



THE BEE LINE

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President's Message

by Paul Dill

Another year is almost over: the time just seems to go so fast these days. And every year brings something new. As always, the Fall nectar flow was good up here, but in some places the bees needed to be fed. Even so, I got some unexpected autumn surprises.

I had bees abscond late in the season this year. Why? Did they object to the nucs in which I had them, or were they hybrid bees? Africanized bees, for example, will abscond easily, but their northward progress seems to have stopped--at least for now--because they do this too close to Winter. We all know that commercial pollinators come through, and with them a few Africanized colonies every year. So far, they have not mixed with local stocks. Is this a surprise for future years?

I watched three nucs just swarm out and land in a tree, up about 40 feet. One other hive that had previously had AFB also had no bees: perhaps they had left, also.

Dr. Wyatt Mangum will be at our upcoming meeting to discuss his surprising new research into swarming and newly observed honeybee activities: his talk "Colony Takeover by Late-Summer Swarms: a New Behavior Displayed by Some of Our Bees" might shed some light on some of the events I mentioned here. It is featured in the November issue of the American Bee Journal, so it should be an exciting presentation.

I do try to make hive locations where the bees might like to stay!

I have done a mix of plantings on small plots. First there will be cover crops for winter, and then next Spring and Summer I will have mustards, then yellows, then crimson, red, alsike, white and sweet clover. Buckwheat will re-seed from this Fall. I'll add some lime and fertilizer to help things along, and hopefully be a big boost to the honey that will come from these plots.

We will be having our yearly MSBA Honey Show at our November 20th meeting, so bring your best from your bee yards! We will also have an auction if you have any gear that you would like to pass on.

I look forward to seeing you.

###

[2010 MacArthur Fellows](#)

Marla Spivak awarded a [\\$500,000 Fellowship](#) from the MacArthur Foundation

Dr. Marla Spivak is an entomologist who is developing practical applications to protect honey bee populations from decimation by disease while making fundamental contributions to our understanding of bee biology. Essential to healthy ecosystems and to the agricultural industry as pollinators of a third of the United States' food supply, honey bees have been disappearing at alarming rates in recent years due to the accumulated effects of parasitic mites, viral and bacterial diseases, and exposure to pesticides. To mitigate these threats, Spivak's research focuses on genetically influenced behaviors that confer disease resistance to entire colonies through the social interactions of thousands of workers. Her studies of hygienic behavior—the ability of certain strains of bees to detect and remove infected pupae from their hives—have enabled her to breed more disease-resistant strains of bees for use throughout the beekeeping industry. Spivak's "Minnesota Hygienic" line of bees offers an effective and more sustainable alternative to chemical pesticides in fighting a range of pests and pathogens, including the Varroa mite, a highly destructive parasite that spreads rapidly through Western honey bee colonies. By translating her scientific findings into accessible presentations, publications, and workshops, she is leading beekeepers throughout the United States to establish local breeding programs that increase the frequency of hygienic traits in the general bee population. With additional investigations into the antimicrobial effects of bee-collected plant resins under way, Spivak continues to explore additional methods for limiting disease transmission and improving the health of one of the world's most important pollinators.

Marla Spivak received a B.A. (1978) from Humboldt State University and a Ph.D. (1989) from the University of Kansas. She has been affiliated with the University of Minnesota since 1993, where she is currently Distinguished McKnight Professor in the Department of Entomology. She is the author and creator of numerous beekeeping manuals and videos, and her scientific articles have appeared in such journals as the *Journal of Neurobiology* (now *Developmental Neurobiology*), *Evolution*, *Apidologie*, and *Animal Behavior*.

The [MacArthur Fellows Program](#) awards five-year, unrestricted fellowships to individuals across all ages and fields who show exceptional merit and promise of continued creative work. It is limited to U.S. citizens and residents.

###

Mark your calendars:

COMING EVENTS

MSBA Annual Meeting & Honey

Show:

November 20, 2010; Maryland Department of Agriculture HQ Annapolis, MD

###

Upcoming Local/ National / International Meetings:

[EAS 2011 Short Course and Conference](#)
July 25 - 29, 2011 Warwick, RI

###

2011 Maryland Queen-rearing Class

presented by Dr. Larry J. Connor, 2 1/2 Days, May 20 - 22, 2011. Location: Churchville - Bel Air area, Harford County, MD. Tuition \$290. For reservations: send \$50 to hold your place to: Joe Lewis, 1102 Runnymede Ct, Bel Air, MD 21014 For more information email lewisjoseph@verizon.net

###

Here's a link from Glenn Apiaries providing multiple links to Beekeeping News articles:

Honeybee and Beekeeper News

(on-line Beeline version use 'Control - Click' on *links* in this newsletter)

###

New Demons Found. The CCD Trail Gets Much Warmer.

from *Bee Culture's Catch the Buzz*

<http://home.ezezone.com/1636/1636-2010.10.06.17.30.archive.html>

In 2007 a team* was formed to search for the cause of Colony Collapse Disorder. Using mass spectrometry-based proteomics, a technique modified by the military for screening samples for pathogens, they found a fungus and an unusual virus associated with samples from colonies with CCD symptoms.

An insect iridescent virus (IIV) in bees from CCD colonies is new to the U.S. It shows similarities to an IIV first reported in India 20 years ago, as well as to an IIV found in moths. The method of its introduction to bees in North America remains a mystery but it probably arrived in infected bees, or it crossed over to bees from another insect.

All animals, ranging from lowly bacteria to humans have DNA as their genetic material. Viruses, however, have either DNA or RNA as their genetic material. RNA is a chemical variant of DNA.

The viruses thus far associated with honey bees in colonies with colony collapse disorder symptoms have been of the RNA type. The insect iridescent virus the research team correlated with CCD is a DNA virus, however. That is a fundamental difference and takes CCD research in a whole new direction. This was when the team brought in RNA virus experts.

The DNA in these viruses is something to behold. Their size and shape, and the way they are stacked inside the cells they infect fundamentally alters light in such a way that it causes iridescence. Viruses and infected host tissue may have a bluish green or purplish hue. Insect iridescent viruses have also been shown to contain a protein that causes host cells to self destruct in a process called apoptosis, which can be a viral attack mechanism or a host defense strategy.

Additionally there is a significant statistical link between CCD, the iridescent virus and a fungal parasite of the genus *Nosema*. It remains unknown if these two pathogens in concert cause CCD, or, are CCD colonies more likely to succumb to these two pathogens?

Currently, the team is trying to isolate the specific strain of iridescent virus in U.S. bees so that they can characterize it alone and in combination with *Nosema*. The work is ongoing but it may be the most important advance in the previous three years.

There are more than two dozen known insect iridescent viruses. As a general rule, the impact of these

viruses ranges from covert infections with relatively minor effects, to highly virulent and lethal infections. This lethality is one reason that this group of viruses has been scrutinized as a potential biopesticide, for applications such as mosquito control. This is not good news for beekeepers. In India, an iridescent virus, called IIV-24, has been implicated in high losses of honey bee colonies.

It is known that in an Asian honey bee, *Apis cerana*, a combination of parasites and pathogens co-exist, including: (1) a *Nosema* parasite called *Nosema ceranae*, (2) an iridescent virus, (3) parasitic and predacious mites, and (4) two other RNA-type viruses, Kashmir bee virus and a Sacbrood virus.

Both Kashmir bee virus and *Nosema ceranae* have been in North America for a decade or more. How similar is the CCD strain of iridescent virus to the IIV-24 from *A. cerana*? Is it possible that US bees acquired IIV from the Asian bee along with *Nosema ceranae* and Kashmir bee virus?

This IIV also seems to be closely related to an IIV virus called IIV-6 that occurs in other insect species. So this may be a variant of this virus that managed to transmit to a new host – bees.

Knowing exactly what IIV species is involved will be important so that it can be tracked and monitored to develop a control strategy. There is not a means of controlling the virus, although there are simple ways of monitoring *Nosema*, which can be seen under a microscope, and some options are available to beekeepers for reducing *Nosema* levels.

Once the strain of IIV in CCD colonies is identified, and assuming that the IIV link with CCD more time and analysis costs are higher than for PCR or ELISA. can be confirmed, the potential exists to use IIV presence as an indicator of CCD. It should be very easy to develop a PCR assay or even to use simple serological tests like ELISA to rapidly detect IIV. Until then, proteomics will be used to screen samples. Proteomics is an excellent screening method, but it takes more time and analysis costs are higher than for PCR or ELISA.

With an inexpensive and rapid assay, the ability to screen all colonies in an area for IIV exists. Until an effective treatment can be developed, eliminating infected colonies may be an option, as well as screening before new colonies are allowed to enter.

Standard quarantine practices such as testing imported bees before they are added to colonies, and disinfecting equipment would likely help. We can do a better job if we know the exact identity of the culprit(s).

cont. on p.6

Maryland State Beekeepers' Association Honey Show & Annual Meeting

November 20, 2010

Md. Dept of Agriculture HQ., Annapolis Md.

8:30am	Refreshments, Coffee, Donuts, etc.	
9:30am	Opening and Welcome	Paul Dill, President
9:45am	Md. Apiary Inspector's Report	Jerry Fischer Md. State Inspector
10:00am	Queen Introduction: Research Results and Practical Advice	Dr. Wyatt A. Mangum, American Bee Journal Columnist on Honey Bee Biology
	Break	
11:15am	Beekeeping & Public Awareness	Dr. Barry Thompson
Noon	Business Meeting: Annual Elections	Nominations Comm.
12:15 pm	Lunch	
1:45	Beekeeper's Auction	Paul Dill
2:15pm	Colony Takeover by Late-Summer Swarms: a New Behavior Displayed by Some of Our Bees	Dr. Wyatt A. Mangum, American Bee Journal Columnist on Honey Bee Biology
	Break	
3:30pm	News from the USDA Honey Bee Pests and Diseases Survey Project	Beltsville Bee Lab Rep- resentative
4:30pm	Honey Show Awards, Adjourn	

Annual Meeting Speakers & Topics:

The MSBA is excited to announce that Dr. Wyatt Mangum will be sharing information from very exciting and recently completed research at the next Maryland State Beekeepers Meeting on November 20th at the Maryland Department of Agriculture in Annapolis. Dr. Mangum's research into late season swarming is featured in the November American Bee Journal, and is the result of independent research he has been conducting just this year. He will also share invaluable tips on Queen Introduction, and take questions.

Dr. Mangum is a Professor of Mathematics at Mary Washington College in Virginia and is an expert in top-bar hives. He also writes the popular column in the American Bee Journal titled "Honey bee biology". Dr. Mangum has kept bees for over 35 years, beginning at the age of ten. In addition to his other colonies, Dr. Mangum maintains 30 observation hives where he conducts experimental work with queen cells and swarming, and bee behavior. Dr. Mangum also has an interest in the history of apiculture. He owns an extensive collection of antique beekeeping equipment, including hives dating back to the 1840's and over 100 old smokers.

Our program also includes a presentation from long-time member and Master Beekeeper Dr. Barry Thompson on community outreach, an increasingly important topic as many of our counties begin to restrict or consider bans on beekeeping in previously open areas. Dr. Thompson is past-President of the Maryland State Beekeepers Association, and also a member of the North American Pollinator Protection Campaign's Honey Bee Health Task Force. Dr. Thomson recently became Medical Director of the American College of Medical Genetics (ACMG).

Last June, the USDA announced the beginning of a 13-state survey of honey bee pests and diseases conducted cooperatively by USDA's Animal and Plant Health Inspection Service (APHIS), USDA's Agricultural Research Service (ARS) and Pennsylvania State University (PSU). The survey is meant to help USDA scientists determine the prevalence of parasites and disease-causing microorganisms that may contribute to the decline of honey bee colonies nationwide. The voluntary survey included 350 apiaries across 13 states and lasts through the end of 2010. We are pleased to welcome a representative from the Beltsville Bee Lab to give us information on what has been learned to date, and how it may affect our own colonies' health.

We will also have our traditional Honey Show, the last of the year and one to which all members are encouraged to bring their entries. David Morris has kindly agreed to chair this year's show, and you are invited to

learn more about the categories and judging criteria on the MSBA website at www.msbeea.org.

You are also invited to bring donations to our auction, an increasingly popular way to pass on old gear and honey-related items in order to support the programs of the MSBA and its support for beekeeper education and beekeeping across the state of Maryland.

We look forward to seeing you there!

###

Directions to:**MSBA Annual Meeting**

Fall Meeting: Nov 20, 2010

MD Dept of Agriculture, Annapolis:

Directions from Eastern Shore and Washington D.C.:

Take Rt. 50 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.

From North /Baltimore beltway:

Take I695 to I97.

Follow I97 to Annapolis, merging onto Rt. 50 E. stay in right lane to immediately merge onto Exit 22, Aris T. Allen Blvd. (Rt665). then follow directions above.

###

Lunch for the Annual Meeting:

There will be no lunch service provided for the Annual Meeting. Attendees should plan to "brown bag" or go to a nearby establishment for their lunch. MSBA will provide coffee and refreshments at the meeting opening and for meeting breaks.

###

cont. fm p.3 "New Demons..."

In the short term, the possibility of developing treatments against the IIV seems remote. Some possible treatments include antiviral drugs or heat treatment of hives. Most IIVs replicate at about 21 degrees C and do not replicate above 30-32 degrees C. Higher temperature may suppress the virus by halting replication, whereas cool weather and damp conditions may speed up replication of both IIV and *Nosema*. Many instances of CCD have occurred following extended periods of cool, damp weather, with more problems with bees in areas with frequent fog or in hill areas where the weather is cooler being reported. Placing bees in warm, sunny locations appears to help.

Finally, in a bee collapse that occurred in the northeastern part of the U.S. some years ago, an IIV was seen in varroa mites that prey on bees. Varroa may act as a vector for the dispersal of the virus among bee colonies, just as mosquitoes transmit West Nile virus or malaria to humans. Varroa is known to increase damage caused by other viruses, and beekeepers who fail to control varroa levels are likely to sustain high colony losses.

In all cases, management practices that reduce *Nosema* and mite loads and try to reduce long term exposures to cool, damp environmental conditions are likely to reduce colony susceptibility to IIV.

The entire paper is published in the online Journal Plos One. Find it at <http://www.plosone.org/home.action>

**The team includes bee specialists at The University of Montana in Missoula, fungal pathologists at Montana State University, and a group of virologists and chemists at the US Army Edgewood Chemical Biological Center (ECBC). Later, after they received the initial results, they added specialists in insect viruses from Texas Tech University and the Instituto de Ecologia AC in Mexico. Team members include Dr. Jerry Bromenshenk, Univ. Mt, Colin Henderson, Univ. Mt., Charles H. Wick, U. S. Army, Robert A. Cramer, Univ. MT., Shan Bilimoria, Texas Tech, and Trevor Williams, Instituto de Ecologia AC in Mexico and several others listed on the research paper.*

###

MSBA Board announces new Beeline Editor

Toni Burnham was selected as Beeline Editor at the recent MSBA Board meeting. Toni will be replacing John Moyer who has served as Editor for 13+ years (since David Bernard was MSBA president).

Toni brings to this position a background in communications and has some exciting ideas on how to advance the organizations presence through the newsletter's printed and on-line versions in conjunction with the MSBA website. Please support Toni in this endeavor.

###

Let's All Enter the 74th MSBA Annual Honey Show

by David Morris

This year MSBA will hold it's 74th Annual Honey Show. It is the final honey show of the year and time to bring out your entries one last time.

The show also provide numerous opportunities to showcase your honey cooking. Think beyond just extracted honey and rolled candles; think breads, cookies, and sauces, or photographs, pollen and granulated honey. Be sure not to miss this last chance to win a blue ribbon and cash prizes. Of course, superior entries are recognized with division ribbons and the Best in Show awards.

The honey show is also your opportunity to engage your children in your hobby and the competition of the show. The show offers a special Youth Division for those under 18. The division has three classes, but if there are enough entries, new classes can be created during the show. It is unfortunate that there are very few entries in the Youth Division. This year let's change this and get our beekeeping children more involved and excited about beekeeping competition.

The entry forms and rules are in the Beeline and on the MSBA web page. Let's see your entries at the Show!

###

Sale of Beekeeping Equipment:

Bob Crouse is assisting Mrs. Mavis Flaharty sell the beekeeping equipment belonging to her deceased husband, James, who was a life-member of MSBA.

In the Beeline /E-version, p.18, is a table of Beekeeping equipment, with retail prices that Bob has determined, and a suggested asking price.

Space limitations do not allow for the table here, but following are the types of equipment available:

Ill. Box w/frames-painted; Ill Box—painted; Shallow Box w/frames & foundation; Bee Escape-conical type; Smoker—small w/guard; Hive Tool--standard; European Veil Suit; Uncapping Tank set; 9 Frame Spacer Tool; Hive Strap; Plastic Honey Pail; Honey Sign; Nuc Box; Goat Skin Gloves—New; 16 oz Skep with caps (Pet); 24 oz. Skep with caps (Pet)

Contact Robert Crouse at 410-638-0105 or use rlcrouse@qis.net to arrange purchase.

Maryland State Beekeeper's Association

74th Annual Honey and Honey Cookery Show, Nov. 20, 2010

Honey Show Entry Form

Name (PLEASE PRINT CLEARLY)

Address _____ Phone _____

City _____ State _____ ZIP _____

County _____ Local Club Affiliation _____

Are you attending this show? YES NO Are you a current 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

Beekeepers entering for the first time

	1st	2nd	3rd	4th	5th	
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

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 Frame of Honey (shallow, medium, or deep)	\$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					

Division II ARTS AND CRAFTS**PREMIUMS**

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 Four Rolled Candles	\$12	9	6	4	2	NP
Class 21 Artistic Beeswax	\$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**PREMIUMS**

Class 31 Extracted Honey (As in Div. I)	\$12	9	6	4	2	NP
Class 32 Bee craft (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**PREMIUMS**

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 st	2 nd	3 rd	Score Card	Entries Released	Premiums Received
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Maryland State Beekeeper's Association

74th Annual Honey and Honey Cookery Show Rules and Premium List

November 20, 2010

General Rules

- 1) Entries will be accepted from 8:30 a.m. until 10:00 a.m. on the day of the show. Entries must remain in place until released by the show chairman at the end of the show.
- 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 whose 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
Prize Premiums	1 st \$12; 2 nd \$9; 3 rd \$6; 4 th \$4; 5 th \$2

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, "Queenline" or "Classic", jars, except Class 1. Beekeepers entering the first time in Class 1 only may exhibit honey in 1 pint or 1 quart glass canning jars or 1 lb. glass or plastic honey jars.

Extracted Honey - Beekeepers entering for the first time

CLASS 1

Extracted Honey

Extracted Honey - Beekeepers with 10 colonies or less

CLASS 2

Extracted Honey - Water White thru
Extra Lt.

CLASS 3
CLASS 4
CLASS 5

Extracted Honey - Lt. Amber
Extracted Honey - Amber thru Dark Amber
Extracted Honey - Dark

Extracted Honey - Beekeepers with 11 colonies or more

CLASS 6

CLASS 7
CLASS 8
CLASS 9

Extracted Honey - Water White thru Extra Lt.
Extracted Honey - Lt. Amber
Extracted Honey - Amber thru Dark Amber
Extracted Honey - Dark

Open to all

CLASS 10 Comb Honey - Square Section
CLASS 11
CLASS 12
CLASS 13
CLASS 14

CLASS 15
must be protected with plastic wrap or suitable container
CLASS 16
CLASS 17

Comb Honey - Round Section
Cut Comb Honey in clear plastic box
Chunk Honey in wide mouth 1 Lb. jar
Finely Granulated Honey in regular or wide mouth 1 Lb. jar
One Shallow or Full Depth Frame Honey -

Beeswax Block, 2 lbs. minimum
Dry Pollen Pellets in 1 Lb. honey jar

Division Champion: Ribbon \$15.00

Division I Total: \$576.00

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) President's 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.

CLASS 18
CLASS 19
CLASS 20
CLASS 21

CLASS 22
CLASS 23
CLASS 24
CLASS 25
CLASS 26
CLASS 27

Four Molded Beeswax Candles
Four Dipped Beeswax Candles
Four Rolled Beeswax Candles
Artistic Beeswax - candles, figurines or other forms, at least 1 1/2 lbs.
Label for Honey Container
President's Prize
Photography
Equipment or Gadget
Honey Wine - Sweet Mead, one bottle
Honey Wine - Dry Mead, one bottle

CLASS 28	Honey Wine - Augmented Mead, one bottle
CLASS 29	Personal Gift Arrangement of honey bee products
CLASS 30	Mailable Gift Pack of Honey Bee Products

Division II Champion: Ribbon 15.00

Division II Total: \$444.00

Division III YOUTH DIVISION

Exhibitors age 18 or under

CLASS 31	Extracted Honey (As in Div. I)
CLASS 32	Bee Crafts (As in Div. II)
CLASS 33	Honey Cookery (As in Div. IV)

Division III Total: \$99.00

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.

CLASS 34	Cake - One unsliced cake that may be unfrosted, frosted, filled, glazed or dusted.
CLASS 35	Cookies - 12 drop, refrigerator, rolled or filled cookies that may be unfrosted, frosted, glazed or dusted.
CLASS 36	Cookies - 12 bar or sheet cookies (brownies, date bars, baked granola, etc.). May be unfrosted, frosted, glazed or dusted.
CLASS 37	Pie - One unsliced pie.
CLASS 38	Candy - 12 pieces. May be cooked, uncooked, or may be candied peels and candied fruits.
CLASS 39	Yeast Bread (Non Sweet) - One unsliced loaf or 9 rolls.
CLASS 40	Yeast Bread (Sweet) - One unsliced loaf, coffee cake, tea ring, or 6 Danish or sweet rolls.
CLASS 41	Quick Bread (Sweet) - One unsliced loaf. Examples are: banana bread, nut bread, etc.
CLASS 42	Quick Bread (Other) - One unsliced coffee cake, tea ring, 6 doughnuts or 6 muffins.
CLASS 43	Jellies, Jams, Preserves or Conserves - One half-pint or one pint in glass jar, sealed with lid or paraffin.
CLASS 44	Condiments, Salad Dressings, Barbecue Sauces - One half-pint or one pint in glass jar. Examples are: catsup, pickles or relishes.
CLASS 45	Any other entry - honey cookery

Division Champion: Ribbon \$15.00

Division IV Total: \$411.00

Honey Show Grand Total: \$1,530.00

###

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THE BEELINE

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Address corrections requested

Old bees' memory fades; mirrors recall of mammals

A study published Oct. 19 in the open access journal Public Library of Science (PLOS) ONE, shows that not just human memories fade. Scientists from Arizona State University and the Norwegian University of Life Sciences examined how aging impacts the ability of honey bees to find their way home.

While bees are typically impressive navigators, able to wend their way home through complex landscapes after visits to flowers far removed from their nests, the study reveals that aging impairs the bees' ability to extinguish the memory of an unsuitable nest site even after the colony has settled in a new home.

"From previous studies, we knew that old bees are characterized by poor learning when trained to floral odors in the laboratory," says Gro Amdam, an associate professor in the School of Life Sciences in ASU's College of Liberal Arts and Sciences. "So, we wanted to test whether aging also affects learning behavior that is important for a bee's survival in the wild."

A bee is very well-trained as a forager after three to four days of flight time, Amdam says. Whereas mature bees have piloted their way to and from the hive for five to 11 days and old bees have had more than two weeks of flight time.

To test how old bees adapt to a changed home location, researchers trained bees to a new nest box while their former nest was closed off. Groups composed of mature and old bees were given several days in which to learn the new home location and to extinguish the bees' memory of their unusable former nest box.

The scientists then disassembled the bees' new home and forced groups of mixed-age bees to choose between three alternative nest locations, including the former nest box. Old bees with symptoms of senescence preferentially oriented toward the former nest site, despite the experience that should have told them that it was unusable.

"Although many old bees fail in learning tasks, we also discovered that a few still perform with excellence," explains Daniel Münch, lead author of the study and a senior life sciences researcher in Norway.

The scientists believe that their findings with bees offer a new means to model and understand the variability found in brain function between individuals; where some individuals' memories remain intact, while others' learning behavior becomes inflexible with age.

This message brought to you by [Bee Culture](#), The Magazine Of American Beekeeping, published by the [A.I. Root Company](#).

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About the E version of the BEELINE:

MSBA members 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 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.

Members without email addresses will continue to receive the mailed version.

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

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 8-10 page 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:

jmoyer28@comcast.net

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Honey Pumpkin Pie



Makes 8 servings

- 3 eggs
- 1 pastry for single 9-inch pie crust
- 3/4 cup honey
- 1 can (15 oz.) canned pumpkin
- 1 cup evaporated milk
- 2 Tablespoons flour
- 1 teaspoon cinnamon
- 1/2 teaspoon ginger
- 1/2 teaspoon nutmeg
- 1/2 teaspoon salt

Preheat oven to 425°F. In a medium bowl, beat eggs. Brush one teaspoon beaten egg on inside of pie crust. Place crust on a cookie sheet and bake for 5 minutes. Meanwhile, add the rest of the ingredients to remaining beaten eggs and whisk to combine. Remove pie crust from oven and carefully pour honey pumpkin mixture into hot crust; bake 5 minutes more at 425°F. Reduce heat to 350°F, and bake 30 to 40 minutes more, until filling is set. Cool completely and serve with Honey Whipped Cream. **Tip:** For Honey Walnut Pumpkin Pie, just before serving, combine 1/3 cup honey, 1/3 cup chopped walnuts, and 1/4 cup vanilla. Carefully spread over pie, cut and serve.

Prep Time: 5 minutes

Bake Time: 40 minutes

Nutrition: 284 Calories * 9 g Fat Total * 7 g Protein * 82 mg Cholesterol * 46 g Carbohydrates * 209 mg Sodium * 2 g Dietary Fiber * 27% Calories from Fat *

From The National Honey Board - Honey Feast Recipe Newsletter, Oct 2010.

Gupta: Sweet As Can Bee!

from Marine Mammal Center news article: <http://www.marinemammalcenter.org/about-us/News-Room/Latest-News/>



Gupta was rescued on October 4, 2010, from Breakwater Cove, Monterey County, California. He had severe trauma to his back and flippers from a massive sharkbite. Doctors thought the shark must have come from below Gupta and to his left. Indeed, the shark must have had a pretty decent hold for a second or so in order to create such a severe wound. Gupta's injuries consisted of major soft tissue loss over much of the left side of his chest, multiple lacerations and multiple puncture wounds in the left 'armpit'. During the initial evaluation, Center staff sedated Gupta, took some radiographs and thoroughly evaluated the situation.

The good news was that no vital structures were damaged. The chest wall remained intact and there was no evidence of joint involvement. The bad news was that the massive soft tissue trauma left a lot of skin and muscle without a blood supply, and this area was in various stages of dying. The wound was infected and infested with fly larvae (maggots) and it required aggressive topical cleansing, removal of dead tissue and application of some sort of antimicrobial, antiseptic ointment. That's when the idea of honey entered into the picture.

Honey has gained recent popularity in both human and veterinary medicine as a wound treatment due largely to its natural healing properties. It has a very high sugar content and as a result binds water molecules strongly. That makes the water unavailable to organisms trying to make a living in the area. This is why honey can be safely stored on the shelf without refrigeration. Honey also contains a variety of compounds that may enhance the tissue response to infection and inflammation. It's less expensive than most topical antibiotic ointments and evidence suggests it is just as effective. So the Center's staff and volunteers cleaned the wound and applied a generous layer of honey to it. Thanks to both the honey and the tincture of time, Gupta's wounds healed very quickly. In fact, he was released on October 25 at Chimney Rock, Point Reyes National Shore, California.

Interested in learning more on this sticky topic? Here are two links to papers indicating the value of honey in medical treatments:

<http://www.drgrotte.com/honey-medicine.shtml>

<http://preview.ncbi.nlm.nih.gov/pubmed/20852479>

###

From Scientific American article: <http://www.scientificamerican.com/article.cfm?id=bees-round-the-clock-nursemaids> Home
Mind Matters *Mind Matters* | Mind & Brain

Bees Work Wonders When Babies Need Them

They morph into round-the-clock nursemaids, but only when they are in direct contact with the hive's larvae

September 14, 2010 



Image:

Although it is about [bees](#), not humans, a paper just published in The Journal of Neuroscience will speak to anyone who has ever been up around the clock as a new parent, a medical resident, or any other type of caregiver. The findings by Guy Bloch and his Hebrew University of Jerusalem team suggest that our brains, our very [body clocks](#), are capable of profound change when we get an all-important signal: Our care is needed.

Guy Bloch, a professor of animal behavior and evolution, spoke with Mind Matters co-editor Carey Goldberg from Jerusalem:

Q: Your work looked at “nurse bees” that care for the hive’s larvae through the day and night. How amazing are they? Do they truly work non-stop?

A: We discovered quite a while ago that they do stop but they don’t have [circadian rhythms](#). Most of us, and most [animals](#), are usually active during one phase of the day. For us, we are active during the day and we [sleep](#) at night. There are nocturnal animals that are active during the night and sleep during the day. But nurse bees switch between activity and inactivity all day long. And it’s not like they’re sleeping for two hours and waking up. The switch is much more frequent. From studies observing them in the lab, I’d say they sleep from five minutes to maybe thirty minutes. You can actually see very nicely when they sleep because their body position is totally different.

Q: So what did you set out to discover?

A: The nurse bees’ basic behavior was known, but we were trying in recent years to approach two important questions. One is: what is the mechanism underlying this activity? We know the circadian clock genes are very conserved and recent studies suggest that the clock proteins and organizational principles are more similar to mammals than to fruit flies. But usually if you try to induce a mammal or even fruit flies to work around the clock, it will cause deterioration in cognitive performance, and you’ll see increasing pathology. What we’re trying to do is to learn as much as we can about the molecular and neuronal mechanisms that allow the bee to show this remarkable pattern of activity. And the other front is trying to understand what is the social regulation involved, because we know from previous studies that all this remarkable plasticity is regulated by social factors related to the

division of labor. Some bees care for the young; others do foraging, other bees are guarding the colony and so forth. But around-the-clock activity is most typical to nurses. So we looked at what would happen when you remove the nurse bee from the hive.

Q: And what did you find?

A: What we showed in this study is that all this behavior, the ability of nurse bees to work around the clock, is very context-specific. The nurse bees care for the brood around the clock when in the hive, but show strong circadian rhythms in activity shortly after being removed from the hive to constant conditions in the lab. You can think about it like a mother caring for the baby. If the mother needs to care for the baby she will be active around the clock. Human babies, during the first three weeks or one month, have no circadian rhythm. The comparison is very interesting.

Q: So how do the social cues work?

A: In this study, we performed manipulations to try to understand the source of the social signals. First, we caged nurse-age bees on an empty comb inside the hive. So they were of a similar age and genotype as nurses in the colony and they could smell the brood pheromones inside the hive. They experienced a similar environment in terms of temperature, carbon-dioxide concentrations and humidity, but they couldn't interact with the brood because there was no brood in these cages. We found that these bees had very strong circadian rhythms both in their activity and in their molecular clockwork functions. These nurse bees were more similar to foragers. So it's not just something in the environment that induces nurse bees to work around the clock. It's something in direct contact with the brood.

This experiment is very difficult to perform because you have to be active around the clock, and we repeated it with three colonies so it was huge work but provided a nice result.

Q: Can you go any farther and say what exactly it is about contact with the brood that affects the clockwork?

A: We're exploring several lines of research on that. We know that in bees, pheromones are very important, and the chemical identity of brood pheromones is known. So we're trying to manipulate them, and have some preliminary data on that.

The other line of research is to try to see what sensory modalities are involved. We know it's not vision because the hive is dark. And probably not auditory because it's so noisy in the hive. Chemical signals are very likely, and can be communicated in several ways. We think the antennae are one of the keys but there are also gustatory receptors in the mouth and legs. We'll try to find the sensory modality, and try to find the link between it and the circadian system, which is currently unknown even in mammals and flies. The bee is a very powerful model: due to their social evolution they appear to be extremely sensitive to social signals,

Q: Just to enter science fiction for a moment: could we, many years down the line, figure out the mechanism that nurse bees use to lose their circadian rhythm and then simulate it in, say, soldiers?

A: In order to understand what could be done, we would also need to understand why it's so unhealthy when you put a human on a schedule of, say, alternating one hour of sleep and one hour awake. The bees seem able to do it without damage. We need to progress in the research using various model animals. Activity around the clock is not common in the animal kingdom. Social insects such as honey bees and bumble bees can be active around the clock, and recently similar activity pattern was discovered in ants and termites. There was a very nice paper recently about reindeer and other deer during the polar summer. We have more and more evidence that animals can evolve to be active around the clock - it's not just bees. But it's not very common.

###

FLAHARTY PRICE LIST *(see Sale of Beekeeping Equipment p.6)*

ITEM	RETAIL	COST	SOLD
Ill. Box w/frames-painted	43.95	22.00	
Ill Box—painted	15.95	8.00	
Shallow Box w/frames And foundation	37.80	19.00	
Bee Escape-conacal Type	10.00	5.00	
Smoker—small w/guard	32.00	15.00	
Hive Tool--standard	2.50	1.50	
European Veil Suit	88.00	44.00	
Uncapping Tank set	100.00	100.00	
9 Frame Spacer Tool	17.50	9.00	
Hive Strap	8.95	5.00	
Plastic Honey Pail	6.95	3.00	
Honey Sign	13.00	6.50	
Nuc Box	37.00	18.50	
Goat Skin Gloves—New	19.20	15.00	
Refractometer	75.00	50.00	
16 oz Skep with caps (Pet)	.55	.25	
24 oz. Skep with caps (Pet)	.66	.33	

Contact Robert Crouse at
410-638-0105 or use

rlcrouse@qis.net

to arrange purchase.

**Make an offer if you don't
think the price is right!**