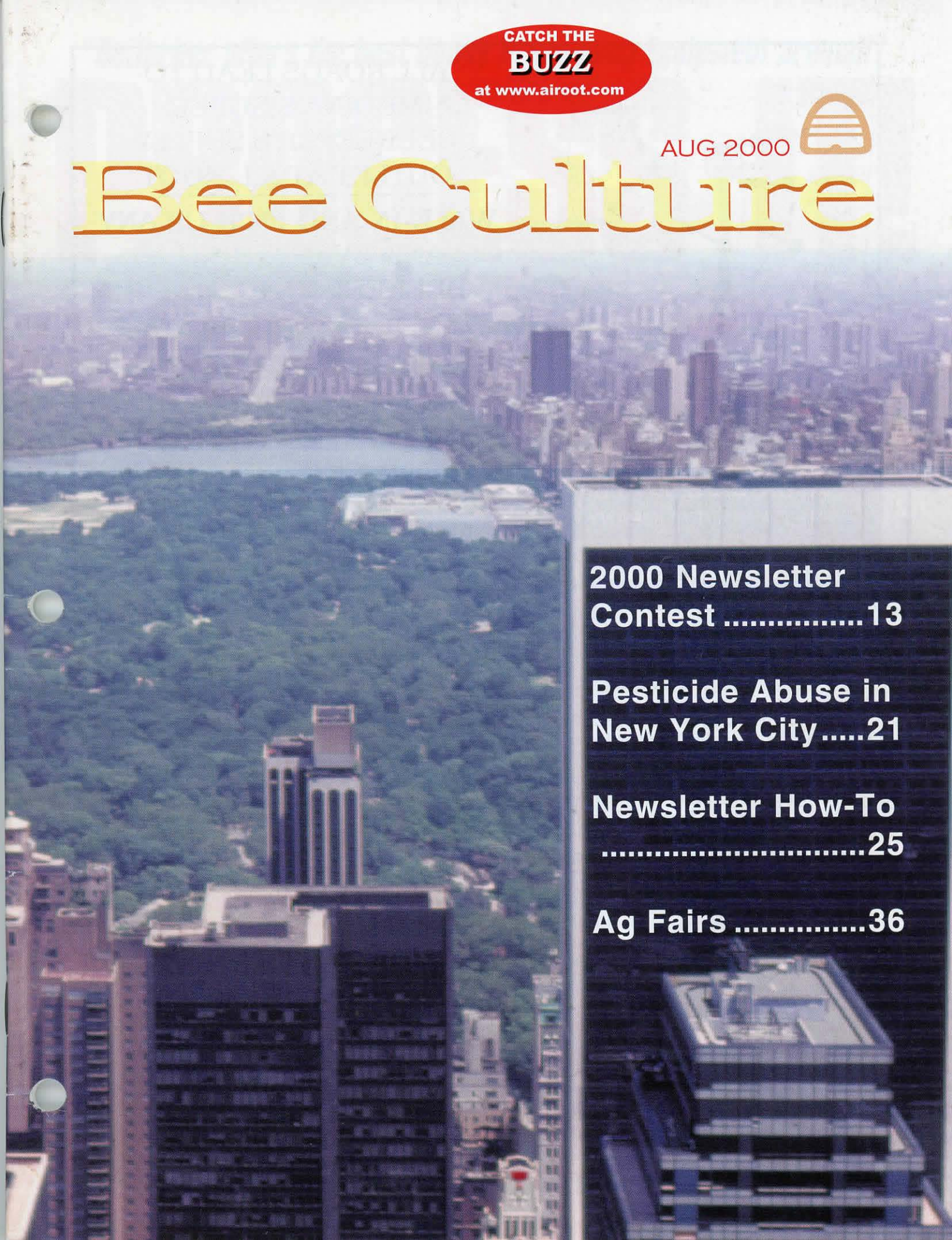
AUG 2000

# Bee Culture



# Bee Culture

THE MAGAZINE OF AMERICAN BEEKEEPING

AUGUST 2000 VOLUME 128 NUMBER 8


*Even in Central Park, pesticides are causing problems and killing non-target organisms.*

## FEATURES



## DEPARTMENTS & COLUMNS

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# MAILBOX

## Ventilator Response

In response to the letter in the May issue of *Bee Culture*, I thank you for pointing out first of all how simple the unit sets up, in fact less than one minute. The unit comes already assembled (not a kit). Also how quiet the unit is, and most importantly that the unit has been working flawlessly in the last year of your testing.

Also I appreciated your point as a beekeeper who used the ventilators since 1996 and substantiated our claims of more than a 30% increase in honey production. It tells me you must have a lot of confidence in the product, and that is one of our major concerns. After all where we got the idea was from studies done in the former USSR and USA (contact IBRA for transcripts) on ventilation of the hive. In the experiments they showed a substantial increase although perhaps some would say in an uncontrolled and crude way. So what we did with our ventilator was make it so you would ventilate the hive in a controlled way (thermostat and fan) and keep it simple to use.

The fact you yourself mention that (early defects) were replaced at **no charge** tells me that we are a manufacturer that stands behind our product. You are the **first** and **only** customer out of a long list of commercial and hobbyist beekeepers that had a problem with the plastic adjustment arm. Please call us at 888.233.5665 and we will replace it for free and if by chance there are others out there please let us know ASAP and we will replace it at no cost no matter how old your unit is. It is made out of the same plastic tent pegs are made of and pounded into the ground. Also we will take another look at it and beef it up if that's what you are suggesting. We have many beekeepers who have had units over three years now and their units are working well.

The 30%+ increase you are receiving tells us a lot about what is going on with your hives. Possibly you have a larger population than normal (healthy environment, and happy queen). Your workers are making more runs in a day which means increased pollination. To illustrate – the further a snowball goes down a hill, the more snow it will pick up and the bigger it gets. So then its only logical to expect increased pollination. You have reduced fanning because the fan is moving the air in the hive and accomplishing what the bees intend to do freeing them up for other chores (gathering more nectar and grooming themselves, etc.). Also old time beekeepers will tell you that a lack of ventilation will raise the chances of swarming.

The newest version (released May 2000) of the ventilator has a 30% (solar panel) power increase over the previous unit. (The manufacturer is giving us a five-year limited warranty that we will pass along to our customers.) It will come on earlier in the morning and stay on later in the evening plus it will work in a slight overcast. The other change we have made is we no longer use a deflector panel allowing more air to flow up and out of the hive. So we are **pushing the envelope** all the more when it comes to honey production.

Another point to consider the *Varroa* mite comes from the tropics (lots of heat and humidity). What happens when you change their environment by removing some of that heat and humidity? I do have the *Varroa* (small amount) in my hives and don't treat them at all, and my bees survive the Winters and are very strong hives. Why? Is it just better grooming? My hope is that the latest ventilator will discourage the *Varroa* all the more. Stay tuned. (See ad on page 48.)

For more information please visit out web site www.beecool.com. We would also like to take this opportunity to thank all of our loyal customers for their support.

Gary Stearns, Bee Cool Ventilators
North Ferrisburg, VT
802.425.3633

## Support Referendum

This letter is to urge beekeepers and all other members of the honey industry to vote YES on the upcoming referendum to implement the changes to the Honey Research, Promotion and Consumer Information Order. Why do I urge approval? Because the programs that this order makes possible are badly needed by the industry.

What are the changes we will be voting on? One change will mandate that the National Honey Board will use at least 8% of the funds raised from assessments for beekeeping and honey production research. Another will enable the National Honey Board to establish programs designed to ensure that honey placed in commerce is pure and natural.

In order to do these things, other changes were needed. If these changes are approved, the producer's assessment will be reduced from one cent per pound of honey to ¾ cent per pound. Honey packers (handlers) will also be assessed ¾ cent per pound. Imported honey will be assessed the full 1.5 cents at the border. With the packers paying their share, there will be funds available to continue the good advertising and promotion programs the Honey Board operates and have needed funds for the purity program and the bee research program. With the new assessments came the need to make some changes in the make up of the Board. The new Board will have 14 members. The Public Member position will be discontinued and two new packers seats will be created. With these changes comes the guarantee that producers will always make up at least 50% of the Board.

Sure we can all agree that we

*Continued on Next Page*

# MAILBOX

need more research on beekeeping problems. We desperately need new controls for *Varroa* mites. The search must include a control that does not have the potential of contamination of honey. For the long run, we need to develop a bee that is resistant to *Varroa*. The hive beetle threatens to become a major problem. We need to learn a lot more about this pest and ways to control it. We need alternative medications for brood diseases available fi resistance to terramycin develops. We need more information on the optimum number of colonies per acre for pollination of many crops – the list goes on and on. The Honey Board would not hire bee scientists, but would fund research projects to be done by University and USDA scientists. That will make the funds available go a lot further.

Plans are also underway for programs that will limit the amount of adulterated honey in commerce. Included are new research proposals for new methods of detection of adulteration. This is a world problem, and if the United States can take a firm lead perhaps other nations will follow. Adulteration not only cheats the producer by increasing the supply, but also puts the image of honey as a pure, natural product at risk.

When you decide how to vote, remember that if the new Order is approved the producer assessment will be lowered and we will get these new programs that will be a help to us all.

Please vote for these needed changes.

Binford Weaver
Navasota, TX

•

As I sit in my living room which includes a big steering wheel, CB radio, gearshift . . . OOPS, I guess this is my truck! Like many of you, I spend a great deal of time away from home to make a living. This is why it is very important to have someone be aware of what is going on in our industry and voice concerns or address problems daily.

The National Honey Board referendum will come up soon. I will not tell you how to vote. You will have to make up your own mind. You will have to find a way to get our product's goodness and usage in front of the consumer in the United States and on a worldwide basis. What I will tell you is why I support the NHB referendum, an 8% research budget, and quality assurance.

We need the changes the referendum could bring as we tackle the global "open trade" marketplace. We will gain, in my opinion, a "heads-up" approach and faster response to beekeeping problem-solving by allocating an 8% research budget. This will place our money where our peers on the NHB see the need and where the Board sees the best possibility for solving these problems.

The quality assurance issue has had the most debate. The question, "Shouldn't the government be doing this?" is asked the most. My response is, "Yes, this is true!" Our leaders in the national organizations have approached government agencies on this and have been rebuffed. Honey adulteration is an economic problem and not a health and safety issue, so they *will not* move on this. I believe we, as producers, have to protect our product's good name and make sure we compete against pure honey in the marketplace. I do not like it this way, but again, I'm sitting in this truck, and I don't like that much either!

We would all like and need a better price for our product. We thought the NHB would make a difference and help achieve that – and it has. When the supply is short, the high side will be higher, supported by the work of the NHB. To be true to ourselves, we need to keep in mind that the NHB does not guarantee a certain price. It is difficult to determine what dollar effect the NHB might have on the honey market. I believe the NHB programs that address marketing and research can have only a positive effect on our industry and should be supported. The NHB has gathered a great deal of information about our industry and our product. If we producers want to use this information, then we must get closer to the consumer and become a handler/packer.

It is my belief that all agricultural commodity producers are in the same position. We should follow the lead of many other agricultural producers and move to the "new age" co-op. Some examples of agricultural groups who have begun this are hog and corn producers, as well as corn, tomato, and soybean crushing plants, etc. This is a way to market the product and garner more consumer dollars. This is when we *could* and *should* take full advantage of the NHB offerings and expertise.

Like I said, you make up your own mind. I see the National Honey Board as a long term investment with good people from the producer side and good people from the handler side doing their best to move honey in the marketplace. I believe doing away with the NHB would be like not feeding my bees and then wondering why they weren't ready to take advantage of the honey flow! I want to be ready to take advantage of the consumer market, and the NHB can do this for me and my handler customers.

Darrel Rufer, Honey Producer
Waverly, MN

## How Much Honey?

In your May 2000 issue, you discuss per capita honey consumption over the past five years ("How much honey?") as calculated by both the USDA and National Honey Board. I would suggest that USDA figures are more accurate. The USDA takes carry over stocks into account and surveys beekeepers having five or more colonies, while NHB data comes from less comprehensive assessment figures.

The NHB also has a political incentive to overstate and hopefully assume credit for gains in per capita honey consumption. This need is related to the NHB's desire to see the upcoming referendum approved. Approval will increase their bureaucracy, power, and budget at industry expense.

USDA data shows per capita consumption essentially flat from 1994 to 1998. 1999 brought a one-year uptick of 9%, which one could hardly classify as a trend. Even if knee-jerk NHB supporters choose

# MAILBOX

to accept the inflated NHB consumption gain of 16.6%, they should acknowledge that very little of that gain has been derived from NHB activities. The US population has increased by 4.5%. We should also factor in the well documented "luxury effect" mentioned by Professor Gary Fairchild in the NHB-funded Fairchild Report. Evidently, studies have shown that honey sales are quite responsive to increased personal income. As people make more money, they spend relatively more on products perceived to be luxury goods, and honey is viewed by many as a luxury item. Fairchild states that a 1% increase in per capita income will translate into a 2.5% increase in honey sales.

U.S. Department of Commerce figures show that per capita income has increased 10.5% in inflation adjusted dollars between 1994 and 1998. Fairchild's 2.5:1 ratio would increase honey sales over 26% barring other relevant factors (such as price).

These two factors alone account for more than the entire reported rise in per capita honey consumption! I think NHB activities have a slight positive effect on honey sales, but it is an economically inefficient lever with which to pry up honey prices or overall consumption.

Over the past few years, the NHB's greatest achievement has been its ability to sell not honey, but rather itself to our industry. They have accomplished this feat with monthly mass mailings, serious schmoozing at association meetings around the country, and many freebies to bee clubs and individual assessment payers. U.S. beekeepers have invested nearly 30 million dollars in the NHB and got brochures and hangtags to show for it.

The upcoming referendum will be a good indicator of whether we as an industry will continue to buy this honey-house of cards that the NHB marketing magicians have balanced before us.

Joe Rowland
Owego, NY

## Free School Lunches

Former senator George McGovern of the FAO (International Food and Agriculture Organization based in Rome) is currently pushing for a school lunch (and breakfast) program for – get this – the world! There are an estimated 300 million hungry children in the world only half of whom attend school (some countries are already using free meals to encourage school attendance).

U.S. agriculture would be a major contributor to such a program. The program makes eminent sense on many levels and has the enthusiastic support of former senator Bob Dole and growing bi-partisan support from congress, especially farm-belt congressmen. The program is in the talking stage now, but we'll hear more about it in the future.

The recent domestic school lunch contretemps (involving the Honey Board) was due, in large part, to beekeepers getting pertinent information too late to take effective action. The bee industry has plenty of lead time on this one.

Various commodity groups will be competing with each other on this and a knock on honey could be that it is neither a staple nor a nutritious food. At the appropriate time, the Honey Board (and here's a good example of where a Honey Board is needed) should bombard the "powers that be" with information on the beneficial properties of honey – it's storage properties as well as it's medicinal properties – that honey is more than just another form of sugar.

As this program develops, the bee industry should gear up for a lobbying effort that is worth the bus fare to Washington.

Joe Traynor
Bakersfield, CA

## Thank You Roger

To say that Dr. Morse had a big influence on my life is definitely an understatement. I was a student in his honey bee biology class during my second year at college, when he talked about the American Foulbrood Control program in New York state. He mentioned that inspection was done by "a few eccentric individuals who worked bees all day long, and did not mind getting stung up to a hundred times a day." Though up till that moment I had only seen one beehive in my life, that I had kept as a teenager on our family farm, a few months later, I was a bee inspector. I inspected bees during summers for years. Bee inspection paid my college expenses, taught me how to really handle bees, put me in contact with many very interesting people, and I got stung a lot! Then late one summer, I went to visit Roger at Dyce lab, and told him that I was interested in getting involved in bee research. Other than assisting his course, taught to more than a hundred students, years before, we had never met. I think he liked the fact that I was raised on a farm, even though it was on Long Island. Somehow, barriers and deadlines disappeared, and a few weeks later, I was Doc's grad student. He sure hated bureaucratic "nonsense", as he called it, but understood university bureaucracy better than the administrators did. There was no way that I should have been able to get into grad school on such short notice. But Doc discovered a loophole in the regulations, and he used it. That was the first of numerous occasions that I saw Dr. Morse get department chairmen and other administrators nervous, but in the end he ran his show in a way that permitted him and us to work in as an efficient manner as possible. "If the rules get in the way, find a way to bend them or get around them." He never said that, but that was the way he did things. His point seemed to be that the university structure is there to provide us with a work environment, but it is the work that we should respect most, not the rules.

One day Dr. Morse called me in from the Dyce lab apiary, and asked me if I would like to go to Bermuda. He was on the phone with Walwyn Hughes, the secretary of agriculture of Bermuda, who had called for advice about the apparent discovery of AFB in that British colony. The next day, I a beginning grad student, was in Bermuda as an international

*Continued on Page 44*

# INNER COVER

## Food Chain

I was working in the driveway which runs along the side of the house and a motion near the corner caught my eye. By the time I turned to look the juvenile rabbit had made the corner and was heading for daylight, directly toward me. Its head didn't move but the eyes, wider than normal now, were moving just a bit left to right making sure nothing was in its path to get away from my 15-year-old cat that by now had cleared the corner too. Since the cat couldn't predict with certainty where the rabbit would go after rounding the corner, she instinctively swung just a bit wide, giving her some reaction room once she could see what to do next.

The rabbit didn't look back, didn't veer left or right, did nothing to give the cat pause. No fake-left-go-right move, no 180° turn at full speed and run right back at the cat who couldn't react fast enough to take advantage of the closeness this provided. This rabbit, still naive in the ways of hunted and hunter showed as much in its eyes and in its motion and was using pure unadulterated, adrenaline-driven speed as its only defense.

Straight toward me came the rabbit. But the cat, having now surveyed the scene had her eyes on the prey and was at top speed, easily closing the gap. The rabbit, heading for the safety of the tall grass some 12 feet away seemed never to see me at all, and it ran, without missing a beat, directly between my feet. The cat was closing fast and veered around my foot and made contact about three feet past me.

It was exactly like all those shows you have seen on television - lion gets gazelle, cheetah gets impala. Closing from behind and just a tad to the right of the rabbit the cat swings out it's left paw, raking the rabbit's hind quarter. Blood and fur fly and the blow knocks the rabbit off balance and to the right, directly in the path of the cat. The rabbit rolls on its side, its front legs still running. It turns it's head back to see what's happening and I can plainly see its eyes are wild, wider than before, showing whites at both corners.

The cat stops dead in mid-stride. Its right hind foot hits the rabbit's midsection stunning it and pinning it down, while the left front paw hits the shoulder and she has the rabbit by the throat. That fast.

The rabbit kicks one, two, three times then is still. The cat shifts weight, position and grip and looks around to make sure she's in control. And I can see the rabbit's eyes are barely open now, the fear relaxed. And even as I watch they dull, as life leaves and becomes one with the cat.

My cat's diet doesn't require that she supplements what I feed her with the occasional rabbit, mouse, mole, snake or even butterfly, all of which, or parts of which have been found on the front porch over the years. She's a cat, the top of the food chain in her domain, and that's what cats do.

To her credit she doesn't just kill, but hunts to eat. No presents at the front door for my praise, just tufts of hair or butterfly wings.

Older, more experienced rabbits are just as often in her sights, but they don't end up for lunch as often. They're faster than this youngster just caught. Even in her prime my cat had a hard time catching an adult with even a few feet head start. And when those wise old rabbits would do the fake-right-turn-left thing that cat would leave skid marks in the grass trying to turn, but end up another few feet behind. Or better, the 180° turn and blast

*Continued on Page 38*

# New Book

## Reviewed by Sue Cobey

The two most frequently asked and reluctantly answered questions about beekeeping are: "Do you get stung?" and "Do you make honey?" The general public seems to have a lack of awareness of the amazing world of honey bees. Beekeepers prefer to talk about their fascination with and the pleasure derived from working with these industrious insects and their enormous value to agriculture. Transferring this enthusiasm to others is a gift. Biologist/cartoonist Dr. Jay Hosler[1]s new book *Clan Apis* bridges this gap, reaching out to explain the fascinating biology of the honey bee. It is unique, informative and lots of fun.

With amazed delight, I watched a series of scribbled cartoons develop into *Clan Apis*. Hosler, a colleague at the Rothenbuhler Ohio State University Honey Bee Lab, would often ask probing questions about observations of colony behavior to verify his story lines. To observe his bee characters and their adventures evolve into five ingenious stories and eventually the book, *Clan Apis*, was an enjoyable diversion in my workday routine. I highly recommend this as a bedtime story for children, an educational tool for teachers and as an entertaining diversion for adult readers. In comic book form, *Clan Apis* tells the life story of a bee. Hosler uses strong characterization and beautiful artwork to draw readers into his brisk story and creates an engaging world that is fun to visit. The star of *Clan Apis* is Nyuki, a goofy young bee who learns about life in the hive from her serious big sister Dvorah. As the story evolves, the cast expands, and we learn about Queen Hachi and the role she plays in the hive and during swarming. Nyuki's brother Zambur provides insight into the one role a drone plays in the hive, and Nyuki's friends Sisyphus (a dung beetle) and Bloomington (a flower) provide Nyuki with valuable insight into the world outside the hive.

However, what sets this book apart from other books about bees is how elegantly Hosler weaves information about honey bee biology and behavior into his story. By making elements of honey bee natural history important plot points, Hosler avoids being "teachy" and packs this work with more information and humor than seems possible. Readers find themselves learning despite themselves. In fact, it is so rich and scientifically accurate that it is currently being used at all levels in schools. The lucid writing and artwork in *Clan Apis* make it an ideal instructional tool for any venue from elementary schools to college classrooms. Dr. John Wenzel, recipient of Ohio State University's Distinguished Teaching Award, currently uses *Clan Apis* in his introductory biology class with excellent results. In addition to its scientific accuracy, the story is funny, and students soon discover that learning and fun do not have to be mutually exclusive concepts. *Clan Apis* has been critically acclaimed in the comic book industry and has started to receive attention from the mainstream media as well, receiving a glowing review in the popular science monthly *Discover Magazine* (February 2000). The work also received a Xeric Award in 1998, a 1999 Ignatz nomination for best comic series and in 2000 has received three Eisner Award nominations (the comic industry's equivalent of an Oscar) for Best Limited Series, Best Title for a Younger Audience and Best Writer/Artist-Humor.


Dr. Hosler is thrilled with the response. "My goal has been to share the wonders of honey bee biology with readers. I am delighted that so many people are enjoying the work and developing an appreciation for the complex world of social insects," said Hosler. "I have always enjoyed teaching, and this is my way of reaching a really big class." Hosler, a neurophysiolgist studies honey bee learning and olfactory processing, will be taking a faculty position in the Fall of 2000 at Juniata College in Huntingdon, Pennsylvania where he will teach invertebrate biology and neuroscience. But does that mean the end of his cartooning days? Not likely. "I am currently working on the next *Clan Apis* story and focusing on the role of the forager in the hive. It should appear late this year or early in 2001."

*Clan Apis* (ISBN#0-9677255-0-X ) can be ordered from *Bee Culture's* Book Store, Cat. No. X88. The book is 160 pages, 7"x 10", perfect bound, with a full-color cardstock cover, interior pages printed on 60-lb paper and black-and-white interior art. The cover price is $16.95 which includes shipping in the U.S. If you would like to read more about *Clan Apis* including a 16-page excerpt and other reviews, visit the *Clan Apis* Web site at www.jayhosler.com/clanapis.html. To learn more about Dr. Hosler's research, visit his Web site at www.jayhosler.com. BC

# NEW PRODUCTS

**Better Bee** has introduced a new clear and opaque plastic cut comb container, along with a cutter to cut comb to fit the container. The bottom has a one inch lip, while the top overlaps the depth of the container and rests on a snug lip on the bottom. This container wont leak. Period. Labels are available that capitalize on the shape. Better Bee, Greenwich, New York. 800.632.3379


If you have been plagued by veils that don't hold snug on your helmet because they keep sliding up, exposing vulnerable spots below, you'll appreciate B & B's helmet with hooks strategically placed facing down to stop that nasty net behavior. The helmet has Velcro adjustable bands inside, with a built in sweat band. **B & B Honey,** Houston MN, 800.342.4811.

**Beekeeping In The Intermountain Range**, 507A, by J.W. Brewer and W.T. Wilson. Colorado State Univ. Coop. Ext. A 6 x 9, 80 page booklet. $5.75 in the U.S. ($4.00 extra for foreign). Coop Extension Resource Center, 115 General Services building, Colorado State University, Fort Collins, CO 80523. This 20 year old publication has some interesting features to be considered. The Extension people have added a supplement on tracheal and *Varroa* mites, bringing it mostly up to date. The rest of the book is pretty straight forward with good information on biology, equipment and management. There is also good info. on the intermountain states, but some of it is fairly dated. The value of this book, however, is who wrote it. Bill Wilson, now is Weslaco, TX with the USDA was in Logan, UT when he co-authored this book. And although Dr. Wilson has many book chapters to his name, I know of no books he has authored. This is a keeper for collectors, and an inexpensive reference for beginners.

***Farmers and their Diversified Horticultural marketing Strategies***, a 48 min video from the Center for Sustainable Agriculture, Univ. VT, 590 Main St., Burlington, VT 05405. $15.00 if mailed to a U.S. address.

If you "sell" anything in the ag market, this video is for you. Although honey, honey bees, and pollination are never mentioned, the information offered in this video applies to every beekeeper who ever thought of selling honey or any other product from the hive. The video contains several segments: Roadside stands, Farmer's markets, Community sponsored ag, Multiple markets, Internet sales, Pick your own (maybe this won't work with honey), Restaurant sales, and Coops. Still, every avenue for sales here applies directly to how to sell honey. Customer service, quality control, adequate production, diversity, innovative techniques to reach new customers, and other ideas. If you sell honey, this is a great investment. I highly recommend it.

# THE WISE GUY

If the referendum passes, producers need to get some issues into this "Act" for the betterment of the industry. Packers and producers need a uniform agreement on the purchase and sale of honey. Along with a uniform procedure on the grading of honey. This is not only a quality issue but has become a quality-of-life issue for producers and packers. What do we need, and where do we go from here?

When a sale of honey takes place, an agreement has been reached, so a contract should be signed by both parties agreeing on price, quantity, physical makeup and date of pickup. Also the payment terms should be included.

Producers should receive payment 10 days from the date of delivery and should get a warehouse receipt from the purchasers, not just a bill of lading. The warehouse receipt needs to be a negotiable instrument in case of financial failure by one or more parties. Example: You sell your honey to me, I file bankruptcy, and all you have is a bill of lading and a phone call saying I would purchase your honey. What chance do you have to recover? This is only business.

In the past both parties have wanted a contract only when it was to their advantage. Now do it to protect your company plus have a negotiable price you can show your bank and give them some relief. In this contract you need to protect each party, given the ups and downs of the honey market. A simple approach is for each party to agree on a price then put in a clause that protects each from a drop or increase by saying that for each fluctuation in price, only 75 percent of that change would be suffered by one of the parties. Example: 100,000 pounds of honey sold at 55 cents per pound by contract. If the market price has increased to 65 cents by the time of delivery, the packer would pay $62,500, which would include 75 percent of the increase, instead of $65,000. The same would hold true if the price dropped to 45 cents. The producer would receive $47,500, not $45,000.

Now who is going to set the price? We can use a panel of producers and packers with accurate sales records, we could use the Honey Board working with the producers providing they had accurate records, or we could just use 30-day sales records if packers wanted to post them on the Internet weekly and use the average price.

The larger issue here is how do we get a uniform color grading structure? I bet I can send 10 samples to 10 different people and get back 10 different readings, especially on color. We could use a central testing lab that is funded by the Honey Board assessment. That would place the burden on a central place and take it away from each party. Also the results should be the same day in and day out.

If something is not done to place items like this into place there will always be doubt from both sides of this business. The quality assurance issue if passed could take care of this. Otherwise, it must be done no matter what happens.

*Wise Guy*

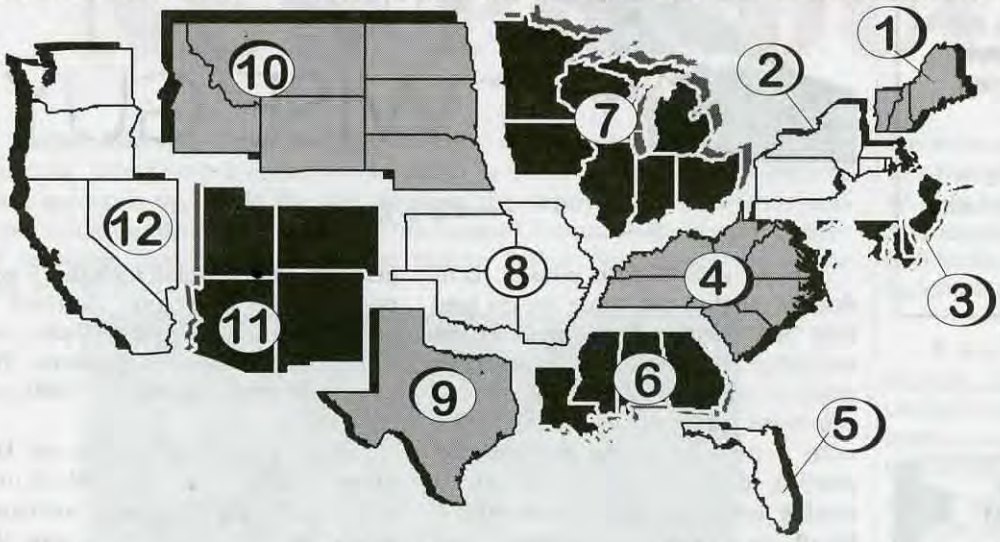
| | | | |
|---|---|---|---|
| Original Contract Price | $.55/lb | = | $55,000 |
| Price Change To | $.65/lb | = | $65,000 |
| $ Increase of | $.10/lb | = | $10,000 |
| Contract *increase* = 75% of $10,000 | | | $7,500 |

Therefore, the packer increases pay by $7,500, not $10,000 increase for a total of $62,500 ($55,000 + $7,500 = $62,500)

| | | | |
|---|---|---|---|
| Original Contract Price | $.55/lb | = | $55,000 |
| Price Change To | $.45/lb. | = | $45,000 |
| $ *decrease* of | $.10/lb | = | $10,000 |
| Contract *decrease* = 75% of $10,000 | | | $7,500 |

Therefore, packer subtracts only $7,500, not $10,000 for a total of $47,500 ($55,000 - $7,500 = $47,500)

# AUGUST – REGIONAL HONEY PRICE REPORT




### *Region 1*

Prices steady since July, but demand steady to increasing a bit. Early flows this year Dandelion, fruit, wild flowers. Weather definitely bad early in the season.

### *Region 2*

Bulk prices down, wholesale up, retail steady. Demand mixed but slowly increasing. Fruit, berries and wild flowers slowed some by poor weather for early flows.

### *Region 3*

Prices steady, but demand not very strong yet this season. Good weather helped all early flows but has slowed for Summer crop.

### *Region 4*

Prices steady across the board, demand steady also. Mixed weather across the region, from dry to too dry, affected early tulip poplar, fruit and wild flower crops.

### *Region 5*

Retail prices down a bit, wholesale and bulk steady. Demand steady, but not strong at all. Early Palmetto hurt some by weather, along with citrus. Hive beetles a *real* problem.

### *Region 6*

Wholesale prices increasing a bit since last month, bulk and retail steady. Demand mixed, but not strong. Clovers, tallow, berries and wild flowers all affected by bad Spring weather.

### *Region 7*

Bulk and wholesale prices down a bit, retail only steady. Demand, however is increasing slightly, a welcome trend. Dandelions, berries and fruit all affected by early season unsettled weather.

### *Region 8*

Bulk and retail prices down, wholesale steady. Demand steady to a bit slower than normal. Locust, berries and clover did fairly well early due to stable weather.

### *Region 9*

Prices basically unchanged, but demand picking up a bit in some areas. Tallow, wild flowers and mesquite helped, and hurt by mixed weather and dry areas.

### *Region 10*

Bulk prices up a tad, the rest steady. Demand down though. Dandelion and early fruit slowed by poor early weather.

### *Region 11*

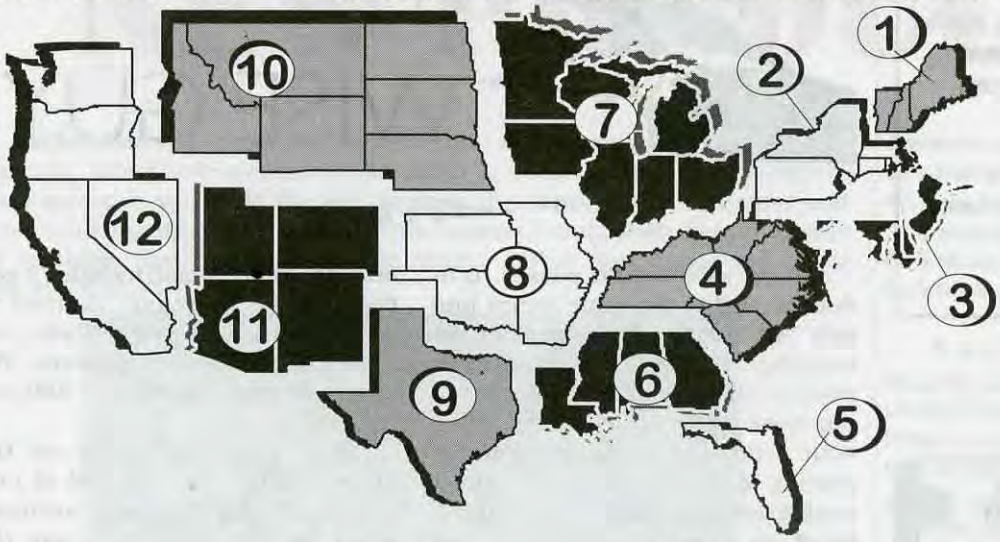
Prices up a little across the board, while demand only steady. Poor Spring weather affected dandelion and fruit, thus buildup.

### *Region 12*

Prices up across the board, while demand remains steady. Berries, blueberries, vetch and other early crops affected by mixed good and bad weather. Summer will tell.

| | Reporting Regions | | | | | | | | | | | | Summary | | History | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | Last | Last |
| **Extracted honey sold bulk to Packers or Processors** | | | | | | | | | | | | | **Range** | **Avg.** | **Month** | **Yr.** |
| **Wholesale Bulk** | | | | | | | | | | | | | | | | |
| 60# Light (retail) | 69.47 | 73.75 | 74.00 | 74.00 | 75.00 | 60.00 | 57.80 | 68.00 | 77.33 | 63.50 | 110.00 | 70.00 | 45.00-142.00 | 70.26 | 70.73 | 70.59 |
| 60# Amber (retail) | 66.83 | 64.19 | 68.00 | 69.00 | 65.00 | 58.50 | 57.00 | 60.00 | 74.00 | 62.00 | 103.00 | 68.00 | 43.00-123.00 | 68.10 | 67.65 | 68.63 |
| 55 gal. Light | 0.59 | 0.60 | 0.65 | 0.65 | 0.63 | 0.65 | 0.60 | 0.65 | 0.65 | 0.65 | 0.67 | 0.65 | 0.55-0.75 | 0.64 | 0.64 | 0.68 |
| 55 gal. Amber | 0.57 | 0.60 | 0.63 | 0.63 | 0.65 | 0.60 | 0.56 | 0.63 | 0.48 | 0.63 | 0.65 | 0.63 | 0.47-0.80 | 0.61 | 0.59 | 0.68 |
| **Wholesale - Case Lots** | | | | | | | | | | | | | | | | |
| 1/2# 24's | 28.22 | 30.38 | 29.50 | 31.89 | 29.50 | 25.83 | 29.69 | 29.50 | 30.00 | 29.50 | 24.00 | 29.50 | 23.65-35.20 | 29.65 | 29.95 | 29.23 |
| 1# 24's | 41.62 | 41.72 | 48.00 | 44.65 | 43.07 | 44.50 | 40.69 | 42.24 | 46.00 | 38.40 | 38.00 | 47.20 | 32.40-54.00 | 42.82 | 43.07 | 43.04 |
| 2# 12's | 38.25 | 38.59 | 45.60 | 42.69 | 40.48 | 42.30 | 38.08 | 40.40 | 40.50 | 31.80 | 34.00 | 42.00 | 29.40-52.58 | 39.47 | 39.17 | 39.66 |
| 12 oz. Plas. 24's | 35.17 | 36.05 | 44.40 | 35.34 | 36.85 | 31.40 | 35.78 | 34.86 | 40.40 | 27.40 | 38.00 | 37.20 | 26.40-48.00 | 36.14 | 36.05 | 36.06 |
| 5# 6's | 41.34 | 43.79 | 54.00 | 47.75 | 46.84 | 39.90 | 38.47 | 39.00 | 48.00 | 46.84 | 40.00 | 42.00 | 30.50-67.50 | 42.52 | 41.34 | 42.13 |
| **Retail Honey Prices** | | | | | | | | | | | | | | | | |
| 1/2# | 1.78 | 1.58 | 2.65 | 2.17 | 1.19 | 1.78 | 1.48 | 1.64 | 2.25 | 1.49 | 1.83 | 1.85 | 0.95-4.00 | 1.79 | 1.80 | 1.90 |
| 12 oz. Plastic | 2.20 | 2.01 | 3.10 | 2.43 | 2.38 | 2.45 | 2.11 | 2.22 | 2.51 | 1.82 | 2.38 | 2.25 | 1.39-3.50 | 2.25 | 2.27 | 2.27 |
| 1 lb. Glass | 2.78 | 2.36 | 3.25 | 3.15 | 1.89 | 2.87 | 2.78 | 2.64 | 3.33 | 2.39 | 3.75 | 3.00 | 1.58-5.75 | 2.80 | 2.74 | 2.84 |
| 2 lb. Glass | 4.45 | 4.17 | 4.90 | 5.42 | 4.69 | 4.48 | 3.78 | 4.75 | 4.72 | 3.41 | 7.00 | 5.00 | 3.19-7.00 | 4.54 | 4.59 | 4.69 |
| 3 lb. Glass | 6.63 | 6.38 | 6.95 | 6.76 | 6.69 | 6.90 | 6.38 | 6.58 | 7.29 | 6.79 | 7.45 | 6.45 | 3.69-15.00 | 6.67 | 6.33 | 6.70 |
| 4 lb. Glass | 7.11 | 6.73 | 8.23 | 8.45 | 8.23 | 6.53 | 6.69 | 7.98 | 7.00 | 8.23 | 8.23 | 8.23 | 5.25-12.00 | 7.43 | 8.06 | 8.08 |
| 5 lb. Glass | 9.22 | 9.70 | 10.50 | 10.10 | 10.34 | 8.08 | 8.17 | 10.97 | 9.00 | 10.34 | 10.50 | 9.25 | 5.57-16.00 | 9.46 | 9.30 | 10.28 |
| 1# Cream | 3.25 | 3.16 | 4.40 | 3.65 | 4.40 | 2.93 | 3.30 | 2.91 | 4.50 | 2.29 | 4.40 | 3.13 | 2.25-7.69 | 3.25 | 3.21 | 3.45 |
| 1# Comb | 4.31 | 3.67 | 3.60 | 4.31 | 5.49 | 4.42 | 4.59 | 4.04 | 6.00 | 5.49 | 4.25 | 4.50 | 3.95-8.19 | 4.34 | 4.38 | 4.30 |
| Round Plastic | 3.60 | 3.15 | 3.60 | 4.00 | 3.70 | 3.75 | 4.45 | 3.66 | 3.65 | 3.70 | 4.50 | 4.00 | 1.30-6.00 | 3.79 | 3.85 | 3.82 |
| Wax (Light) | 1.60 | 1.94 | 2.00 | 2.25 | 2.13 | 2.17 | 1.56 | 1.88 | 1.77 | 2.13 | 1.25 | 1.50 | 1.25-5.50 | 1.64 | 2.57 | 2.54 |
| Wax (Dark) | 1.35 | 1.44 | 1.75 | 1.48 | 1.83 | 1.67 | 1.33 | 1.10 | 1.00 | 1.83 | 1.00 | 1.00 | 1.10-5.00 | 1.39 | 2.32 | 2.27 |
| Poll. Fee/Col. | 37.89 | 43.00 | 35.00 | 36.67 | 38.15 | 36.67 | 40.50 | 40.00 | 20.00 | 38.15 | 50.00 | 35.50 | 20.00-55.00 | 39.44 | 38.96 | 36.55 |

# AUGUST – REGIONAL HONEY PRICE REPORT




### *Region 1*

Prices steady since July, but demand steady to increasing a bit. Early flows this year Dandelion, fruit, wild flowers. Weather definitely bad early in the season.

### *Region 2*

Bulk prices down, wholesale up, retail steady. Demand mixed but slowly increasing. Fruit, berries and wild flowers slowed some by poor weather for early flows.

### *Region 3*

Prices steady, but demand not very strong yet this season. Good weather helped all early flows but has slowed for Summer crop.

### *Region 4*

Prices steady across the board, demand steady also. Mixed weather across the region, from dry to too dry, affected early tulip poplar, fruit and wild flower crops.

### *Region 5*

Retail prices down a bit, wholesale and bulk steady. Demand steady, but not strong at all. Early Palmetto hurt some by weather, along with citrus. Hive beetles a *real* problem.

### *Region 6*

Wholesale prices increasing a bit since last month, bulk and retail steady. Demand mixed, but not strong. Clovers, tallow, berries and wild flowers all affected by bad Spring weather.

### *Region 7*

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| 55 gal. Light | 0.59 | 0.60 | 0.65 | 0.65 | 0.63 | 0.65 | 0.60 | 0.65 | 0.65 | 0.65 | 0.67 | 0.65 | 0.55-0.75 | 0.64 | 0.64 | 0.68 |
| 55 gal. Amber | 0.57 | 0.60 | 0.63 | 0.63 | 0.65 | 0.60 | 0.56 | 0.63 | 0.48 | 0.63 | 0.65 | 0.63 | 0.47-0.80 | 0.61 | 0.59 | 0.68 |
| **Wholesale - Case Lots** | | | | | | | | | | | | | | | | |
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| 2 lb. Glass | 4.45 | 4.17 | 4.90 | 5.42 | 4.69 | 4.48 | 3.78 | 4.75 | 4.72 | 3.41 | 7.00 | 5.00 | 3.19-7.00 | 4.54 | 4.59 | 4.69 |
| 3 lb. Glass | 6.63 | 6.38 | 6.95 | 6.76 | 6.69 | 6.90 | 6.38 | 6.58 | 7.29 | 6.79 | 7.45 | 6.45 | 3.69-15.00 | 6.67 | 6.33 | 6.70 |
| 4 lb. Glass | 7.11 | 6.73 | 8.23 | 8.45 | 8.23 | 6.53 | 6.69 | 7.98 | 7.00 | 8.23 | 8.23 | 8.23 | 5.25-12.00 | 7.43 | 8.06 | 8.08 |
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| Round Plastic | 3.60 | 3.15 | 3.60 | 4.00 | 3.70 | 3.75 | 4.45 | 3.66 | 3.65 | 3.70 | 4.50 | 4.00 | 1.30-6.00 | 3.79 | 3.85 | 3.82 |
| Wax (Light) | 1.60 | 1.94 | 2.00 | 2.25 | 2.13 | 2.17 | 1.56 | 1.88 | 1.77 | 2.13 | 1.25 | 1.50 | 1.25-5.50 | 1.64 | 2.57 | 2.54 |
| Wax (Dark) | 1.35 | 1.44 | 1.75 | 1.48 | 1.83 | 1.67 | 1.33 | 1.10 | 1.00 | 1.83 | 1.00 | 1.00 | 1.10-5.00 | 1.39 | 2.32 | 2.27 |
| Poll. Fee/Col. | 37.89 | 43.00 | 35.00 | 36.67 | 38.15 | 36.67 | 40.50 | 40.00 | 20.00 | 38.15 | 50.00 | 35.50 | 20.00-55.00 | 39.44 | 38.96 | 36.55 |

Mark Winston

# SWARMING

"It was a distinct pleasure for me to return to England, the home of swarm research, to pay homage to these fine scientists."

Swarming season is almost upon us. No, I'm not daft; late August and September is a second swarming season, although it's more of a mini-season than the full-blown Spring swarm extravaganza. Up to 40 percent of wild colonies become crowded and swarm in late Summer, a situation that can be mimicked in beekeepers' colonies when you remove honey supers and squash four or five boxes of bees down into two hive bodies.

Swarming is on my mind this month for that reason, but also because I recently returned from lecturing in England, and to my surprise and delight both the Meridian and the British Beekeepers associations had asked me to talk about swarming. The surprise was because no one has asked me to talk about swarming since tracheal and *Varroa* mites came on the scene, and I had almost forgotten that swarming is an interesting biological phenomenon and an important management subject. The delight was because the talk was in England, home to some of the finest swarm research in beekeeping history.

I cut my research teeth on swarming studies, and as a young student was in awe of the quadrangle of Butler, Free, Ribbands and Simpson, four British bee researchers active in the 1950s-1990s, who established much of what we know today about swarming. These gentlemen conducted classic studies on the biology and management of swarming at the Rothamsted Experimental Station, including the first breakthroughs in understanding the important role of queen pheromones in the inhibition of queen rearing that precedes swarming.

Swarming has always been a subject of intense speculation and research by beekeepers and scientists alike. It is, after all, one of the most complex behaviors in the world of social organisms, with upward of 30,000 individual workers coordinating the precise choreography involved in rearing queen cells, exiting the hive, clustering, scouting and eventually moving to a new nest site.

The key to understanding swarming is in the rearing of new queens, for this is the first and most critical step that eventually results in colony reproduction. Reproductive swarming cannot occur without new queens developing in cells, yet for most of the year the colony rears no queens. Much early speculation focused on why workers suddenly rear queens, with various hypotheses proposed that included a seasonal trigger, excessive numbers of nurse bees that required an "outlet" for their brood food and some signal based on crowding in the hive.

My earliest contribution to this debate was to propose a multifactorial hypothesis for why queen rearing and subsequent swarming occur, which involved a complex model that in retrospect was an overly elaborate conclusion. Feeling conciliatory, I suggested that all of these theories were right and that swarming required many different stimuli in and outside the hive to all be at their proper levels before workers would begin rearing new queens.

Sounded good at the time, but although the behaviors of swarming remain as complex as they ever were, I think the cause of swarming is more on the simple side of things. That is, as colonies grow in population and become congested, the distribution of queen pheromone is restricted and the amount of pheromone per bee diminishes, leading to the release of workers from the queen's inhibitory influence and the rearing of new queens.

This concept originated with two findings from Rothamsted, the first being their 1960 discovery of one component of queen pheromone, which they called queen substance. This early work established the importance of the queen in suppressing queen rearing, and pointed to queen pheromones as the primary inhibitory factor. The second important advance involved classic studies of the role of crowding and congestion that indicated the important role of these factors in swarming.

Our work in recent years has furthered this concept in a number of important directions, in intimate collaboration with Keith Slessor of Simon Fraser University's Chemistry Department and a legion of our students and technicians. Interestingly, we've added to the complexity in our knowledge of swarming simultaneously with simplifying our understanding of its underlying causes.

One of the areas of increasing complexity is the number of compounds making up "queen substance." Our initial research indicated that queen substance itself, produced in the queen's mandibular glands, was actually a blend of

*Continued on Next Page*

"Simple management manipulations can prevent swarming if done properly and in a timely fashion."

five substances, all of which have to be present in order to replicate the effects of the queen's mandibular gland pheromone. However, even that composite blend is not the whole story. Recent work by Chris Keeling, a Ph.D. student in Keith's laboratory, has demonstrated the existence of three to five or more additional queen-produced pheromone components, likely not produced in her mandibular glands, all of which need to be present to duplicate the chemical attraction of workers to their queen. Chris is well on his way to identifying these substances (one is in the bag already), adding another layer of complexity to this chemical detective story.

To further complicate the issue, brood also produce odors that inhibit queen rearing. Queen pheromone alone, at least the mandibular version, is not sufficient to suppress all queen rearing, but the addition of young brood increases that inhibition. This research, primarily conducted by Jeff Pettis and Heather Higo, was an odd result, since it is young brood from which workers rear queens in the first place. Some of their work suggested that pheromone produced by young brood may be the primary cue mediating supersedure rather than swarming, an interesting hypothesis for the next generation of students to pursue.

While our research into the queen's inhibitory chemistry has yielded an increasingly complex story, our knowledge of the in-hive behaviors leading to queen rearing and swarming has simplified. Elegant work by Ken Naumann in the early 1990s confirmed earlier hypotheses that worker bees attending the queen remove pheromone from her and then serve as messengers, spreading the pheromone through the nest by subsequent contacts with other workers. Further, Ken demonstrated that pheromone distribution in crowded colonies was restricted and the amount of pheromone per bee reduced, providing a quantitative mechanism to explain how the queen's inhibitory influence declines as colonies grow and become congested.

Thus, the initiation of queen rearing is a simple consequence of a complex blend of queen odors being restricted in their distribution and of the amount of pheromone per bee declining as colony populations grow. There is still a need for research to differentiate between the relative roles of restricted distribution due to congestion and a simple per-bee reduction in pheromone quantity, but taken together these factors explain why colonies begin queen rearing leading to swarming, even though the old queen is still present.

An experiment conducted last Summer by an undergraduate student in my laboratory, Monique Ledoux, added another interesting twist to this story. Queen rearing is one-half of colony reproduction, but drone production is the other component. Colonies begin rearing drones about a month or so before Spring swarming, and perhaps drone rearing also depends on a reduction of queen pheromone, although at a higher level than the decrease of pheromone required for queen rearing to begin. Her experiment demonstrated that queenless bees will build comb with drone-sized cells, and that bees with a mated queen, a virgin queen or queen mandibular pheromone will construct comb with worker-sized cells. This result suggests a role for queen pheromone in mediating the timing and possibly the extent of drone production, a subject again worthy of pursuit by future pheromone researchers.

The idea that reduced queen pheromone leads to queen rearing is an elegant explanation for the initiation of reproductive swarming, and also is satisfying in that it explains why simple management manipulations can prevent swarming if done properly and in a timely fashion. Since pheromone distribution is restricted by congestion and crowding, any management procedures that reduce crowding should diminish swarming. Thus, switching hive bodies early in the Spring to provide empty comb above the brood nest, breaking up the brood nest later in the Spring by inserting a frame or two between chock-full brood combs and timely supering before the honey flow all are effective management strategies that virtually eliminate swarming when done properly.

My love of swarming research has continued throughout my career, most significantly because swarm studies emphasize the important interaction between basic and applied science. Beekeeping benefits from understanding why bees behave in the ways they do, and swarming is an excellent example of how research into basic aspects of bee biology can lead to important management methods.

The two go hand in hand. It would be foolish to restrict the basic research that provides the underpinnings for new advances, but irresponsible for scientists to leave the research at the basic stage without pursuing the applications. For swarming, I learned that lesson from the example set by the stellar generation of Rothamsted scientists who preceded me. It was a distinct pleasure for me to return to England, the home of swarm research, to pay homage to these fine scientists by informing the next generation of British beekeepers how the story has developed from the foundations they laid. BC

*Mark Winston is a professor and researcher at Simon Fraser University, Burnaby, B.C. Canada.*

# ? DO YOU KNOW ?

## *Impact On Man*

Clarence Collison
Mississippi State University

Beekeepers are very fortunate to have many opportunities to increase their beekeeping knowledge by attending various conferences, meetings, demonstrations, short courses and workshops. National, regional, state, and local beekeeping associations offer a wide variety of educational programs. In addition, there is a wealth of printed materials available on honey bees. It has often been said that more has been written about bees than any other living thing with the exception of man. How familiar are you with beekeeping, bees and their impact on man, past and present?

Please take a few minutes and answer the following questions to determine how well you understand these important topics.

---

The first nine questions are true and false. Place a T in front of the statement if entirely true and F if any part of the statement is incorrect. (Each question is worth 1 point).

1. ____ In the past honey bee colonies have been used in warfare.
2. ____ The original author of "The Hive and The Honey Bee" was C.C. Miller.
3. ____ Queen substance is a very volatile substance and is distributed in the hive by fanning bees.
4. ____ Different races of honey bees use different dialects of the dance language.
5. ____ Pollen is normally stored in both worker and drone-sized cells.
6. ____ Cells containing pollen are filled about 3/4 full and are not covered with a wax capping.
7. ____ Persons with serious allergic reactions to bee stings can be immunized.
8. ____ Bees need more room to ripen honey then they will to store it.
9. ____ Before laying an egg in a cell, the queen measures the diameter with her antennae.

(Multiple Choice Question, 1 Point)

10. ____ The coxa, trochanter, femur, tibia, and tarsus are associated with the honey bee:

A. Proboscis
B. Leg
C. Antenna Cleaner
D. Pollen Basket
E. Sting Apparatus

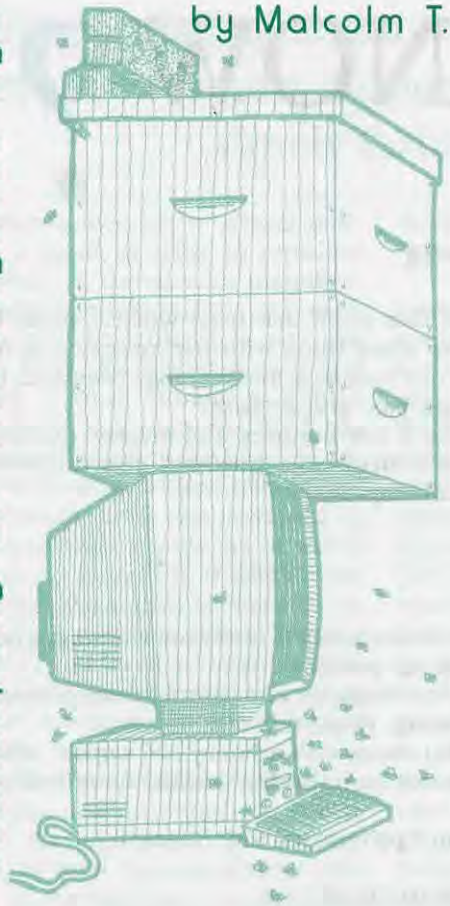
11. Name four techniques used to remove bees from honey supers when removing honey from colonies. (4 points).
12. Please explain why there is an increased probability of a colony picking up American foulbrood during a nectar dearth. (1 point).
13. What is the primary function of branched hairs on the worker honey bee's body. (1 point).
14. Name two disadvantages of bottom supering a honey bee colony. (2 points).
15. Describe four features of a normal human reaction to a bee sting. (4 points).
16. Upon being stung with a honey bee worker, what is the first thing an individual should do and why? (2 points)
17. What is an EpiPen used for? (1 point)

ANSWERS ON PAGE 43

Beekeeping In The Digital Age

by Malcolm T. Sanford

# Here Come The Dot-Coms, Part Three



Last month I discussed another **example of apicultural dot-coms** on the World Wide Web found at **http://beesource.com**. This month I will explore several more. The first has the url **http://about.com**. I mentioned the site briefly in a **previous column**. My remarks at that time were misconstrued by some to be disparaging. That was not my intention, and I apologize to **Ms. Sherry Medders**, who is responsible for developing the site, if what I said caused her harm. She says about herself: "As the beekeeping guide at About.com my job is to gather the best beekeeping information on the Web and put it into alphabetical categories. I have compiled a growing categorized list of related links on bees and beekeeping. I also write biweekly features, we have weekly Chats hosted by myself or by my Chat Host (HoneyRobberHost), and I manage a Bulletin Board and distribute a biweekly newsletter. The result is a community focused on beekeeping." Certainly her site is one of the most comprehensive on beekeeping-related information yet available and it is regularly updated. I especially like her listings for Africanized bees (AHB), general articles on beekeeping and bee biology. In addition, one can find links to trivia, bee diseases and many other topics linked to the About.com page.

**Al Needham** bills his page as an educational site about honey bees; the URL **http://www.xensei.com/users/alwine/beesite.htm** lists a good many options, including **Zen Bee** and **hang the beekeeper**. It greets the visitor with, "Try rubbing fresh crushed garlic on the spot where you have been stung by a bee after you have removed the stinger!" The **Zen Bee** returns three phrases for each click of the button. The first phrase changes every hour, the second changes every minute, and the last phrase changes every second. **Hang the beekeeper** is a downloadable version of the standard hangman game, but based on beekeeping terms. There are sections on **beginning beekeeping**, written by Richard Bonney of the University of Massachusetts and author of a book for sale on the site, **Ed Mabesoone's** videos from Florida, New York City **rooftop** beekeeping and a whole section on what are called beekeeping "**skins**." "Skins are nothing more than a background for your Internet Explorer Browser, just something to replace that dull, boring, gray default background. Below you will see a sample of what a Browser skin looks like. Unfortunately, there are no skins available for the Netscape Browser." One is never sure what will pop up on this site. For example, **pollinator losses** turns out to be all about honey bee and other losses, based on the forgotten pollinator campaign, **Queen Cage** is a picture of just that with some explanatory text about introducing queens and **Bee Man** is a picture of a human's torso and head covered by a huge bee beard. This site is also part of the **honey bee ring** mentioned in **another article** in this series.

**Mr. John P. Clayton** has developed a site with the URL **http://www.beemaster.com**. It consists of 110 pages and 550 images. This site contains a lot of information that is not beekeeping-related, but definitely worth looking into. I especially like Mr. Clayton's **Web page design section**, with its explanation about the basics, including selecting digital cameras and image editing programs. For the apiculturally inclined, however, it is the **novice beekeeping course** he has developed that may pique your interest. This contains sections on **bee anatomy** with a description of the castes, unique **equipment** used in beekeeping, installing **package bees** and **capturing** swarms. The site also contains a **detailed log of activity** and a **photo gallery** of bees, beekeeping and other related subjects. Finally, there is Mr. Clayton's discussion of the **Tai Chi of beekeeping**. "The secret here is to attempt to move smoothly from one task to another, with as little actual stopping as possible. A good example follows, but lets just say that you are a body and spirit in motion. The two can dance with each other if you can freely escape the idea that the brain is in charge. I don't enjoy repetitive motion, rather I think AHEAD of each step of the hive inspection, planning each move like a chess game or a road rally. You need to fly mentally from step to step, shifting weight and thinking of the weight as a small airplane flying freely through you and even out away from the body, which is really the goal here." I discussed this concept with reference to smoking bees in my March 1999 ***APIS*** newsletter on the **TAO of smoking bees**.

Commercial World Wide Web operations are not limited to those in the United States. I have already published on perhaps the largest site, developed by **Mr. Gilles Ratia** in France. Enrique Estrada de la Mora runs

his site on Mexican beekeeping in both Spanish and English. The URL for the English page is **http://www.netcall.com.mx/abejas/en/bee.htm**. This site contains information on **Mexican honey production, exportation,** a comprehensive list of **plants** that bees use for nectar in the country, a **list of honey exporters** and **packers** important in Mexico and **other enterprises**. A link to the latter provides one with an idea of printed and other beekeeping educational resources available to beekeepers in Spanish. These include the magazine, ***Apitec***, and a **CDROM** about queen rearing. Finally, it promotes the next Mexican **Beekeeping Congress** that will take place in August 2000. Mr. Estrada is known for his **queen production**. He says, "The incidence of Africanized bees has modified production practices principally increasing the mass production of European drones, close to the queen yard. A very important part of the new work is to include genetic improvement programs to keep the bees gentle and highly productive." He reveals the secrets of this **program**, which is a no nonsense practical look at queen rearing, including ensuring that every queen that comes out of his outfit is clipped and marked. Finally, the site sports links to research done in Mexico. There are three studies conducted by **Ernesto Guzmán-Novoa and colleagues**. The latest to be published in the *Journal of Economic Entomology* tells of five years of selection and production. The honey crop in these colonies has risen by 16 percent while the defensive behavior has decreased by 50 percent. According to the authors, this is the first time there has been such careful selecting and monitoring of stock using both molecular genetics and morphometrics. The study is particularly rigorous because it used 3,000 colonies.

Links to other studies include **one** attempting to identify genes that could be relevant in the caste determination process, "Isolation and Characterization of Genes Differentially Expressed during Larval Development of Queen and Worker Honey Bees." Finally, there is **course in *Varroa* control** authored by Miguel Angel de Felipe H. and Rémy Vandame dated July 1999, based on using oxalic and formic acids, as well as the oil of essence, **thymol**. BC

*Dr. Sanford is Extension Specialist is Apiculture, University of Florida. He publishes the APIS Newsletter:* ***http://www.ifas.ufl.edu/~mts/apishtm/apis.htm***

# MOSQUITOES 1, LABELS 0

John Mitchell

## "Public Health" trumps the label in pest abatement campaigns

Last Summer, New York City residents got to see an uncommon event outside the world of beekeepers and entomologists: a pesticide kill.

Nancy Sanchez-Caro, 55, an administrator at Montefiore Medical Center, was skating in Central Park on her inline skates at daybreak September 3. "I saw dying Monarch butterflies on the road the whole way," she told the *New York Daily News*.

She skated twice around the park's six-mile loop. "And as I was finishing the first loop, the [malathion] truck came up behind me, filling the air with spray," she said. "That made me angry, and it also made me angry to see the butterflies everywhere."

The migrating Monarchs were "collateral damage," the unlucky victims of malathion spraying to kill mosquitoes that might bear the West Nile virus, a strain of encephalitis that killed seven people and sickened dozens more in New York City last Summer. The disease was believed to have been introduced recently in exotic birds from the Middle East.

Malathion is toxic to bees. The label restricts its use to when bees are not foraging. Most officials involved in regulating the use of malathion say that when sprayed at night or early enough in the morning, malathion won't affect honey bees.

In New York City, a number of people reported the pesticide being applied at the wrong time of day. Beekeepers up and down the East Coast tell similar disturbing stories of officials invoking "public health" as a defense – and as justification for – ignoring label restrictions.

"The federal laws on pesticide use are completely neglected because they find it more convenient to argue that this is for the common good or this is for public health," says Raymond Lackey, past president of the Long Island Beekeeper's Association.

Lackey says that during Summer in New York, honey bees will forage until 7 p.m. Last Summer, pesticide applicators began spraying at 5 p.m.

"I wrote a letter to vector control telling them that according to the label directions, it was illegal to spray while bees were foraging," Lackey recalls. "They said they had only certain windows when they could operate, and for the public health, they needed to do this."

*Even in Central Park.*

Lackey says there were no wholesale die-offs of hives and that it was difficult to venture a guess as to how much damage was done to the foraging forces of Long Island beehives. Elsewhere in New York City, determining how much damage was done, if any, to managed honey bees is difficult because beekeeping is illegal in four of the five city boroughs.

Jim Kile is president of the Sullivan County Beekeeper's Association, located about 100 miles north of New York City. Kile says he has sold bees and equipment to enthusiasts in the city. "Just because we haven't heard about pesticide kills, I feel it doesn't really mean it hasn't happened," he says. "Most of the people with bees, its illegal anyway, are not going to muddy the water."

In South Carolina, beekeeper David Green has used his Web page on the Internet to draw attention to public health spraying in that state. "Illegal applications after Hurricane Hugo nearly drove me out of business. In the following season, I did not have enough bees left to pollinate the crops I had contracted for," he says. Green posted pictures on his Web site of pesticide applicators spraying while honey bees were foraging. He reported similar incidents after Hurricane Floyd struck last year, when the Carolina countryside was again targeted for mosquito abatement.

After the hurricane, Green stumbled across some workers spraying malathion near one of his apiaries. He told them what they were doing was illegal and showed them the label. The workers ignored him and turned their equipment back on. Green summoned the police, and two officers arrived.

"They (the police officers) refused to acknowledge the crime," he writes on his Web page at **www.pollinator.com**. "They prevented me from gathering any further evidence and threatened me if I did so again. Then they cited me for a cracked windshield and not

*Continued on Next Page*

***MOSQUITOES ... Cont. From Pg. 21***

having my registration with me," Green says.

Green was so incensed he listed the police officers' phone numbers on his Web site, along with the names and numbers of various state and Clemson University officials responsible for regulating pesticide use in his area who he says have been unhelpful. "There is a built-in conflict of interest in South Carolina pesticide regulation," he writes on his Web page. "The department is under Clemson University, which receives research grants from the industry that this department is supposed to regulate. Many of the personnel in the department are people from the industry."

Neil Ogg, director of regulatory and public service programs for the state of South Carolina, denies Green's allegations. One of the departments he oversees is the state Department of Pesticide Regulation.

"We're separate from the research group at the university. Any funding another unit receives doesn't infringe on any decision we make," he says. "Those allegations that funding that another unit gets at Clemson would influence the way in which we view each individual case of bee poisoning just aren't true."

Ogg also says that there are legitimate reasons why spraying may take place while bees are still foraging in violation of the label.

"The problem in South Carolina is that not a lot of flying can be done at night for mosquito control," he says.

Ogg also says that malathion is less effective against mosquitoes at night. "The efficacy of malathion is probably related to when mosquitoes are foraging. Most mosquitoes begin foraging at dawn and dusk, and I think the treatments are probably more effective in the late afternoons and evenings."

Ultimately, it's a public health issue, Ogg says. "There were three suspected cases of encephalitis after Hurricane Floyd. When you weigh the death of a child against leaving the airport at four in the afternoon, these are legitimate considerations."

**Scientist fired**

Malathion and public health don't mix well.

No scientist who works for a government agency wants to end his career like Florida state epidemiologist Omar Shafey. On March 2, 1999, he was fired and hustled from the Florida health department headquarters by a police officer.

The Mediterranean fruit fly was discovered in that state in 1997, and a malathion program was quickly initiated to protect Florida's $4 billion citrus industry. After receiving hundreds of health complaints, the next year Shafey was put in charge of the first-ever surveillance program of the health effects on humans living in a malathion spray zone. Shafey documented more than a hundred cases of pesticide poisoning and recommended in a report that the aerial spraying program be discontinued "in light of documented adverse health affects attributable to the 1998 Medfly program operations."

Shafey's work, which was funded by the Centers for Disease Control in Atlanta, showed that 700 out of every 10,000 people in the sprayed areas suffered side effects.

When the health department published the final report, all of Shafey's conclusions had been expunged and rewritten to conclude, "The findings do not allow an association between malathion/bait applications and reported adverse health effects to be established."

The expunged material was reviewed by the CDC in Atlanta, which called the work "excellent and thorough."

An investigative report by *The Tampa Tribune* said the changes may have been made because of state agriculture agency objections. "The preliminary report's conclusions likely would have forced the department to pursue less toxic and more costly methods of eradicating the crop-killing pest," *The Tribune* concluded.

Shafey, 36, was fired after being accused of falsifying a travel voucher while in Chicago for a conference. Investigators claimed he had billed for a full day when he had actually only worked three-quarters of a day. Shafey and his attorneys are appealing the firing under federal whistleblower statutes, alleging that his supervisor at the health department, David Johnson, told Shafey "that he should conform his professional recommendations" to the official policy of the health department "or consider leaving."

*The Tampa Tribune* called the final report a whitewash, and wrote of the incident: "The circumstances surrounding Shafey's dismissal raise questions about the autonomy of government scientists acting in the public's interest and whether their work can be effectively shielded from political pressures."

**Legal recourse**

In Florida, beekeepers throughout the state have had to contend

*The lobster industry has suffered tremendously because of Malathion abuse.*

with malathion spraying, for both mosquitoes and Mediterranean fruit flies.

Charlotte Randall is the president of the state beekeeper's association. She downplays the effect of malathion on her hives.

"We had the Mediterranean fruit fly right up here in Umatilla, and they sprayed directly over my hives," she recalls. "I lost a little field force. They were spraying during the day. They started about seven, finished up about nine in the morning. We didn't have any problems with it, and they sprayed once a week for six weeks, usually on Sunday morning."

Citrus growers have lobbied hard for malathion spraying in Florida, and Randall supports them. "Without the citrus growers, the beekeepers aren't anything, and without the beekeepers, the citrus growers aren't anything, so we need each other," she says, adding that the fruit fly is a real danger to the citrus harvest.

But other beekeepers have chafed under the spraying and have decided to join with others in a lawsuit. Gladstone Jones is an environmental lawyer with the New Orleans firm of Smith, Jones and Fawer. His firm is the lead counsel in a class-action lawsuit representing a hodgepodge of people who say they or their businesses were harmed by the spraying in 1997 and 1998.

"We are representing people whose health suffered and the ornamental fish farmers who lost up to 80 percent of certain species at the time of the application; we're representing a couple of bee farmers down there who lost all of their bees; and people who have had car damage," Jones says.

By pulling the disparate groups together under one class-action lawsuit, Jones says it will be easier for the firm to recover costs and legal fees associated with such a lawsuit and to pursue redress from the state for damages.

Jones explained what he would do if he were retained by beekeepers right now who felt eminently threatened by a government action that involved malathion.

"If I were representing the beekeepers, I would file an injunction requesting that a court stop them from applying the malathion because of the well-known fact it is going to destroy, devastate and have a huge mortality rate for bees," Jones says. "To allow malathion to be used like that in those areas is going to have a devastating impact on the bee farmers."

Jones recommends that beekeepers gather evidence after a pesticide kill if they want to be included in a class-action suit. "Go out there and take photographs of the piles of dead bees lying underneath the hives and around the area and videotape an airplane flying overhead with the malathion shooting the bee farm."

David Green, the South Carolina beekeeper, also recommends video. "I videotaped the people spraying the malathion, then I panned over to bees foraging on flowers to show that the pesticide was being used at the same time."

If the bees are dead after the airplane flies overhead, then you've got a pretty good case, Jones says. "You can also look for other evidence of malathion exposure on car paint. It looks like the car paint is peeling off."

Jones says some of his clients put out white paper cards or towels. When the malathion strikes the card it leaves a distinguishing, slightly off-color mark.

His firm is working on another malathion lawsuit, this one aimed at the spraying that was done in New York last Summer. This time, his firm is representing the lobster industry, which has hired researchers to gather scientific evidence that a massive die-off of lobsters off Long Island was related to the mosquito abatement program. The targets of the lawsuit will include "municipalities, counties and pesticide applicators.

Nick Crismale, president of the Connecticut Lobster Association, says lobsters are "just bugs in the sea," and are affected similarly by pesticides.

"We pulled up the traps, and they were dead," Crismale recalls. "I mean, when I tell you there were piles of dead lobsters, that's what I'm telling you. There were guys who went out and pulled up eight, nine hundred traps, a thousand traps and would find as many as five or six thousand dead lobsters in the traps."

Harvesting lobsters is like beekeeping in that there is only a very small group of people who make their living solely off lobsters, less than a thousand. Crismale – a former New York cop who started lobster fishing in 1972 and now owns a 45-foot boat and 2,200 lobster traps – is despondent about what has happened. "They wiped out the fishery. Lobstermen are losing their homes, they're losing their boats, their livelihood, their marriages." Some lobstermen have talked to a psychiatrist who may provide trial testimony about the psychological consequences.

Jones says he has not decided yet whether the lawsuit will be a class action and whether other groups that claim damage, like beekeepers, will be able to participate in the lawsuit, since most of the research is being funded by the lobster industry. BC

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*John A. Mitchell is a contributing editor to Bee Culture magazine. He is a radio producer and garden magazine writer living in Cambridge, Massachusetts.*

*Part I*

# Effective Newsletter Publication

Mary Gannon

## Editors: Make The Best Of The Resources You Have. Here's How.

Suppose that you have volunteered, or have been volunteered, to edit the very first newsletter ever published by a beekeeping organization. It has never been done before, and the eyes of the beekeeping world are on you. Where to begin???

In this article we will try to get you started by laying out the basics of newsletter creation and publication, with emphasis on the responsibilities of you, the editor. In later columns, we will deal with these issues in greater detail and offer tips on effective writing, design, layout, artwork, etc., helping you produce a handsome, informative newsletter.

Let's begin by defining exactly what a newsletter is. A newsletter imparts news, plain and simple, news that is of interest to those who read it. It is also a crucial link between the members of the organization, between the officers and the general membership and between the membership and the beekeeping world outside the organization. It is a vehicle for sharing information among members on a timely and consistent basis.

Think of the editor of the newsletter as the "boss" of the operation. He or she has the responsibility of overseeing the entire process. In a perfect world, the editor would have a large staff to whom he/she could delegate all the various tasks necessary for production. In the real world, however, all or most of these tasks usually fall on one person. If that one person breaks down the tasks into manageable chunks, the job will appear much less formidable. That said, let's talk about delegating some of these tasks to others. Each member of your beekeeping organization has talents, and it is your job as editor to sniff out those talents. As a rule, people are willing to help out if only they are asked. An effective newsletter editor is observant – he or she will survey the members and spot unused resources. There are many ways in which the membership can be of service. Of prime importance is the gathering of news. The editor can't possibly be everywhere; he can't talk to everyone; he can't read every word ever published about beekeeping. Therefore, he must rely on the membership to provide tips about possible stories. There is a wealth of information out there in printed material, on television and radio and especially on the Internet. Members should be alert for this information at all times and be ready to suggest stories to the editor. Better yet, these members could actually *write* the article or the story and submit it for consideration. Because each author has a distinctive writing style, readers are likely to become bored by the same style month after month. Encourage others to contribute stories and reward them with a byline along with a big "thank you" for their efforts. Even if there's not sufficient space in the current newsletter, and even if the material is not timely, it would certainly be helpful to have an archive of material to fall back on in leaner times. In addition, the editor may call upon members with typing and/or word-processing skills to type the newsletter or to keep the mailing list current. A person with artistic talent may be called upon to provide artwork appropriate to the stories appearing in the newsletter or to assist with creating an attractive layout. Encourage resident shutterbugs to contribute photographs taken at the group's events. Another area in which you could use help is in distribution of the newsletter. Folding, stapling and labeling copies is a time-consuming task, and there is surely someone who would be willing to take it on.


Since this is a brand-new newsletter, the first decision the editor needs to make is how often to publish the newsletter. Depending upon the size and level of activity of the group, it might be published monthly, bimonthly, quarterly, etc. When determining how often to send out the newsletter, the makeup of the group and the structure of the organization must be considered. For example, How often does the group meet? Whatever the schedule, the newsletter should be in the hands of the members as soon after each meeting as is feasible and enough in advance of the next meeting so the members can prepare for it. The newsletter will serve as a reminder to those who attend meetings regularly and may spark the interest of those who don't. Does the majority of the membership attend the meetings or is there a core group of active members and a large group of inactive members who pay dues and would rely on a newsletter for information and education? If the latter is the case, a newsletter is even

*Continued on Next Page*

*NEWSLETTERS ... Cont. From Pg. 25*

more important to keep members abreast of developments in beekeeping.

It is also very important to publish the newsletter on a consistent basis – members need to know when to expect it. Of course, the group's budget will also be a factor in determining how often to publish the newsletter, as printing and mailing costs can be high. But let's suppose for the moment that budget is not a concern.

Okay, that was the easy part. Now let's get down to the nitty-gritty – what exactly to put in this newsletter of yours. The possibilities are endless, but let's face it, there are limits to time, talents and resources. Since the object of the newsletter is to inform, it is imperative to get as much news into the document as possible without overwhelming the reader. First of all, what appears in your newsletter must have relevance for your readers. As a general rule, the content should consist mostly of stories that concern your beekeeping organization in particular and what has happened, is happening or will happen in the future as it pertains to your members.

Among the elements that could be included are:

1. A letter from the president – This letter could be informational (perhaps a synopsis of happenings within the group or a report on an event he or she attended), educational (a report on some new development in beekeeping not mentioned elsewhere in the newsletter) or inspirational (The sky's the limit here.) But it must have a hook – something to grab the reader's attention.
2. Minutes of the previous meeting and/or the agenda for the next meeting, including guest speaker if there is one or topics of interest to beekeepers in general – This is especially important if the majority of the members do not attend meetings on a regular basis or if the minutes are not read at each meeting.
3. Calendar of upcoming events – There is a lot of latitude here for including events of other groups, the community and beekeeping in general without sacrificing valuable space if you use a blank calendar page and fill in the dates and events.
4. Vital statistics – births, deaths, marriages, hospitalizations, graduations, promotions, retirements, significant birthdays or anniversaries, etc., and congratulations to members for awards or achievements.
5. New members and address and phone number changes. There is an opportunity here to profile new members. A brief sketch will help the current members get to know the new member and perhaps find something in common with him or her outside beekeeping.
6. Thank yous to members who have contributed to the group in a special way. Seeing these kudos may encourage other members to make contributions.
7. Financial information including details of any fundraising activities.
8. Personality profile of a member who has made a significant contribution either to the organization or to the community.
9. News from other beekeeping groups.
10. Significant events in the world of beekeeping and in the community that would affect the membership.
11. Seasonal tips and news. The important point here is timeliness. File all those other tips and pointers for use at an appropriate time.
12. Letters to the editor or an editorial from a reader along with follow-up correspondence.

13. Question and answer column.
14. Beekeeping trivia column or "Did you know... column – Here you might include unrelated facts that are relevant to the members.
15. Photographs and artwork.
16. Humor and cartoons.

This list is meant only to be a general guideline. As the editor, it is your privilege to choose what will appear in each issue. Space limitations will necessitate choosing among these titles, but all are acceptable items to include in your newsletter. Although there are elements that should be included in every issue, do not be afraid to be creative and to make changes from time to time. But keep in mind the following questions when choosing your material: What will people want to know about your group? What will people want to know about other people in the group? What will motivate the people in your group? What will be meaningful to the people in your group in terms of their hobby/profession? If your story or article or picture or whatever answers one or more of these questions, then it belongs in your newsletter.

In future issues, we will offer tips on effective writing for you the editor and for others who contribute to the newsletter and tips on design, layout, artwork that will make your newsletter a stand-out publication. BC

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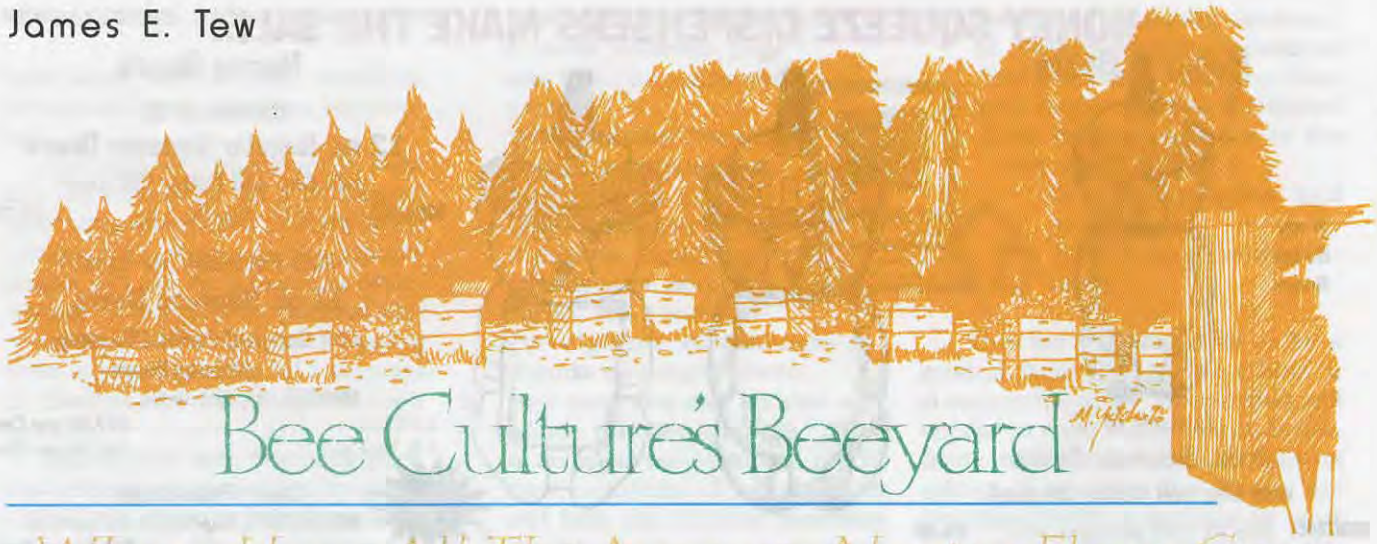
*Mary Gannon is a professional copy editor, proofreader and Newsletter consultant living in Akron, OH.*

James E. Tew



# Bee Culture's Beeyard

## Where Have All The Average Nectar Flows Gone

### What I would give for an average nectar flow season

My ancestral home in Southeastern Alabama is currently in its second year of a serious drought. In a good clear Southern accent, a farmer being interviewed on National Public Radio said, "Now, even if it rains steady for the next month, this year's corn crop won't make anything at all. It's too late for this season." At my home in Wooster, Ohio, the water news is that surface water resources are rated as excellent, but ground water levels are still down about 18 feet due to droughts in past years. We should still conserve. Interestingly, I got an email message yesterday telling me that North Dakota State University is closed due to severe flooding – including their computer system. Go figure.

*A small stand of Black Locust Trees. Big nectar sources don't always equal big honey crops.*

Last year in Ohio, the spring season was dry; therefore, our nectar flow was minimal. No doubt, I wrote about it. This year, it has been the opposite. It rains about every other day and everything is verdant and lush. Here's the rub. As far as I can tell, our nectar flow is "*below normal*" – too much rain. A local county agent was quoted in the local newspaper that farmers who produced hay were in serious trouble. All the rain was making it nearly impossible to harvest their hay crop and the crop quality was low. But wait! Their problems should be our beekeeping success. Alfalfa and clover, allowed to go to seed, should bring in a huge surplus honey crop – right? Well, I guess not. Too much rain. It's becoming clearer to me. The premise seems to be that when the weather is dry, we don't get honey crops because there is no nectar flow – but when it rains, we don't get a nectar flow since the rain washes the nectar away. Only minimally sarcastically, I am reduced to asking, "When did we determine our perception of *Average* honey crops?" If we ever had an average year, it would be unusual. So how can that be average? The average honey crop in Ohio has historically been 40-60 pounds per colony per year. I'm guessing (and only guessing) that in recent years our average would be more like 20 – 40 pounds per year. Even if we all got huge honey crops, the price-per-pound would probably drop due to oversupply. As beekeepers, for what are we to wish – rain? No rain? Big crops with reduced income? Small crops with a higher selling price? If it were my job to answer beekeeper prayers, I would definitely be confused as to what prayers should be answered.

### Locust Honey – Bah Humbug!

Along the same vein of complaint, I am worn out with Black Locust being called a nectar-producing plant. One year, drought prevents the plant from producing nectar so nothing happens. The next year, a powerful thunderstorm knocks off the blossoms, so there's no nectar flow. This year, there is snow-white locust blooms, but we didn't get a crop. Too much rain I guess. In this area, locust may look pretty and locust may promise a high-quality honey crop, but we just never quite get the crop. Does getting the occasional crop warrant keeping a highly visible plant on the promise list? If you are planting black locust trees, do it for reasons other than nectar production.

### The Modern Nectar Source

For most of us, today's nectar sources are not really very dramatic. Few of us see acres upon acres of nectar and pollen producing plants at one location. More often, what we do see are straggly plants growing along side the road or a patch here and a patch there of various nectar and pollen-producing plants. I am trying to realize that my hypothetical 18,000 acres of clover, upon which my bees can forage, are punc-

tuated with housing sub-divisions, strip malls, soccer fields and used car dealerships.

The photo presented on the right represents the partioned foraging area of today's modern honey bee. The flowers at the base of the sign, the sweet clover growing along the bridge abutment in the background, and whatever may be in the small forest in the distant background, are all the mixed floral source locations that our modern-day bees must explore to find a honey crop.

### An Aside

No doubt, some of you who have read to this point are asking yourselves, "What is he talking about? We have access to thousands of acres of various floral sources." I am aware that some of us still do have access to large expanses of uninterrupted nectar and pollen sources, but the fact is that most of us must make do with urban/suburban plantings. The incidental backyard flower garden, when taken alone, means little to the beehive, but to a forager honey bee exploring 40,000 backyard gardens in an urban community, the floral importance cannot be ignored. Plant bee friendly flowers. Every little bit helps.

### The Bee Yard

In spite of the beekeeper (me), the bee yard seems to be progressing. I am nearly at a loss to tell you the individual evolutional history of each hive. There were a few colony deaths, which I reported and then there were a few swarms – some of which I had time to report. Bottom line – I actually have more hives than I want. The number keeps growing – at this point; I have 20 hives in the yard. You may recall that originally I only wanted five. I've written about this colony growth in the past. If you keep bees aggressively, colony numbers multiply. Bee populations seldom stand still for long. Populations are either growing or declining, but rarely, rarely does the colony population stay the same one cycle to the next. Your best hive this year could very well your worst hive two years from now.

### Plastic Hives

As I discussed in previous articles, I am interested in tinkering with some of the new plastic bee-


*A typical foraging area for today's urban honey bees.*

*A partial view of the 2000 beeyard. Five more hives are out of view.*

*The bottom of an Insul-Hive. Note how deep the frames are inset and the resultant burr comb.*

*Continued on Next Page*

*Insul-Hive with a Ross-Round Super in place. I provided the hive stand. The narrow entrance on the left is screened and important when closing and moving the colony. (For those who have read previous articles, this hive was originally my prototype 5-frame Garden Hive.)*

hive equipment currently for sale from bee supply dealers. I make no claims any analytical science in making these observations but call my comments *casual observations.*

## The Insul-Hive

This plastic hive is lightweight and pre-assembled. Initially, I didn't care for the color but it grew on me. In center photo on the previous page, the Insul-Hives are the two aqua-colored units on the left and right side of the photo.

The Insul-Hive is an interesting hive, but mine may have some problems - or I am doing something less than correct? The frame spacing seems to be wrong on the top and bottom of the unit. I have spoken with the distributor and learned that they have not had others report the same problem. The frames are flush on top, having all the bee space on the bottom of the frames. In my unit, the bee space is excessive on the bottom resulting in a bit of burr comb being constructed. In one unit, I have two Insul-Hive deeps as the hive proper. The bees are not particularly wild about working the plastic frames but this has been a characteristic of several different brands of plastic frames.

In another unit, shown above, I maintained the colony in a single deep and placed a Ross Rounds Super on the unit. The small opening to the left of the of the entrance is screened and is useful when the colony is closed in preparation for moving. I have been told that the use of two bottom boards – one on bottom and one on top for upper ventilation – makes colony movement easier on the bees.

From experience many years ago with prototypic expanded foam hives, I observed that bees would put brood on the outside frames – even against the wall of the hive. I found that to be true in all three of the different plastic units I have in the BC yard. Therefore, I wondered if I could produce comb honey on a single plastic unit – due to increased forager population. Indeed, I had success with this project. Does that portend a recommendation? Nope. Just one hive, one year, and one super.

## The Problems

The frames are flush on top and considerably higher than the bottom. I got some resultant burr comb on top frames. Again, the distributor said that this had not been a common compliant. I'm not sure what is happening here, but I will get back to you on this situation.

I'm not sure if it presents a problem, but due to increased wall thickness, the supers don't fit exactly. This is no problem so long as an Insul-Hive top is used. In addition, I have found all expanded polystyrene hives to be soft. I get the sense that I will bend or crack the hive if I apply too much pressure with my hive tool.

## The Future

Overall, use of any expanded polystyrene bee equipment will require changes in the way we handle the equipment and how long we can expect to use it. Is it better than wood? In some ways – yes - but in many other ways - no. Presently, I like it because it's different; therefore, stimulating, but that may not be a long-term reason. I've got some other new-styled plastic equipment in the yard that I want to discuss in future articles. Be ready.

And I want to talk about earwigs at some point. Anyone finding earwigs in their hives? They are common in hives in the South, but I am finding them in increasing numbers in my hives here in Ohio. Why? BC

*Dr. James E. Tew, State Specialist, Beekeeping, The Ohio State University, Wooster, OH 44691, 330.263.3684, Tew.1@osu.edu, www2.oardc.ohio-state.edu/agnic/bee/, www2.oardc.ohio-state.edu/beelab/*

*Comb honey crop on an Insul-Hive.*

*Section Super on the Insul-Hive. Note the smaller size of the super at the arrows.*

# WHERE ARE THE BEES?

Larry Goltz

The article "The Value of Honey Bees as Pollinators of U.S. Crops in 2000" in the March 2000 issue of *Bee Culture* was an excellent review of this important phase of beekeeping.

Since we are next door to the almond growing area, perhaps I can elaborate somewhat on the subject. I think extra emphasis is warranted in that the status of the pollination of almonds is indicative of what may transpire in the future with other crops. The importance of almond pollination is pointed out in the article (California Statistics and Position). Almonds have three times as many colonies rented as the next most important crop (apples). With 420,483 bearing acres of almonds in California and soon to increase to over half a million acres, the demand for bee pollination may outstrip the supply. This increase in acreage of almonds is obvious to anyone who has recently driven Routes 5 and 99 through the Sacramento Valley and southward. All too obvious, also, at least from my observations, is that this past Spring there were sizable almond orchards where no hives were present among the rows of trees. What effect this will have on the yield will become clear as the crop matures this Fall.

One cause of the apparent absence of pollinator bees is the shortage of supply. As far as I can guess there was a combination of circumstances that contributed to this shortage. Most of us, at least in northern California, had a loss of up to 50 percent overwinter, losses that began last Summer and Fall. Speculation suggested everything from mite resistance to medication, unfavorable weather, virus or hive beetle infestation and queen failures to lack of forage to built-up pollen and honey reserves. I did not harvest a single super of honey from our main crop, yellow star thistle, in the Fall of 1999, a rarity around here. It has been difficult to determine whether there was a single cause or multiple causes for the unusual season, a subject open to many opinions. Should such conditions again occur and continue in the future, some serious attention to beekeeping will be needed in California and elsewhere to meet the challenges of the future, particularly in regard to pollination.

Whatever the cause of lack of vigor last year among established colonies, we hope it has been only temporary. If a long-term effect is seen, we may have to look for environmental causes, possibly pollution in some form or other stress conditions including weather or climate changes. Stress could also be the cause or the result of biological disorders in some sensitive species, honey bees possibly being one. Our human experiences with natural or unexpected disorders, especially long-term, are limited due to our relatively short presence during Earth's history. An erroneous, complacent perspective on the state of our environment may lull us into believing that we can continue to allow abuse and degradation without suffering some abnormalities in natural orders. Realistically, we cannot afford, with our massive population growth, to tolerate disruptions in our food supplies, yield reduction certainly being one of the most cataclysmic that could occur.

True, as indicated by the editor of *Bee Culture*, the pollination business with bees is predictable and stable to all appearances. Should inability to supply adequate pollination limit the diversity of crop plants, some disruption in our agricultural economy can be expected.

*Continued on Next Page*

*Bees in a holding yard near Redding, California awaiting transport to almond orchards in the Sacramento Valley.*

*Pallet of hives in almond orchard near Chico, California in the Spring of 2000. Is there enough representation for maximum needs? If not, where are the bees?*

*Where are the bees? Acres of almonds in the northern Sacramento Valley of California were without pollinating agents in the Spring of 2000.*

*Almond blossoms without or having few bees are indicative of a need for more pollinators in the future for maximum yield. An increase in bearing almond acreage is expected during the coming years. The trees are already planted.*

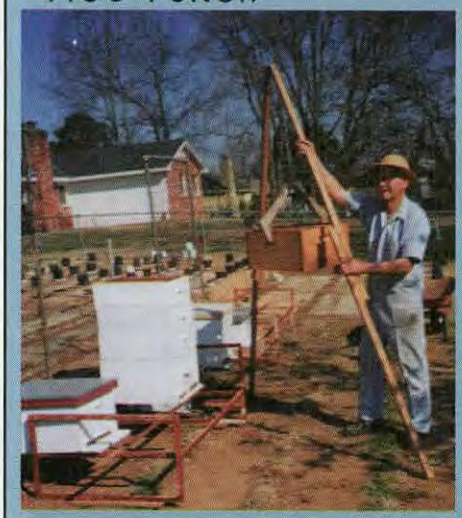
Many are unaware of, or forget, that plants are the basis of most of our protein, including meat and dairy products. Pollination is a critical process in plant reproduction, and any interruption can have serious consequences in respect to our food supply. Food does not magically appear on our grocery shelves without the long chain of natural cycles that constitutes that often neglected and maligned occupation called agriculture.

All of these ponderables are discussed in excellent detail by the editor of *Bee Culture* in the feature "Inner Cover" in the March 2000 issue. Beekeeping in America will undoubtedly face some uncommonly difficult adjustments in the future, much as it has in the past. The demand for pollination is not going to diminish, only increase, at least in the foreseeable future. Desperation may induce some growers to assume responsibility for supplying bee pollinators. However, opportunity is sometimes as effective an incentive as desperation. BC

*Larry Goltz is former Editor of this magazine and remains a frequent contributor. He lives in Redding, CA.*

# Backsaver Evaluation

Fred Fulton



The Backsaver device is designed for beekeepers to lessen the effects of lifting heavy beehives and supers. The price is reasonable ($75.50 including shipping) and assembly is simple.

I purchased the mechanical leverage device and reluctantly had to force myself to use if for two Summers in order to give it a fair test.

The inventor's claims are correct: Lift and move the heaviest hive bodies; quickly folds into two compact pieces for easy transport; metal parts are of quality material.

What is not obvious are problems in the use of the Backsaver in the beeyard:

The bi-pod legs often slip on grassy surfaces when in other than a vertical load position. (This was corrected with the field expedient of bolting a pointed spike onto the leg ends.)

While the load can easily be lifted, where to place it is a problem. Lowering onto the ground means picking it up with back labor, which is worse than removing it from the original hive location. To place it on a trailer or truck, means there must be an assistant to back the vehicle into position for release of the load.

The more the Backsaver load is lowered, the heavier the weight the beekeeper must manhandle without much leverage. At an 80° angle all the load is on the operator, and is awkward to control, giving no leverage advantage.

While the brochure states that all wooden parts are pressure treated or acrylic coated, the beekeeper is cautioned about the adverse effects of storing Backsaver out of the weather. However, moisture from dew and occasional rain during the normal work days has caused the wooden legs to crack and plywood gripper arm to swell and pull apart for three veneer layers.

The Backsaver theory is a good one, but is not efficient or practical for the lone beekeeper.

# FAIR SALES

## An attractive display, a good product and LOTS of handouts

Ann Harman

It's fair time! County fair, state fair, local fair, big fairs, small fairs. No matter what the size, these agricultural fairs can mean opportunities for honey and wax sales. Some fairs want only displays and beekeepers are not permitted to sell. At other fairs beekeeper associations can not only make displays but also sell honey and other hive products.

No matter what is allowed, these fairs are a great place to educate the non-beekeeping public. Beekeeping associations, large or small, can fix an exhibit that will convey a message promoting honey bees and hive products. Let us look at some of the possibilities these agricultural fairs offer and how beekeepers can benefit from participation.

Suppose the particular fair said "no sales." Have you tried approaching the fair management with several officers of your bee club armed with honey and other hive product samples? You will need to explain that the association exhibit is educational and fits the theme of the fair. No guarantees, but it may be possible to talk the management into a sales table as part of your exhibit.

You can point out that squeeze bears are popular with children and that honey stix are for everyone. Beeswax blocks are readily bought by quilters and carpenters alike. Pure beeswax candles are eagerly sought, especially in the Autumn. Local honey is better than that from the supermarket. Give a good talk and leave the samples with the fair management for them to think about.

OK – the answer is "no." No selling. Now what? Well, fix a great display. But create an attractive tri-fold brochure for fair visitors to take home with them. In this brochure, you need to describe briefly the activities of your association with information about how someone can contact any of the officers. You must include something about the benefits of honey bees to our food supply. And inside the brochure, put the names and addresses of beekeepers who have honey for sale and have agreed to having their names included.

Fair goers, especially at state fairs, come from all over. With an assortment of addresses of beekeepers, potential customers should be able to find a beekeeper within reasonable reach of home. It is sort of indirect selling, but it is better than trying to explain where someone can buy honey and scribbling a phone number on a scrap of paper that will be lost. It is helpful for a beekeeper to list the hive products available, for example honey and candles, or say that comb honey is a specialty. It may also be desirable to list retail outlets carrying local beekeepers' honey and hive products.

A professional appearance is definitely possible with the many attractive and inexpensive tri-fold brochure papers available. Printing costs will depend on the number you wish to print, but the cost should be minimal. The brochure can serve for other occasions and even the next year at the agricultural fair.

OK – the answer is "yes." Selling is possible. Now you've got some planning to do. Many associations have already done sales booths at agricultural fairs for many years. If so, you may have a very attractive sales display and are quite successful selling honey and hive products. If you would like to share some of your ideas with other beekeepers, let me know. However, if this is the first time your association will have a sales booth or if you need some suggestions, perhaps you will find some ideas here.

*A large, attractive sign, easily seen by fairgoers is a must.*


*Continued on Next Page*

*Observation hives are a must!*

Sometimes you have to spend a bit of money in order to make money. Shake the club's treasury to see if there is enough for two professionally made banners. These are plastic with large painted letters and usually have grommets in the corners for hanging. The banners can be rolled up and with reasonable care will last many years. Here's what the banners should say: One will have the name of the association; the other will say local honey. The lettering should be large enough to read from a distance. The person who makes the banners will be able to advise you on details.

The 'Local Honey' banner is rather important. Many non-beekeepers have heard that local honey is good for allergies. Some people would rather buy from local beekeepers than buy honey at the supermarket. An added benefit from the 'Local Honey' sign plus the association sign is that they are visible, meaning that next year customers will look for the signs and thus be able to buy their year's supply of local honey from the association booth.

Now the local honey banner does not mean that every type of honey you offer for sale is local. Orange blossom, or citrus, honey is a popular flavor, but citrus comes from warm climates. For most of the country, orange blossom honey has to be brought in. Is it worth it? Try offering some and see how it sells. When the movie *Ulee's Gold* was seen by so many, customers asked for tupelo honey, no matter where in the U.S. the sales booth was. A honey "imported" from some other part of the country can mean a sale of two jars. A customer will buy one of local honey and then is willing to try a jar of a special flavor, even if it costs more.

If many beekeepers from the association will be offering honey for sale, it is wise to set some standards that must be met, *without exception*. The standards should be made available to all, even to those who may not be selling this year. Perhaps you want to establish a "selection team" whose responsibility is to set standards, publicize standards and inspect to make sure standards are met.

Clean honey that is not crystallizing is essential. Sticky jars or comb honey containers should be


*Honeystix sales appeal to all ages.*



*Labels should meet local requirements for weight and all, but what if more than one beekeeper sells honey at the stand? One solution is to use the club label on one side, promoting the club, and the individual beekeeper's label on the other. Consumer, club and producer all benefit.*

sent back home to be cleaned up. Lids and caps must be new. Legal labels must be on every container and put on straight. Hangtags can be used as labels on squeeze bears but should be tightly fastened. Creamed honey should be of a good consistency, not runny or brick-hard, and not full of weird-looking foam. Chunk honey is so often represented by miscellaneous leftover pieces of comb stuck in a jar which is then filled with whatever color of honey is available. This is not chunk honey. Chunk honey done correctly is a beautiful product and satisfies the customer's desire for both comb and liquid honey.

Round-section comb honey should have lids that are transparent on both sides so that the customer does not think you are hiding something. Square-section honey should have its own clear plastic wrap before being put into its box. In this way, if desired, the customer can ask to see both sides before buying. Cut-comb should be well-drained before putting into a container. Cut-comb is another candidate for a completely transparent container, either rigid plastic or the clamshell type. You may wish to secure the clamshell with a piece of tape so that the lid does not pop open when handled.

Blocks of wax and candles must be represented by clean wax without mystery globs. It is fair to offer different colors of beeswax in blocks. The lightest is recommended for quilters and should command the best price. The darker wax can be used for many purposes and should sell slightly cheaper than the light wax blocks. Many who come by the sales booth will not know what blocks of beeswax can be used for. A small handout, perhaps one-third of a sheet of paper, can list an incredible number of uses for beeswax. Somewhere in that list the customer will find a reason to buy one.

Some beekeepers will have other products, such as soaps or skin creams. These products serve to make the sales table more interesting and will encourage sales of honey.

Setting standards actually means that everyone whose products are for sale has a fair chance. A poorly packaged product will not sell, and that beekeeper will be unhappy.

It can be difficult to predict what types of containers will be the best sellers unless the beekeepers know what is popular in their area. Since families are fair goers, squeeze bears should be offered. Children find the bears appealing, and parents will appreciate a squeeze container over a drippy jar in the hands of children. Suggest the purchase of a squeeze bear plus a jar of honey – to refill the bear. In some areas, pints and quarts will be the preferred sizes. Translucent plastic containers do not show the colors of honey very well, so some of the containers offered should be either of glass or of transparent plastic.

I have spoken to a number of beekeepers who do not use honey stix on a fair's sales table. However, those who do use honey stix, both plain and in flavors, find that the revenue from their sales equals or sometimes exceeds that of honey in containers. Use honey stix even if the customer does not buy any other honey. You may be surprised at the results.

*Segregate areas for demonstrations – here candle rolling and honey extraction – from the sales area if possible . . . but not too far.*

The sales table should be as attractive as possible. Decorations such as a straw skep, flowers (yes, they can be silk ones), candles in holders or a bee windsock or flag all contribute to a cheerful and visible stand. The table should look full – always, even if you have to spread things out a bit toward the end of the fair.

One beekeeper who sells at a county fair has a way of arranging his sales surface so that there is a six-inch-wide shelf in front of the honey but several inches lower than the counter. Why? It is for ladies to set their purses on while they are taking out their money. Does it work? Yes. It keeps everything from getting knocked over on the sales counter, and the women seem to appreciate having a place to put their purses. Another beekeeper has made a shelf to put across the back of his sales counter. On that he can put decorations, special honeys, signs, whatever suits the occasion. That shelf makes his display interesting.

I assume you have handouts at your fair sales table. You need ones for recipes – quick, simple ones such as salad dressings and barbecue sauces along with suggestions for using honey in baked beans and for sweetening beverages. A handout describing your association is helpful since you may have a few customers who would like to become beekeepers. Another handout could be describing the value of honey bees in agriculture. You can, of course, combine all of these subjects in one handout.

Your association's presence at the agricultural fair is important. You are conveying the desirable image of the honey bee to the non-beekeeping public. Besides, your association can enlarge its treasury. BC

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*Ann Harman is a sideline beekeeper and international marketing consultant.*

*INNER ... Cont. From Pg. 8*

right by her as she tried to stop and turn in one motion. I'm surprised she didn't hurt herself trying to stop, turn and fly, all at once. Experience, and sometimes luck, favors rabbits.

Those that live long enough learn these tricks. They learn what cats can, and can't do. The really smart ones play to those weaknesses when feeding, when finding nesting spots, and when out looking for mates. It's an old story.

Not quite as old, but just as deadly is the silent battle *Varroa* mites and beekeepers play. But the prey here isn't the honey bee population that *Varroa* attack, no more than the lettuce and bean plants rabbits eat from your garden.

At the moment *Varroa* are pretty much at the top of the food chain in their domain. The young, the inexperienced and the naive beekeepers use not enough tools to escape being eaten for lunch.

Like older (but not too old) rabbits, experienced beekeepers, in their battle to stay alive, use a variety of tricks to outwit, or outrun *Varroa*. What are they?

Using sound IPM to start with. What is the *Varroa* population in a hive? Can you guess? No, you can't. Does checking a few drone brood cells tell you? No, it doesn't. Ether roll? Better, but not the best. Sweet roll (powdered sugar)? Better yet, but not the whole story. Checking normal mite fall with sticky boards? Getting there, especially if you use a strip the next day to measure the difference. Then, checking with the other strip the day after that to see if there is a big difference - even better. Like the rabbit sitting at the edge of the tall grass, where's the cat? Ah, over there, by the house. O.K., now I know. So, what's next?

Keeping one step ahead, that's next. For a few hives, removing infested capped drone brood frames. Open mesh bottom boards certainly help. Good ventilation during the honey flow rush is important. For more hives (and less time) testing a few to have a feel for what's going on in the rest. Always, always know where the cat is, and keep the distance between you and that cat safe.

When the cat closes that distance? Treat, treat, treat. Remove honey and treat. That, or lose bees. It's that simple, and that difficult. You can remove supers from hives with big *Varroa* populations and put them on hives not needing help and treat colonies needing help. Yes it's extra work and expense. And yes, you lose fall flow, and even late summer flow, but you keep that cat behind you by dodging and turning and twisting and speeding up and everything and anything necessary to stay away from those claws.

There's a point when nothing you do, however, will help. *Varroa* overpower the bees. The colony is lost. Dodging and turning don't work, the cat is too fast and too strong. Lights out.

And right now is the time of year that happens. A lot. The choice to treat or make honey comes to a head. Either decision has a very predictable outcome.

Like the rabbit at the edge of the tall grass looking at your garden, and at the too-close cat, you can choose. Take a chance for the goodies and hope you can outrun the cat if she sees you...and you know she will. Or, nibble on some bland grass for a while and live to eat those peas another day.

If it's my cat, or *Varroa*, the outcome is pretty certain. Only wise rabbits, and wise beekeepers will be here tomorrow.

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Changes afoot. First, our newest regular contributor, John Mitchell, comes to us as a hobby beekeeper living in Cambridge, Massachusetts. He has 15 colonies, gardens, reads and spends time with family in what free time he has.

His background, however, is both interesting, and important to what he does here. He graduated from San Francisco State College in journalism, and spent time as a reporter working for the *Oakland Tribune* and the *Salem Evening News*. From there he moved east and became an associate editor for the elegant *Traditional Gardening* magazine, and an associate producer for the radio show *The Cultivated Gardener* which can be heard on over 40 NPR stations.

John's focus on our pages will be to bring to light issues that affect beekeeping and beekeepers. He brings a broader perspective along with a beekeeper's passion to his stories and we are pleased to have him with us. We know you won't find this caliber of writing in any other industry journal. Welcome aboard John.

Starting soon, Dr. James E. Tew will be making a second monthly contribution here, but one very different from his observations of *Bee Culture's Beeyard*.

Over the years Dr. Tew has worn many hats and played many roles on our pages, and he has excelled in all of them. His newest adventure, however, will be different than all of those. His focus will be on the straight forward, no nonsense aspects of how to keep bees. Bringing in the necessary science and biology when needed he will address the most common problems beekeepers face – swarming, queen replacement, honey production, harvesting, pests and predators, wintering and many more of the 'regular' trials and tribulations everyday hobby and sideline beekeepers run into.

We look forward to this newest endeavor, and, coupled with John Mitchell's contributions are confident we will be covering the major, the minute, the mundane and the miraculous every month.

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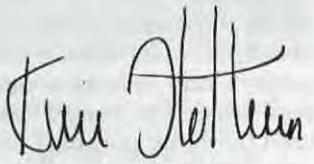
The USDA will be mailing out the National Honey Board's referendum in early September. If you are eligible to vote look for it then. If you don't receive one call the Honey Board so you can be part of the action.

So be sure and read John's article on pesticides in the 'Big Apple,' dig out your extractor and strainers and make sure you have enough bottles. It's harvest time. Be ready.



# ?Do You Know? Answers

1. **True** Humans have used bee and wasp colonies in warfare since the beginning of time. Bee hives were relocated inside castle walls of medieval Europe to provide food and to use as a last resort to rout the enemy climbing over or tunneling under the town enclosure.
2. **False** The original author of "The Hive and The Honey Bee" was Rev. L. L. Langstroth, the father of American Beekeeping.
3. **False** Queen substance is not very volatile. The queen pheromone does not function just as an odor. It must be contacted directly by the bees and received on a regular basis or the effects of the chemical will not function properly. Some bees must be in direct contact with the queen and the pheromone is passed to other bees in the colony via food transmission.
4. **True** The various races of honey bees differ slightly in their indications of distance and direction when performing the wag-tail dance. These racial differences are referred to as dialects of the bee dance language.
5. **False** Pollen is normally only stored in worker- sized cells. Drone sized cells are used for the production of drone brood and can be used for the storage of honey.
6. **True** When bees store pollen in cells, they are only filled about ¾ full. A glaze of honey is usually placed over the pollen and the pollen is clearly visible. Pollen cells are not covered with a wax capping.
7. **True** An individual that suffers an allergic reaction to a bee sting can be immunized so that they will not likely suffer a life-threatening reaction when stung again. The individual can undergo testing for sensitivity and then be immunized with a series of shots with an extract of pure bee venom. In the past, these treatments consisted of whole bee body extracts and have been shown to be not as effective as pure bee venom. Once desensitization shots are taken, they must be continued periodically (booster shots), as the immunization is not permanent.
8. **True** Bees need more room to ripen honey than they will to store it. Nectar as it is collected in the field contains from 5 to 80% water (most are in the 20 to 50% range) whereas fully ripened honey contains 16 to 18 % water. The evaporation of excess moisture during the honey ripening process reduces the volume required to store the final product.
9. **False** Before laying an egg in a cell, the queen determines the diameter of the cell with her forelegs. The legs function as calipers and if the diameter measures ¼ inch, (the size of a drone cell), she lays an unfertilized egg. Only fertilized eggs go into the smaller worker cells.

10. B) Leg

11. Bounce and Brush
    Chemical Repellents (Fume Boards)
    Bee Blowers (Forced Air)
    Bee Escapes

12. There is an increased probability of a colony getting American foulbrood during a nectar dearth since the bees are searching for food sources and robbing from weak colonies. Colonies suffering from American foulbrood are weakened and are less likely to be able to defend their American foulbrood spore laden honey stores.

13. The primary function of branched hairs on the honey bee's body is trapping (collection) of pollen grains.

14. Disadvantages of bottom supering include: May end up with several partially filled supers.
    The queen may move up into the bottom super since there is not a honey barrier, unless a queen excluder is used.
    More work (lifting) since all of the honey supers must be removed to add a new one.
    It is not easy to determine when a new super needs to be added.

15. Pain
    Inflammation of a wheal
    Redness developing around the wheal
    Swelling
    Burning reaction (generation of heat)
    Itching

16. When a honey bee stings, the individual should first scrape or scratch the stinger from the sting site using the edge of the hive tool or finger nail. This should be done as soon as possible to reduce the amount of venom injected into the person.

17. An EpiPen is a type of emergency sting kit used to treat an individual suffering an allergic reaction from a bee sting. An EpiPen has an automatic injector system which can be used by untrained individuals to administer a dose of epinephrine.

There were a possible 25 points in the test this month. Check the table below to determine how well you did. If you scored less than 12 points, do not be discouraged. Keep reading and studying- you will do better in the future.

Number Of Points Correct
25-18 Excellent
17-15 Good
14-12 Fair

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*Clarence Collison is a Professor of Entomology and Head of the Department of Entomology and Plant Pathology at Mississippi State University, Mississippi State, MS.*

# MAILBOX

consultant, on TV, training Agriculture department technicians and setting up an Island wide AFB control program. In 12 days I inspected all the colonies on the Island, seeing countryside that a tourist would never see even if he came back 50 times. That was the first of many interesting trips to one of the most beautiful places on earth. Since then the bees have flown me to more than 20 countries to work with and study bees and their parasites, as a speaker and as a consultant. But it was certainly Dr. Morse that opened this special world for me, and showed me how to fly on "honey bee airlines". Now I have been in Brazil for 20 years as a professor of Genetics as part of the largest bee research center in the Americas. Roger came first, opened doors and helped me get here. He was a pioneer among Americans in recognizing that Africanized bees had more to them than stings. I was supposed to stay for two years, but now I am here sharing with my students and the other professors a little of Morse's philosophy of work and life.

"Doc" really knew how to get us, his grad students, going. We worked long hours, and often seven days a week, because we liked what we were doing, and because he was always there too. He gave us everything we needed to become researchers, extensionists, and teachers, including a great lab environment, pickup trucks, a shop and all the resources at his disposal. Doc's students were polyvalent. They became that way, not just by watching what he did. Roger gave us an incredible degree of responsibility. Almost from day one, everything that he wrote went through our hands. He was so prolific, and so matter of fact about getting it down on paper, that we checked his manuscripts with great care to make sure nothing incorrect got by. It was not until much later that I realized that by doing this he was molding us into writers. In those days I would arrive at eight in the morning to find doc in his office, having been there for some time already, banging away at an old manual typewriter. It was so beaten up by his heavy hands that the technician who serviced the machine, about every six months, would grumble that we were beating on it with a hammer. He seemed never to look back at what he did on that machine, except perhaps to strike over some words. No backspacing to erase, or stopping to mull about the next word. Whatever he thought about would pour it out through his pounding fingers. The manuscripts that came out were full of stray letters and symbols, and generally looked terrible. Then they would go to Lowis Bower, his longtime secretary, who would "fix it", retyping the text on an electric machine, correcting the typos and any errors she found. Next it was our turn. We would look the text over and give our opinions. Dr. Morse seemed so matter of fact about his writing that we really took this chore very seriously. It was as if we were afraid that something would "slip by". It was an incredible responsibility, but I think that a key part of this process was that he sort of tricked us into being professionals, making us "coresponsible" for his writings. What he put out was important for apiculture and for science, and we were definitely a part of it.

Dr. Morse held back nothing from us. We were involved, or at least aware of everything that went on at Dyce lab, including his and each other's research projects. He permitted and actually encouraged us to look over the papers on his desk to keep up with things, and welcomed any comments we had about his work. He even gave us advice about how we should administer financial aspects of our lives. I did not follow all of his counseling to the letter, but in hindsight I can certainly say that it was very sound advice, and I sometimes kick myself for not paying attention to some of the details that he tried to show me were important.

As soon as we became his students, Dr. Morse made *us* the experts. We helped teach the courses, ran the correspondence course, gave short courses, gave numerous talks to beekeeper groups, initiated the master beekeeper program, help set national policy for various aspects of beekeeping, became intricately involved in the books he produced, maintained the university apiaries and ran our own research projects. It was a lot of work, but we were like a big farm family. "Doc" was definitely a father figure for all of us. As soon as we chose a research project, we were the authorities on that particular subject. He would not interfere or try to lead us along a particular path in our research. Rather he would support us in every way, with resources, funds, contacts and anything we needed to get the work done. I began to work on chalkbrood. From day one, if anyone wanted information about chalkbrood, or indeed any bee disease, I was the expert. Of course that meant that we investigated our particular research niches to a degree that we really were the experts. Doc really knew how to get us going.

Dr. Morse came to visit me in Brazil several times, gave short courses to grad students and got involved with my research. We invited him several more times in recent years, but he was very busy with other commitments and would never leave Cornell during the semester that he taught his lecture course. We actually had him give two lectures to Latin American beekeeping congresses from Cornell, via satellite. These were very well received. Doc was an excellent lecturer, and it was amazing how well he could communicate, with people from any country.

I really admired the way Roger was able to guide and get his students going. Criticism when you did something that you should not have was extremely rare. "Doc" got us on the right track by quietly praising us when we did good work. Still today, as a professor, when I have trouble guiding my own grad students, I think with admiration about how he would handle it. I will never forget what he taught me.

David DeJong
Brazil

# MAILBOX

## In The Classroom

I thoroughly enjoyed Raymond Lackey's two part article entitled 'Going Back to School (as an expert)' in your April and June editions. I am not a beekeeper, but my husband is and my enthusiasm for learning about the beloved honey bee came from him and inspired me to give classes for the past 13 years as Mr. Lackey had done. It thrilled me to know that such an accomplished beekeeper and myself are 'on the same page' when it comes to teaching in the classroom.

I derived several good suggestions from his articles and have one suggestion for him and for other teachers. He stated that we need to involve all the senses in teaching, but that 'taste was the most difficult in a classroom setting.' In my classes I have three tables set up, one for the observation hive, one with beekeeping equipment and the third a tasting table. The tasting table involves the kids tasting a dark honey and light honey then voting on which they like the best. Each jar is placed on a paper plate with a box of toothpicks between them. I demonstrate how to use one toothpick to taste from each jar, then they place their toothpick on the paper plate of the honey they like best thus placing their vote. There is always an adult supervisor at this table to reinforce the instruction and plenty of wet paper towels! The kids always enjoy knowing which honey won the taste.

Our school district is not fortunate enough to be able to pay for professional speakers so my fee is $100 worth of honey sales. Thanks again for a wonderful article.

Kathie Scott
North Kansas City, MO

## More On GMOs

In response to Mr. Robert Gates letter concerning GMOs.

Both sides of this issue must be carefully examined. Unfortunately, the news media is no help. One must go to the actual sources and examine the proofs given. I've discovered that the producers of GMO seed are reluctant to show proof or even publicize their methods.

GMO producers are not simply carrying on the work of hybridization. They are introducing a Pandora's box into the production of food. We simply cannot know what the long-term results of GMO foods will be. They are limiting the farmer in what he can grow, where he will get his seed, and how much he will pay for it. They have controlled the experimentation of these products so much that the U.S. Government cannot or will not police their actions. It has been an eye-opener for me to realize how many have left work for the USDA to become employed by one of the GMO operators. Alternately, those who have left a GMO corporation job to be employed by our government. How can the USDA police a product when they are actual business partners with certain GMO producers? Does the USDA have a vested interest in the sales of GMO crops?

Joe D. Leonard
Sweet Home, OR

•

Robert Gates letter in the June 2000 issue begs a response.

First, all crops (and people) are genetically modified. Overtime genetic variations have crept into every living thing. Since Mendel, plant and animal scientist have attempted genetic modification thru cross breeding. Sometimes it has worked and sometimes the attempts have been utter failures. These failures have frequently been for the best.

Today we are seeing a whole different kind of technology driven by Hi-Tech companies. Gene splicing and related technologies are taking us into uncharted waters. High development costs (Monsanto has repudiated to have invested in excess of 8 billion dollars) are pressuring shorter time to market. Mistakes are and will be made. Some of these may have the Pandora's Box effect.

The concerns are very real, there is considerable evidence that testing has been less than the best. A lot of bad science is being practiced (this is a subject for considerable discussion). In many GM cases we simply do not know what the long range implications will be. (Remember DDT?) Federal agencies, especially the FDA have not been able to apply rigorous standards in all cases and have had to rely on the developers testing. (The National Academy of Science, which has a number of people involved in the GM industry, has acknowledged that there are "some unresolved scientific issues." - See their 160-page report.)

Lastly, there is considerable concern about the safety of GM in Europe. The fall out in this country will be felt was we seek to ship foodstuffs (including seeds) to Europe. GM products are largely banned yet a major Canadian supplier of rape seed shipped contaminated seeds to Europe. Thousands of acres will be plowed under because of this contamination. The cost to European farmers will be devastating. (It is interesting to note that the Scottish Beekeepers Association is strongly opposed to the use and testing of GM crops in areas where they have their hives.)

Richard Starkey
Woodstock Valley, CT

•

I was appalled at the inaccuracies of the recent letter "GMOs - A Resonse", June 2000 issue. Nothing in 10,000 years of prior agricultural work allowed a salmon to breed with a tomato (FlavoR-Saver tomato (trademarked when correct spelling used)), nor have Bacillus thuringenisus bacteria taken up breeding with corn, cotton, etc (the Bt series of crops).

These are not just old plants in say a new flower color because the introduced genes are not even from the same genus in many cases or even same kingdom (plant/animal) and the expression of the foreign gene can neither be predicted nor is it tested.

The most troubling aspect of the Genetically Modified Organism issue to date is the complete sell out by our government to the corporations and their big financial muscle. While at least one corpo-

*Continued on Next Page*

# MAILBOX

ration did stop one project that could have caused death in those allergic to one of the introduced genes such responsibility is more a response to the projection of liability law suits rather than a benign attitude.

Whether the letter writer is a member of the very high paid biotech industry or merely hoodwinked by its selective half truths published as fact, it is no credit to *Bee Culture* to facilitate the spread of such erroneous information.

Then again we might push for a cross of a bee with a toad so we could make honey while it rains and the resulting GMO would also eat the wax moths in the hive.

GMOs are to prior agricultural breeding programs as the atomic bomb was to chemistry. The fallout hasn't started yet but the effect may have consequences never suspected.

Eldon T. Winston
Martinsburg, WV

•

Mr. Gates, in reference to your letter in the June issue of *Bee Culture*, before you call others nasty names, I suggest you avail yourself with the facts and risks involving GMOs.

We should all be concerned about genetically altered crops. It is not plant breeding. It is inserting genes from totally unrelated organisms including fish and bacteria. It is powerful chemical companies venturing into the world of the unknown with inadequate research. We and our environment are the guinea pigs. Environmental problems are already surfacing.

81% of Americans and most of the rest of the world want these new foods labeled. This is not an unreasonable request.

Since it will mean less carbaryl (sevin) will be used, BT corn will be good for bees. Roundup-ready crops however, will result in killing bees and honey plants. I had some bees killed after the county sprayed Round-up. The bees rear four legs were paralyzed. A friend had the same problem. There are over thirty formulations of Roundup which makes research on this problem difficult. French researchers have discovered that some varieties of transgenetic rapeseed can harm bees by shortening their lives and destroying their ability to recognize plant pheramones.

Roundup ready crops mean more Roundup in our food, higher costs to farmers, dead soils, lower yields and huge profits for Monsanto.

Scientists, the world over, are deeply concerned that GMOs containing bacteria will cross with the beneficial bacteria and will destroy the good bacteria.

Monsanto sold our military Agent Orange without removing the hazardous dioxin which the other chemical supplier had removed. Monsanto has been found guilty of misrepresentation involving their advertising and the research for the labeling of Roundup.

Would not genetic research directed toward making crops resistant to drought and having the ability to produce in marginal soils would be a boon for developing countries and our Southwest.

I spent thirty-five years in the pest control business and since retiring I have found the best sources of accurate information on GMOs and pesticides to be the Northwest Coalition for Alternatives to Pesticides located in Eugene, Oregon. Their phone number is 541-344-5044.

I would be interested in hearing from anyone who has had experience of Roundup or Garlon 3A killing bees.

I can be reached at 6888 Crown Point Road, Coos Bay, Oregon, 97420, 541-888-5695.

Robert C. Burgdorff

## Good Going Wise Guy

Just finished reading your latest Wise Guy where Wise Guy discussed the ABF. I have written numerous similar pieces over the years. The ABF has some well meaning people that need to wake up and smell the coffee. It is my understanding that the ABF just recently did some restructuring. I have no details, but by their recent decision not to support the anti-dumping effort proves that they did not restructure properly. The last antidumping effort forced many ABF leaders to show their true colors. I will never forget those ABF leaders that sat with the attorneys for the Chinese during the International Trade Commission hearings. There were several ABF leaders back then ready to clean house, but later lost their steam for some reason. The ABF should clean house and get rid of the nonproducers/nonbeekeepers or disband.

Jerry Stroope, President
U.S. Beekeepers, Alvin, TX

## Thanks For The Laugh

I laughed so hard at James Tew's article "The Inevitable Sting" in the June issue of *Bee Culture* as I just had a similar experience, only miraculously no stings! I was just going to slide the inner cover over to pour some syrup in my division board feeder when the attack bees made their move. I went running and fluffing my shirt to get rid of them. I thought I got them all and then went to get the suit on (like I should have done given the overcast conditions etc.) and finish the job. As I was pouring I could feel a bee crawling up and down my chest, down my stomach, back up again and I'm like "Do I squish it and hope I don't get stung or hang on and try to get it out." I went for option 2 and unzipped the veil, opened the neck on my shirt and zip... out she went. I went in the house and got out of the suit and buzzzz, there goes another one! It went to the window and I grabbed a paper towel and gently set her free out the door. About a half hour later, I felt something in the hair on the back of my neck (like a woodtick crawling) and I felt back and found another one! One more bee got a ride to the door to live yet another day and I still have yet to be stung! Let's just say I've been warned and I'll be treating them with a little more respect in the future.

Thanks for the good humor!

Sherri Hane
Walker, MN

# GLEANINGS



## New Trade Actions
## SIOUX HONEY SUPPORTS

The Sioux Honey Association ("Sioux") has announced that it supports the efforts of the American Honey Producers Association ("AHPA") in investigating whether unfair trade cases are warranted against dumped honey imports from Argentina and China. Sioux also announced that, if such cases are warranted, it will appear with the AHPA as a petitioner in asking the U.S. Government to begin new trade investigations against these countries.

"U.S. honey prices are at an historic low level, and these prices have been lead to the basement by dumped imports from China and Argentina," said John Milam, the chairman of the board of Sioux. "As a result, all our members are in financial distress, and many are on the verge of collapse," he continued. "If action against these countries is warranted, we need to get the process going as soon as possible."

"We are delighted to have the support of the Sioux Honey Association in our ongoing effort to correct the grossly unfair pricing at which imports from Argentina and China are entering our country," said Richard Adee, president of the AHPA. "Domestic honey producers have had an extremely hard time moving honey over the past two years, when the amount of Argentina imports increased dramatically, but dropped through the floor in price," he added. He noted that the precipitous decline in the price of Argentina imports has allowed the Chinese to lower the price of its imports to an even lower level. "We must either get relief from these dumped imports, or get ready to die as an industry."

Sioux is a cooperative marketing association for its 375 apiary members, which are located primarily in the western two-thirds of the U.S., and in Georgia and Florida. Sioux markets the honey of its members under four brands, including the original "Sue Bee" brand.

The AHPA is a traditional trade association, and has 600 members located throughout the United States. Each member markets its own honey. The AHPA represents its members on mattes, such as international trade, that are of concern to the entire membership.

## January 2001
## AAPA WITH ABF IN SAN DIEGO

The American Association of Professional Apiculturists will hold its American Bee Research Conference in San Diego in January 2001 in conjunction with the American Beekeeping Federation's annual convention.

The meetings will open on Friday, January 12, at the San Diego Marriott Hotel in Mission Valley, and run through Monday, January 15. Some of the presentations will be to joint sessions of the ABF and ABRC; at other times, the two groups will meet separately.

More details on the program will be announced as they are finalized. Watch for updates on www.ABFnet.org.

Following the San Diego convention, a group of the conventioneers will fly to Kona on the Big Island of Hawaii for six days of visiting beekeepers and sightseeing "in Paradise." The Kona tour will fly home on Sunday, January 21.

Discount travel programs are being arranged by the ABF and details will be available soon.

For information on promoting products and services through the ABF Trade Show and through advertising and sponsorships, contact the ABF Office, P.O. Box 1038, Jesup, GA 31598, 912.427.4233, FAX 912.427.8447, email info@abfnet.org.


"WELL, LOOKS LIKE A POOR ATTEMPT AT A FRAME-UP TO ME!"

## 2000 PA HONEY QUEEN


Renee Blatt was chosen as the Honey Queen for Pennsylvania 2000. As an aspiring beekeeper, Renee knows the value of the honey bee. Her goal is help the public realize that honey bees are not just stinging insects, but are also a vital part of our food chain.

Renee lives with her parents, Steve and Jennifer Blatt on the family's hog and dairy farm in Jonestown, PA. She is a student at Central Penn College majoring in Entrepreneurial/Small Business and Marketing.

To invite Renee to promotional events contact Linda Hackenberg, RD#3 Box 349, Lewisburg, PA 17837.

# NEWS FROM ABROAD

*by Alan Harman*

**GM POLLEN FOUND IN UK HONEY** – British beekeepers have been told to keep their hives at least six miles from field trials of genetically modified crops after honey was found to contain genetically modified pollen.

Both the Bee Farmers' Association and the British Beekeepers' Association told their members to act and called for compensation for the extra costs and work involved.

The associations, now using the GM-free status of British honey as a marketing tool, also want to be informed about the location of GM field trials.

The Honey Association, representing packers and importers, said supermarkets had asked for a minimum six-mile limit because they want to ensure products are GM-free.

**AWARD FOR AUSSIE BEEKEEPER** – Agriculture Western Australia senior apiarist Lee Allan won a National Quarantine Award for his scheme to guard against the threat of exotic bees and diseases.

Allan developed a surveillance program that uses beehives at Western Australian ports to guard against incursions.

Involving the cooperation of the community, the state's been industry and the state agriculture department, the hives are intended to attract any exotic bees arriving by sea.

A surveillance team regularly checks the hives for exotic arrivals and for signs of pests and disease. They also capture and test foraging bees in port areas and conduct similar tests.

There is also a 10-kilometer zone around each port where the movement of managed bees is barred.

"Without the cooperative effort – and local beekeepers providing and maintaining sentinel bees – the surveillance system would be very expensive and difficult to achieve," Allan said.

The awards are made by a panel selected by the Australian Quarantine and Inspection Service and the Quarantine and Exports Advisory Council.

The bee surveillance program now is to be introduced at all of Australia's ports in the continuing effort to protect the A$75-million beekeeping industry and the A$1.2 billion worth of pollination services it provides - from foreign invaders.

**HONEY WITH A STING** – An apiary in New Zealand is about to launch a honey blended with bee venom as a dietary supplement for people suffering from arthritis.

Nelson Apiaries Ltd. used Auckland University's commercial research arm to test the product and conduct toxicology studies to ensure consistent concentrations of venom.

Managing director Philip Cropp said the bee venom appeared to have anti-inflammatory properties for ailments such as arthritis. By blending it with honey, the venom could be absorbed through a person's stomach lining.

He said there had been no previous studies on bee venom and honey anywhere.

The apiary's product would be swallowed and absorbed through the stomach lining. The product is said to trigger hormones called cortisols that break down crystals that cause arthritis.

**TASMANIANS WANT TOTAL QUEEN BAN** – Tasmanian honey producers have voted to ban the import of queen bees into the Australian state from overseas and elsewhere in Australia.

Tasmanian Beekeepers Association chairman Shirley Stevens said the aim was to prevent the introduction of the *Varroa* bee mite.

She said the mite has the potential to wipe out the Tasmanian honey industry.

"I believe at a high risk," she said. "It's a huge threat to Tasmania because New Zealand has it and Tasmania has been the first one that has had the wasp introduced from New Zealand, we
have the bumble bee from New Zealand and we have direct shipping in from New Zealand."

**GENETICALLY MODIFIED CANOLA COULD RUIN INDUSTRY** – The South Australian Apiarists Association warned that the country's honey industry could be ruined if genetically modified canola is allowed to be commercially grown in Australia.

President Keith Gibbs said the threat would come because the industry would be unable to guarantee that honey is free of tainted pollen.

But he said it could turn out that a greater demand for pollination would outweigh the loss of the honey industry.

"GMO crops cost them a lot more to plant, they yield a lot better, but they've got to make sure they get a real consistent yield," he said. "They need bees to guarantee a real good crop. So we'll still end up probably no worse off, possibly better off with just pollination, more income from pollination.

**KIWIS MULL THE OPTIONS** – There's a nasty dog fight looming in New Zealand after the shock outbreak of *Varroa* mite in the country's North Island.

The ministry released two draft operational plans – one on eradication and the other on the control – that will be used to advise the government on its response to *Varroa*.

The decision is expected to be made quickly with the aim of having one of the two options underway by August.

Inspection teams had confirmed 284 infected apiaries owned by 132 beekeepers found in five clusters. The number was reached after 2,874 apiaries were visited and 13,525 of the 55,305 hives on those apiaries were tested by Apistan.

While one plan suggested a four-year NZ$56 million eradication program could rid the country of the mite, there have been suggestions beekeepers opposed to the cost of eradication proposal could deliberately spread the mite further to kill that plan.

But while the eradication program would cost around NZ$56 million, a control program would cost A$17 million every year.

Beekeepers said the opposition to eradication could depend on just how much beekeepers get in compensation.

A recent survey found some opposition when compensation of NZ$75 a hive for a depopulated program was suggested.

Some ended their opposition when the suggested figure rose to NZ$112 and National Beekeepers Association spokesman Lin McKenzie said that at NZ$145 the survey showed there was likely to be no opposition.

"The compensation package is very important," he said.

One Ministry of Agriculture report said opposition to eradication was understandable because all attempts to eradicate *Varroa* in other countries had been unsuccessful.

"All they have achieved is disruption, hardship and significant loss of income to the commercial beekeeping community," it said.

Its report said it would be necessary to persuade those opposed to eradication that an attempt in New Zealand would have "significant components not found in overseas programs that will greatly improve the likelihood of success."

Beekeepers who favor eradication argue that a control program would only delay the spread of the mite.

About 90% of the country's beekeepers are hobbyists with only 500 to 600 make a fulltime living from their hives. The professionals strongly support the eradication program.

Russell Berry of Arataki Honey, the country's biggest beekeeping company, told local newspapers that threats to sabotage eradication attempts by spreading *Varroa* or not taking part in the program were just scaremongering.

Berry said a lack of enthusiasm for eradication within the ministry could be the biggest problem.

"It would appear that the enthusiastic have been sidelined without any consultation with the major stakeholders," he said.

The ministry is accepting comments on both papers and the National Beekeepers Assn. is coordinating responses from the beekeeping industry through its regional branches.

The operational plan for control of *Varroa* considers the potential ways to achieve the specified objectives of mitigating the effects of *Varroa* on North Island beekeeping and ensuring that the South Island remains free of *Varroa* for as long as possible.

It proposes two alternative programs of surveillance to confirm the South Island's freedom from *Varroa* and a series of measures to protect this status. Movement control of bees, hives and equipment from North Island to South Island could be maintained.

Options are also included for an eradication program in the event that mites are found in the South Island. The extent and cost of an eradication program for such an incursion

*Continued on Next Page*

# CALENDAR

**♦INTERNATIONAL♦**

**Second Caribbean Beekeeping Congress** Nevis, West Indies, August 14-18. The Congress Secretariat 869.469.5521, Exts. 2124,2153,2154. Fax 869.469.1698 or 469.0324 or email: psalhc@hotmail.com

**♦IDAHO♦**

**The Idaho Honey producers** will hold their annual convention November 3-4 in Twin Falls, at Cavanaugh's.

For more information contact Randy Johnson, 208.467.2589.

**♦MASSACHUSETTS♦**

**Looking For A Mountain Top Experience** . . . at sea level? Good food, good friends, and ACME beekeeping instruction, for all levels of experience? Affirmative? EAS 2001 is the place for you. Come join 500 other beekeepers August 6-10, next Summer; that's right – on Cape Cod, MA.

Visit the website: www.capecodcom/bcba/eas2001.html.

**♦NEBRASKA♦**

**BEETOPIA!** NE Bkprs. Assn. annual convention is November 17-18, at the Best Western Central Executive Center, Omaha.

Contact Dennis Stenner, 13401 S. 34th Street, Bellevue, NE 68123-2330, 402.293.0973, stenner@radiks.net

**♦NORTH CAROLINA♦**

**North Carolina State Beekeepers Association/South Carolina State Beekeepers Association** will a hold a joint meeting in Myrtle Beach, SC March 9-10, 2001 at the Crown Reef Resort and Conference Center.

Contact Mike Hood 864.656.0346.

**♦SOUTH DAKOTA♦**

**The Mid-U.S. Honey producers Marketing Association** will be holding their annual meeting Friday, August 18 at the Ramkota Inn Pierre, South Dakota. The organization is considering getting involved in marketing Mid-U.S. honey in a value added honey product. Attend the meeting for details!

For information contact President Darrel Rufer at 3499 75th St. SW, Waverly, MN 55390, 763.658.4036.

**♦TENNESSEE♦**

**The Tennessee Beekeepers Association's Annual Convention** will be held at the Pollard Auditorium in Oak Ridge, Friday, October 20 and Saturday, October 21. Dr. james E. Tew, OH State University; Dr. Hachiro Shimanuki, USDA Beltsville MD Research lab; and Mr. Jerry Hayes, Dadant & Sons will be among the guest speakers.

There will be workshops, honey show, auction, a honey baking contest and a banquet on Friday night. Registration fee includes lunch on days attended.

For more information contact Robert Elwood, 865.482.5276, rhelwood@email.msn.com or Barry Richards, 615.654.2459, beerich@bellsouth.net.

**♦VERMONT♦**

**Honey Harvesting and Extraction Workshop** will be held August 12 from 10:00 a.m. to 2:00 p.m. and the same location.

Contact vtba@mailcity.com or write VT Bkprs Assn, 405 Browns River Rd., Essex Junction, VT 05452, 802.759.2387.

**♦WEST VIRGINIA♦**

**The 20th WV Honey Festival** will be September 9-10 at the City Park in Parkersburg, WV.

WV Honey Festival, P.O. Box 2149, Parkersburg, WV 26102, 800.752.4982.

## Priceless Gold

*Of all the riches in the world*
*a gift most valuable to us*
*yes is golden for sure*
*but not in jewelry*
*form to gleam*
*it's another way the value lies*

*Where would kings and we*
*be after all without our insect couriers*

*To provide us nature's bounty*
*Delivering on the wing*
*their gold dust burdens*
*Bees with their pollen treasures*

Frank Turkowski

***Abroad ... From Pg. 51***

would depend upon how early the find was made and where and when it was located.

The plan discusses various options for immediate control of *Varroa* in the North Island, including two versions of a co-ordinated treatment strategy in those areas known to be currently infected. Coordinating treatments through a management agency is considered as a first year option to achieve maximum impact on current *Varroa* populations.

It also includes a proposal for New Zealand-based research activities because overseas control methods may not be directly applicable. This is due to differences in New Zealand beekeeping practices, climatic and floral conditions, honey bee strains, and the interaction of bee viruses present in New Zealand with *Varroa*.

The goal of the research program would be to produce a sustainable control strategy that minimizes cost, chemical use, and development of resistance in mites and residues in the products being produced.

The plan discusses an extension program to help lessen the impact of the mite on New Zealand beekeeping and on the horticultural and agricultural industries that rely on honey bees for pollination.

Proposed activities would include queen breeding courses for South Island beekeepers to help them produce their own queens now that North Island queens are not available.

The National Beekeepers Association's Lin McKenzie, a major beekeeper in the South Island, said officials should look at genetic engineering to end the crisis.

He said with mites overseas building up resistance to chemical control, "I believe some genetics is where the answer lies, whether it is GE or selective breeding."

A gene from mite-resistant Asian bees could be introduced, which would allow bees to produce honey and survive the mites.

The ministry now is assessing the risk of allowing imports of honey to make up for any local production shortfalls.

The National Beekeepers Assn said no imports would be needed to meet the domestic demand of 6,000 tons a year. It predicts *Varroa* would cause honey production to drop from 9,000 tons a year to less than 7,000 tons.

McKenzie said feedback from a meeting between the National Beekeepers Assn., the Kiwifruit Pollination Assn., the Ministry of Agr. and other government departments and scientific experts indicated strong support for the eradication proposal. The experts had said it was technically possible to eradicate *Varroa* given New Zealand's isolation in the South Pacific.

The Federated Farmers organization said the cost of eliminating the mite could be high but the cost of not doing so could be greater.

The Grains Council also backed eradication saying the value of pollination by honey bees to the arable industry was immense with more than 509,300 acres of seed multiplication and herbage seed crops relying on bees for pollination. The crops generated NZ$43 million in export revenue.

Overseas bee product markets have indicated most will continue to buy from New Zealand because most already have *Varroa* present.

Only two small markets, Tahiti and New Caledonia, have stopped imports. Both are island groups free of *Varroa*.

The ministry received an application to import bees from China. New Zealand has not imported live bees in 40 years. Before it can occur, an analysis of the disease risk for importing bees will need to be undertaken by the ministry.

A spokesman said this is a time-consuming, long-term process, which would need to be undertaken in consultation with the bee industry and it was unlikely live bees imports will be permitted in the near future.

With Australia the only major beekeeping country free of *Varroa*, Jim Cullen, chief of the Commonwealth Scientific and Industrial Research Organization's entomology division, said the New Zealand outbreak highlighted the need for continuing quarantine vigilance.

"This shows the critical role performed by CSIRO Entomology in assisting the quarantine authorities with the management of unwanted insect incursions," he said.

While Asian bees from the northern parts of Asia carry the destructive version of the *Varroa* mite Asian bees from other parts of Asia carry versions of the mite which CSIRO's research has shown to be harmless.

"Knowing the difference makes a difference to how any invasion is managed," Cullen said. "While vigilant monitoring and quarantine is our first line of defense, we need to increase our preparedness for potential incursions."

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# Finders Keepers Losers Weepers

Peter Sieling

The retired preacher rattled into my driveway in his rusty old "Jimmy" to take me out to one of his beeyards for some cutting and pasting of queen cells. I would lift off the heavy supers and hold the frames as he cut out the capped queen cells. Then he would use my younger eyes to find and kill failing queens in other hives, replacing them with the queen cells. As he stepped from his car, I could see the expression on his face, something like a cat with a mouse tail hanging from its mouth or a beekeeper who just found a new swarm in one of his vacant hives.

"Guess what!" he exclaimed, " I had a swarm move into one of my empty beehives over to the Stolzfus farm. I have never seen a swarm this early in all my years of beekeeping." He should know. Reverend Bence's experience with bees makes *C.C. Miller's Fifty Years Among the Bees* look like the work of a novice. This was the first week of May in a cold pocket of New York. We normally didn't see swarms until the end of the month.

"Oh how ah, interesting," I tried to sound pleased at his good fortune. "When did it arrive?"

"I don't know exactly. Sometime yesterday."

I occasionally have uncanny intuitions about swarms, almost clairvoyant. Sometimes I can even pinpoint swarms by moving my hive tool over a map until it stops, although the swarms have always left by the time I drive to the location.

"Stolzfus's are about one mile from here. I'd say that swarm arrived at your hive in the early afternoon and contained about four pounds of bees. I suspect it bore a strong resemblance to a swarm that came out of one of my hives. I caught it twice two days ago. It absconded again yesterday and floated over our house at 12:35 in that direction. I pointed to the southwest. "Funny, I would have placed the Stolzfus place over there." I readjusted my arm three degrees farther to the west.

Pastor Bence looked smugly concerned at my loss and said consolingly, "It's highly unlikely they were your bees. Just a curious coincidence." Of course he knew I knew the beekeeper's rule about swarms – "finders keepers, losers weepers."

Men, being less verbal than women, have to compensate by direct mind to mind communication. So while we chatted that afternoon in manly grunts and monosyllables about extractors and bees and the old days and spun stretchers about stings we'd received and swarms we'd caught, underneath – subconscious to subconscious – the conversation went something like this:

"That was my swarm. I'd really like them back," I thought.

"You really can't prove those were your bees. Maybe one of my hives swarmed," he thought.

"You know those were my bees. I worked hard hiving them. Your hives aren't strong enough to swarm. That's why you buy bees from me," I retorted thoughtfully.

"You know the rule. Finders keepers losers weepers."

"I ought to charge you. Lets see – $35 for the bees and that's cheap for four pounds. A queen of unknown lineage – mine are all worth at least $8. Seven bucks for air mail delivery and the patented automatic installation service. That makes an even $50 plus tax.

"I think you used some kind of pheromone spray in that hive and are trying to suck all my bees out of my hives and into yours. The Bible says something like 'if a man asks you for a swarm you should carry it even two miles unto him if you have to . . .'"

"The Bible also says, 'To him that is faithful with a little, more will be given. But to him who is not, even that which he has will be taken away' (and given to the faithful, I would add). But you just wait. Someday one of my hives will swarm and you'll get some of my bees. Then we'll be even."

"But my bees always head southwest when they swarm. I'll bet yours do too. I'll never get any of your swarms."

"Son, I've been keeping bees for many years now. Of course all bees swarm to the southwest. Year after year after year on and on they move. The swarms that migrate into your apiary from the northeast are the descendants of my first bees 60 years ago coming around the earth again to begin anew the great circle of life. Now hold that frame steady while I cut out this queen cell."