDGE, NOT JUST HONEY!**

**WHERE DO YOU LEARN?** - Our society is so different today than it was just a couple of generations ago when the bulk of people lived a rural life or in small towns. People did a lot of farming or gardening and bees were just a part of their lives; and you were taught "on the job" by your family, neighbors, and local people. Today the bulk of people are highly urbanized knowing little or nothing about farm life or agriculture; and thickly populated areas control the national vote directing the government to protect all people from everything from murder to a mosquito bite, from cancer to the common cold, training-on-the-job to trade schools, junior colleges, or universities. **TIMES CHANGE, and BEEKEEPING HAS TO CHANGE WITH IT TO SURVIVE!** The Federal Government has 6 bee laboratories spread around the U. S. staffed by scientists paid to research beekeeping problems and their solutions. Some universities still teach the sciences vital to beekeeping: biology, chemistry, biochemistry, entomology, virology, etc. State Departments of Agriculture employ Extension Agents to work on-site of agriculture products such as **HONEY**. Some of these scientists whose entire life evolves around our honey bees write detailed books that explain proper beekeeping procedures, tools needed, seasons to be used, management techniques, diagnosis and treatment of bee diseases, and how to work in harmony with the bee. I have already mentioned that it is these scientists that have done so much research these past 15 troubled years that have "kept us afloat" today with solutions for our problems (maybe not the best solution yet, but at least something that works fairly well); and now, almost every day, they are discovering some new finding of value in our search for better ways to **KEEP** bees. I have already stated that I think the 1992 **REVISED EDITION** of the **Hive and Honey Bee** should be every beekeeper's "bible"; but I want to mention what I think is the best beginners and novices (Roger Morse suggests "old timers" also) book ever written. It is the 3rd Edition (April 1998) of the **BEEKEEPER'S HANDBOOK** by Dr. Diana Sammataro. Not only are her statements accurate, but her drawings and sketches of "what is going on inside a hive" are so definitive, it is one of the finest books that I have ever read, and the price of \$29.95 is not expensive. Diana is best known as the pioneer or discoverer of the use of grease patties to control the

tracheal mite, and her photographs and even movies of these microscopic critters taken with an electron microscope are mind boggling.

ENDING NOW (finally! some might say) - There is little written by me without injecting a strong personal feeling. In taking care of my 50 or more colonies, I haven't worn gloves or a bee suit more than a few times in the past 40 years, and usually work in a Tee-shirt and no veil. My county sponsors the largest agricultural fair east of the Mississippi lasting 9 days and drawing over a million paying attendees. Inside a screen booth that has a pair of two story colonies of live bees, I put on 4 demonstrations each day of opening these hives, describing all the "happenings" inside the colonies, finding the queen and taking her over close to the audience of 100 or more at each demonstration so they can view her closely; and I am constantly talking into a microphone tied around my neck about bees, beekeeping and pollination. I do this dressed in a T-shirt and shorts with no veil, and I have only been stung a few times while doing this for over 10 years. Then, of course some people put on exhibitions of bee beards, but that does not allow the person to talk and move around as I like to do. Is this trickery? Do we get PAID? Are we CRAZY? The answer is emphatically, NO! We are good students of BEE BEHAVIOR, who have learned "HOW A BEE THINKS" and have eliminated all ANTHROPOMORPHIC thinking about bees. Most readers go to Chapter 8 in The Hive And Honey Bee entitled "Activities and Behavior of Honey Bees" written by the eminent entomologist, Dr. Norman Gary, and say to themselves "This is boring stuff, I just want to get to the part that tells me how to get more honey", and skip reading the chapter. They might remain a beeHAVER the rest of their lives, never learning about BEE BEHAVIOR and hence not able to appreciate KEEPING bees. I strongly urge every person to read the words of Dr. Gary, and when you throw away your ANTHROPOMORPHIC thoughts and understand BEE BEHAVIOR, only then will you find the real JOYS OF BEEKEEPING!

George W. Imirie  
EAS Certified Master Beekeeper

Many of my Monthly "George's Pink Pages" can be found on the Internet at:  
For older ones: <http://www.cybertours.com/~midnitebee/> (click the lower right image)  
For newer ones: [http://www.beekeeper.org/george\\_imirie/index.html](http://www.beekeeper.org/george_imirie/index.html)

REVERSING: It is well known and almost totally accepted that Reversing of brood chambers is one of the most helpful of swarm prevention techniques; and if your bees swarm in April or early May in Maryland, you have basically lost your honey crop for an entire year. However, many, many people seem to have lots of problems figuring out just how to reverse, when, and how often; so I am going to try to explain it in writing (it is easy if we were inspecting one of my colonies together and then I could show you and explain as we did it) It has been well proven that one of the strongest reasons for swarming is CONGESTION IN THE BROOD CHAMBER - Note, I said BROOD chamber, and nothing about super space. Let me stop here and make you think. It is late January, February, or March, the weather is cold or chilly, but the brood must be kept at 91-96 degrees to stay alive, bees like to keep nectar close to the brood for easier feeding, so the brood area is highly congested with lots of nurse bees feeding brood and warming the brood nest. Meanwhile, the old foragers are bringing in needed pollen from skunk cabbage, maples, and alders. If there is no 1:1 syrup, but just honey, bees have to fly out and find water to dilute the honey to nectar consistency for brood food. This whole scene is just a mess of congestion, which is the number ONE cause of swarming. Back in November, the worker bees began storing honey near the top of the colony and driving the queen down to the bottom hive body for any brood laying that she might do; and hence initial clustering of the bees as the weather moved down into the 40's or 30's was around the queen on

the frames of the lowest hive body. Just imagine a cluster of packed bees about the size of a basketball or soccer ball enveloping most of frames #5 & #6, some of frames #4 & #7, and smaller portions of frames #3 & #8. As the winter progresses, the bees slowly move UP (not sideways) and by January, they have consumed most of the stores in the lower frames and are now starting to eat the stores in the frames of the top hive body (regardless of whether you are using 2 deep bodies for brood chambers or 3 Illinois Bodies (like I use) for brood chambers. It is Nature's Way or Bee Behavior that bees like to move UPWARDS, and more or less have to be FORCED DOWNWARDS. Hence, when the space in the upper frames is filled up with brood or honey, even though there is plenty of empty space in lower frames, the bees and particularly the queen resist moving their brood rearing to the lower frames. Hence, the worker bees either stop the queen from egg laying, or even prepare to swarm. Therefore, it becomes the BEEKEEPER'S task to reposition the frames so that there is always empty laying space ABOVE where the queen is laying. However, the position of the frames that contain brood is VITALLY IMPORTANT before you start repositioning those frames. To aid you in trying to picture brood location in a colony, I want you to think of a big round CLOCK in the place of All (either 2 or 3) of Frames #5, where the number 12 is close to the inner cover and the number 6 is close to bottom board. Draw an imaginary line through the 3 & 9, and that indicate the space between the bottom hive and the top hive if you are using 2 deep bodies, or the center of the middle body frames if you are using 3 Illinois bodies. It is most important that you understand where this 3 to 9 imaginary line is for my written explanation of REVERSING. Upon examination, if about 80% of the brood is in UPPER frames and the remaining 20% brood, probably capped, is in the LOWER frames, REVERSE the positions of the top body with the bottom body. You might have to do it again in just 7 days or maybe not for 17 days depending on the weather, the age of the queen, the size of the frame, the race of the bee, and a dozen other reasons. However, you open the colony, examine the location of the brood as well as the empty space, and decide whether to reverse bodies that day or wait 2-3 days. Obviously the beeHAYER won't do as well as a knowledgeable beeKEEPER. I start reversing in late January (late February might be best for most readers) and continue it until the nectar flow is strong, usually about May 1st. I usually make about 4 or 5 reversals of a colony in that period of late January to May; but many beekeepers using 2 deep bodies as brood chambers get by with just 2 reversals. However, since I don't want to contend with any swarming problems, I might reverse more often than someone else. Reversing too soon is the important danger to the technique, because much of the new brood will be killed by being chilled because it is away from the heat of the bee cluster. Think of the imaginary clock: Brood is located in between the lines of 10 - 2 and 7 - 5, and you reverse the bodies. The frames with the brood up to 10-2 where the queen is laying is now in the bottom body and the bees are clustered about her to keep her warm, but the frame with brood that was down to the 7-5 line is now in the upper body and that brood is close to the inner cover and away from the cluster of bees, so it dies of chill. This mistake is referred to as SPLITTING THE BROOD, and you should remember it. Using the example just given, do not reverse until the brood is located between lines of 11-1 and 8-4 or even better when all the brood is in an upper frame and NO brood in the lower frame.

REVERSING is one of the most valuable techniques used in beekeeping not only helping to prevent swarming, but to aid your bees in building a larger population to enhance your honey yield. However, it is like learning to drive, it takes practice; but I strongly urge everyone who really wants to find the real JOYS OF BEEKEEPING to learn and perform the reversing procedure.

#### IMIRIE REQUEENING METHOD (ALMOST FOULPROOF)

Select an exact date for your new queen to arrive and make it known to your queen breeder, and get a MARKED QUEEN. TEN days before the new queen is to arrive, insert queen excluders in between any two boxes where your old queen can go. When your new queen arrives, water her and store her in a cool dark place until needed. Gather up a double screen board, an empty hive body, 10 drawn

combs, and a feeder with a gallon of 1:1 sugar syrup. Find the OLD queen (which ever brood box has larva is where the queen will be found) in the colony you want to requeen. Set her ASIDE away from the colony, so that you free to manipulate all the other frames in the colony. Select 3 frames of brood: 1 capped and 2 of eggs and larva, all with the covering nurse bees. Place these in the center of the empty hive body. Now add 6 more frames, as follows: 2 empty drawn comb, (one on each side of the brood frames), 2 frames of pollen and honey, (one on each side of the drawn comb), then 2 more empty drawn comb, (one on each side of the honey-pollen frames). This totals 9 frames leaving space for the queen cage. Now take several frames of brood ...remaining in the old colony...and shake the nurse bees into the new 9 frame nuc. Cover the nuc and set it aside for a while. Return the frame with the OLD queen to her home hive and replace the 5 frames you removed (3 of brood + 2 of honey-pollen) with empty drawn frames. Now put the double screen board on top of the old colony so that its entrance faces to the rear of the parent colony. Set the new 9 frame nuc on top, and install the new queen (make sure you remove the cork from the candy end). Start feeding the new nuc immediately. After about 3-5 days, check the queen cage very quickly using little or no smoke to see if the queen has been released. If she has not, you release her from the cage. Do NOT disturb for another 5-7 days and then check with as little disturbance and smoke as possible looking for eggs and larva. Add the 10th frame and remove the queen cage. During the next few weeks (I like about 5-6) check the brood pattern of the new queen. If you like it and want to accept that new queen, find the old queen down below the double screen, kill her, and remove the double screen board. This method has a couple of advantages: 1) if something is wrong with the new queen, you kill her and the colony has a backup with the old queen; and you requeen the colony at a later date, and 2) for about 5-6 weeks, you have 2 queens laying eggs that increase the number of bees which will make the hive stronger for winter and reduce the stresses of Winter. Note: If you don't have a Double Screen Board - You should. If you are not sure how it is made, imagine a wooden queen excluder frame without the metal wires, covered on both sides by 8 mesh wire - A DOUBLE SCREEN BOARD. Brushy Mountain Bee Farm in North Carolina makes and sells a fancy, very, nice one.

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