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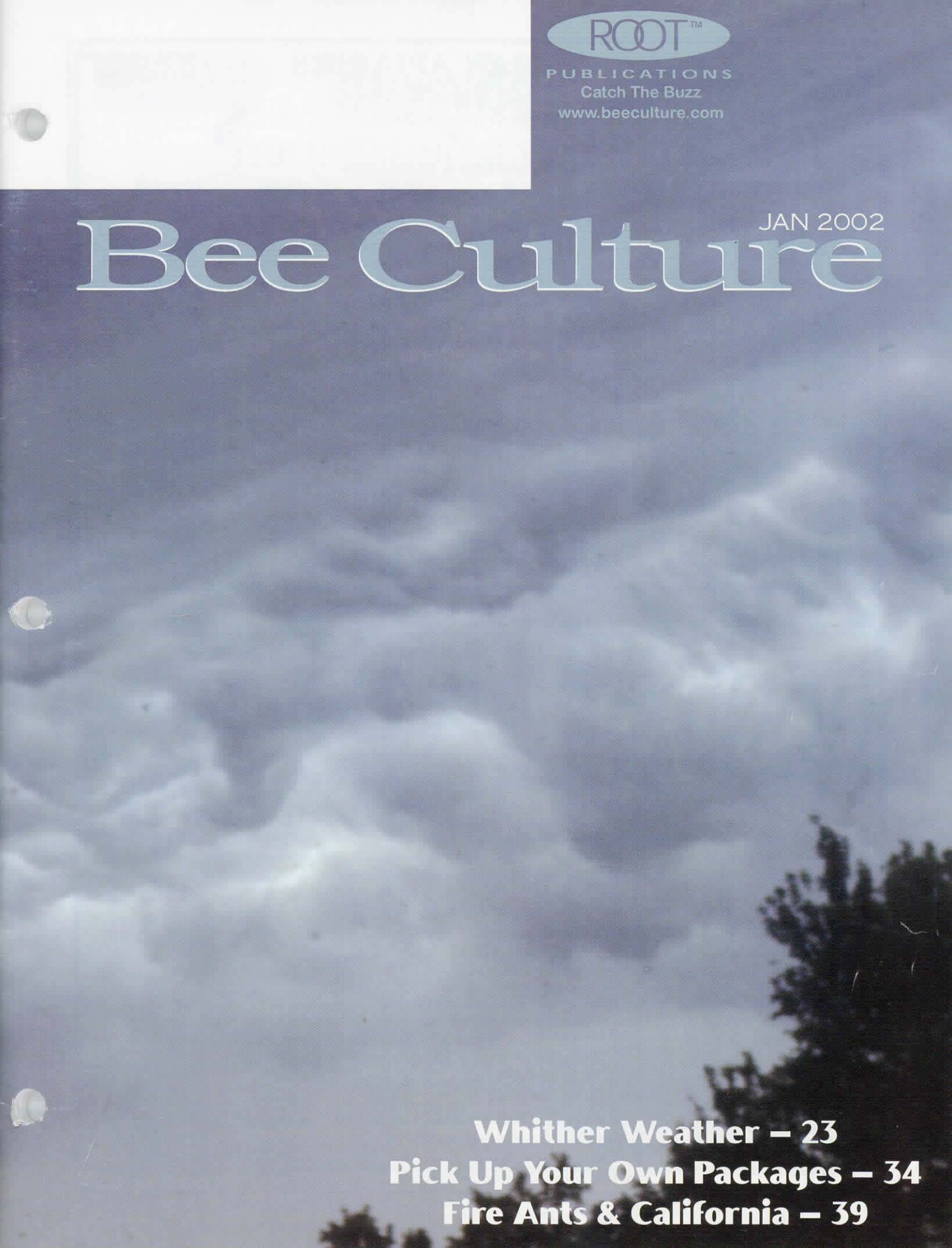

Bee Culture
THE MAGAZINE OF AMERICAN BEEKEEPING

JANUARY 2002 VOLUME 130 NUMBER 1

FEATURES

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Plan ahead. Know what the weather will be tomorrow, and a week from now. Here's how, page 23.
photo by Kim Flottum

DEPARTMENTS & COLUMNS

MAILBOX

KEEP IN TOUCH

Write: Editor, 623 W. Liberty St., Medina, OH 44256
FAX: 330-725-5624
EMAIL: KIM@AIROOT.COM

Enjoys *Bee Culture*

Thanks for a good magazine, informative, scientifically challenging and philosophical as well. I often read it at breakfast.

Someday I might even get around to having bees.

Ted Faris
Barnet, VT

No Way, Mr. Fulton!

I have always enjoyed *Bee Culture* and have found it to be an excellent resource for my interest as a hobby-level beekeeper (10 hives) here in southeastern Michigan. I do, however, think it's a disservice to the journal and its readership to publish an inane and unproductive letter like Mr. Fulton's from your last issue. Publication of a letter which has as a stated intent to ridicule and embarrass another writer hints at a significant flaw in editorial judgement. It's certainly not a productive means to encourage other letters from anyone but the most experienced beekeepers. I would hope you would reconsider publication of letters from such angry and arrogant writers in the future.

You seem to have always been a champion of beekeepers of all levels. I hope your future choices of readers' letters will reflect this in a way more meaningful than giving pompous writers like Mr. Fulton a public platform from which to attack others.

Michael Stafford
Clarkston, MI

•

I have been reading Mr. Fred Fulton's letter to Mailbox where he attempts to embarrass Paul Doerr (November issue). I am an experienced beekeeper and enjoy very much reading Paul's writing.

I don't believe Fred when he said he has had hundreds of suggestions published. Please have him prove exactly how many suggestions he has had published. And what was that stuff about military leaders and C&GS College all about? I suppose it had something to do with guard bees.

Mr. Fulton should not bother mixing his spray concoctions to combine frames from several hives. I always spray the frames and attached bees with sugar water using my plant mister. It works so well that I use the same sugar water mist when "working" the bees in my hives, hardly any smoke is needed and the bees are incredibly calm. The spray mist sends any angry bees (on the wing) back into the hive to get licked off and the mist also keeps a swarm super calm during hiving. I recommend Mr. Fulton read Dr. Richard Taylor's stuff, it will make him a better beekeeper.

In conclusion, Mr. Fulton should not be making recommendations about fellowship; he knows nothing on that subject. Keep up the good work Paul.

Brad Booth
North Carolina

Starbucks Smoke?

In response to "No Coffee In Smoker," November issue, I have to differ with Jim Lowe's thoughts on using burlap that is used to bag coffee beans in fueling a smoker. I have been using coffee burlap bags for several years now without incident. Perhaps there was something more in the bee's bonnets than the smell of coffee?

Debbie Barrows
Fairfield, CT

More About Lady Bugs

Read with great interest your Inner Cover article on lady bugs. I agree with everything you wrote, but would add a couple things. They bite people hard enough to draw blood, and are very damaging to late fruit crops such as late peaches, apples, etc.

However my interest as a beekeeper ponders the damage to bees. Having broken a couple of No-Nos by setting out bulk honey buckets to let the bees clean out the ever present honey, I noticed that they attracted thousands of lady bugs. Then I noticed also that they gathered around two Boardman feeders on a late Russian swarm I hived late August. Then I noticed hundreds(??) in groups on the hive entrances being nervously watched by the bees. Bees tried with no success to pick them up or herd them out.

My pertinent question is this. With the lady bugs affinity for sweets, and also seeking warmth for Winter hibernation, and their ability to penetrate apple peelings and bite, could they be a serious menace to our bees. As you know our bees in Northeast Ohio suffered greatly by the drought and their food supply is marginal at best.

The soybean aphid in parts of this area were sprayed while blooming and a lot of bees were killed, or seriously damaged their honey crop. The problem being that soybeans bloom over a long period of time. Three of my hives next to a large soybean field, that was not sprayed, were nearly overwhelmed with lady bugs at harvest time.

Sorry about the ones that entered your home. Yes they stink.

Arnold Bigler
Vermilion, OH

Editor's Note: *I have found that a small container, like a jar lid, with a teaspoon or so of honey spread on the bottom makes an ideal trap in the home. Lady bugs, looking for both moisture and food find the honey but the honey doesn't let go once they wander in. After a few days the lid with the trapped lady bugs is discarded and a new one put in its place. No pesticides, and no bites!*

Continued on Next Page

MAILBOX

Bee Blower Tips

It was interesting to read the Tips and Tricks on using a Bee Blower by Bob Kornely, as little appears to have been written on this subject.

I have the Dadant blower for many years now and, whilst I agree with much of the article, there are some points that I would make.

The most important one is to avoid breaking any comb, because the bees will be blown against the exposed honey and there they will stick! The honey will also be blown in a very fine spray and this will cover bees and equipment (such as a chute). This will also encourage robbing.

To avoid these problems, I try to ensure that all supers are cracked apart on the visit prior to the harvest so that the bees clean up any brace comb and loose honey before my visit to collect the supers; odd bits of brace comb between the supers can be removed with the hive tool and placed on the crown board (inner cover) and bees will come up through the feed hole, remove the honey and leave dry wax.

I would strongly advise against removing, or even disturbing, any of the frames prior to blowing for two reasons: firstly, because any damage to the comb – perhaps by breaking brace comb – will lead to the problems outlined above and, secondly, because the very powerful air stream can easily blow frames out of the super when stood on end.

I do not use a chute or stand, but work in one of two ways depending on conditions:

If the bees are in a good mood, I often simply stand behind the hive, slide the super forward slightly and lift the front so that it is stood on end with the frames vertical and the *top* bars towards me. I blow out most of the bees and then stand it on its other end with the bottom bars towards me and blow out the rest. The super is then removed and the next one cleared in the same way.

However, if we are just at the end of a flow, it can be difficult to keep the bees down working this way, so I then remove the supers and place them on an upturned roof either beside or about 4' in front of the hive, put the crown board back on the hive and then clear the supers. If there is robbing then it may be best to clear one hive at a time, otherwise the supers can be removed from a number of hives before starting blowing.

I always try to blow bees up into the air rather than into the ground or straight at the hive – I want them to live a bit longer!

It is important to blow from the top of the super first – combs are often thicker at the top and blowing from the bottom first will wedge lumps of bees between the combs.

It is much easier to blow bees off sealed honey as they have less footholds.

The blower nozzle should be waggled from side to side, rather than simply directing a steady stream of air at the bees – this catches them off their guard and they lose their grip. (I once had a bee in the car which I allowed to crawl on to my finger and then put my hand out of the window to get rid of it; to my surprise, it simply held tight - we were traveling at 70 mph at the time!)

Position the blower motor as far as possible from the hives; the bees hate the vibration and are also very sensitive to the high voltage to the sparking plug – they will sting the rubber cap on it and, if there are enough of them, may even stall the engine by forming a bridge between the plug cap and the earth lever used to stop the engine.

It is not necessary to remove every last bee, especially if working at an out-apiary. Flying bees will often land back on the supers when you have finished blowing, but this does not matter as they will leave later; however, it is important to dislodge young bees that will not be inclined to fly. I stack supers on the trailer as I work, covering them loosely if there is any robbing and then, when I have finished, drive a couple of hundred yards away and stop for a few minutes; covers are removed and most the bees left in the supers fly back to the apiary. Sometimes it is worth driving a bit further and then stopping again.

Peter Edwards
Stratford-upon-Avon, England

Bee Lab Samples

Samples of Adult Honey Bees

Send at least 100 bees and if possible, select bees that are dying or that died recently. Decayed bees are not satisfactory for examination.

Bees should be placed in 70% ethyl or methyl alcohol as soon as possible after collection and carefully packed in leak-proof containers.

Alternatively, bees can be placed in a paper bag or loosely wrapped in a paper towel, newspaper, etc. and sent in a mailing tube or heavy cardboard box. **AVOID using plastic bags, aluminum foil, waxed paper, tin, glass, etc.** because they promote decomposition.

Samples of Brood

The sample of comb should be at least 2 X 2 inches and contain as much of the dead or discolored brood as possible. **NO HONEY SHOULD BE PRESENT IN THE SAMPLE.**

The comb can be in a paper bag or loosely wrapped in a paper towel, newspaper, etc. and sent in a heavy cardboard box. **AVOID wrappings such as plastic, aluminum foil, waxed paper, tin, glass, etc.** because they promote decomposition.

If a comb cannot be sent, the probe used to examine a diseased larva in the cell may contain enough material for tests. The probe can be wrapped in paper and sent to the laboratory in an envelope.

How to Address Samples

Send all samples to:

Bee Disease Diagnosis, Bee Research Laboratory, Bldg. 476, BARC-East, Beltsville, MD 20705 301.504.8173

Include a short description of the problem along with your name and address. There is no charge for this service.

Email: KnoxD@ba.ars.usda.gov

Please Note: All incoming Mail is now being opened by a private contractor and examined before being forwarded to the BRL. Also, there is a possibility that some of this mail

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will be irradiated. **Therefore, time sensitive samples or samples requiring culturing (AFB Resistance Test) should be sent by UPS or FedX.**

Dave Knox
USDA Beltsville Bee Lab

Too Much Honey?

I am just writing about my honey this year which was above average. I have been keeping bees

ever since 1956 and this was the best year since I started.

Since this picture was taken on July 17 I have added another box to each colony (full deep boxes). In the picture there are eight more colonies to the left which can't be seen and one of them was nine boxes high at the time.

At extracting time the hive that had nine boxes gave me 43 full deep frames of honey (I only use nine frames to a box).

In another yard I took 48 frames from one colony and left her 19 sealed frames and several partly filled. All my colonies are left with about 90 pounds of honey for the long Winters we have here.

From the colony that gave me 48 frames I weighed three frames and they weighed 10½ lbs. Each.

I go through all my colonies once a week and arrange my brood by putting the youngest brood to the bottom and very seldom have a swarm. This won't work for commercial keepers, but can be done by smaller beekeepers.

Our last scheduled frost in this part of MN is predicted for June 15. This year it was June 17 We have a very good honey flow, but it is very short.

I use three boxes for brood until the first of July. That's when our honey flow starts around here. Then I spread my brood and bring in the outside frames and put in the center of the box and keep doing that until the 3rd box is full of honey and this is my queen excluder. By this time I have all the bee power I need for a honey crop.

I have been a subscriber to *Bee Culture* since I started with bees in 1956.

Gervase Bauer
Carlton, MN

Feeding Fondant

I take a 5-3/8 frame that has horizontal wires lay it on a cookie sheet, 1/4 inch cardboard under the shallowpart of the frame so the fondant will be even on both sides, wax paper on top of this so fondant won't stick. Any fondant recipe will do. Pour the fondant into the frame. The advantage – frames can be put next to the cluster.

Jack Sullivan
Chesterfield, IL

Buy USA

"You Know What I Think?" (October) points to a problem we are far from solving, whether one sells honey or not.

No one wants to lose his own source of income to foreign competition. But at the same time, everyone seems to want things cheaper than we can produce them here in the US. You can't have it both ways. And you shouldn't expect your neighbor to do for you what you didn't do for him.

At the same time, we want the world to accept into its market place the things we have to sell them. But turn about's fair play going either direction.

Besides, when you buy a Chrysler, for example, are you buying American or German or some strange mix of the two? And that's even before you count in parts that were made in, say, Mexico with materials from yet other countries. Agricultural goods are more clearly localized in origin, but fertilizers, pesticides, and such are more and more international. And where would be the logic in letting in fruit from, say, Israel but keeping out honey from that very fruit's pollenizers?

And if the dilemma weren't already thorny enough, economists will point out to us that all those things that are no longer "Made in the USA" are what allows us to cut back on our outright foreign aid to poor nations without destabilizing the world. We are allowing "workfare" to grow where "international welfare" once ruled.

Maybe we just have to put up with being undercut until we are able to prove to the consumer that it is in their OWN best interest to pay a little more.

Paul Kent Oakley
Ava, IL

Wise Up, Wise Guy!

I've just been checking the National Honey Board's new Honey Locator and have been amazed at the number of competitors we have now offering Florida honey for sale.

A few weeks ago, I visited the Epcot International Food and Wine Festival at Disney World to observe the NHB staff promoting U.S. varietal honey to some of the top chefs in the country. This is the way to get U.S. honey on the minds of chefs and menus of restaurants throughout our country and abroad.

The National Honey Board is creating new opportunities for U.S. honey. Yet the word I get on the street is so often, "The National Honey Board is not increasing the price I'm getting for my honey." I even overheard a gentleman at our last state beekeepers meeting say, "I don't give a damn about consumption! Someone buys every drop of honey that I produce."

Wise up, wise guy. You'd better believe the someone you're selling honey to gives a damn about

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INNER COVER

It's gratifying to see what was once only a suspicion borne out as correct according to recent research. A few years ago, we brought together an army of experts for a half-day symposium to examine the complaints we were hearing about, basically, worthless queens. Early supercedure, colonies impossible to requeen, queens not laying . a whole slew of problems were explained in detail by hobby, sideline and commercial beekeepers. Then the queen producers took over and tried to explain why what was happening was happening, and then the scientists came on and looked at the whole process of queen production, and at the very, very end, one, just one, made the comment, "Of course, the role that mite control chemicals play in queen and drone biology is still to be explained."

Now, finally, results of several studies released this year show beyond doubt that the presence of either Apistan or Checkmite+ adversely affect queens and drones. Developing queens treated with Coumaphos suffered high mortality rates, acceptance was low, larvae died, physical abnormalities were common, they weighed less, had lower ovary weights . . and all at exposure rates *below* the EPA tolerance level of 100 ppm in the beeswax they were living on. Meanwhile, Fluvalinate reduced sperm counts in drones and reduced the size of queens at maturity, according to the reports.

So you weren't dreaming, and it probably wasn't something you did that made those queens act weird. Or was it?

Go back to that EPA tolerance level – only 100 ppm. What is the toxic load of the wax in your brood combs after using Apistan and Coumaphos for how many years? 1ppm? 10 ppm? 1000 ppm? Face it, you don't know. Recall too that very low levels of these chemicals were killing larvae! How many larvae died in your old combs last year? 1? 10? 10,000?

Apistan and Coumaphos have saved our collective butts, no two ways about it. None of us would be here, probably, if they weren't around. But, like playing with fire, it can destroy just those things you want destroyed (AFB supers), or it can get away from you and take out your house, your garage, your business.

The combs in your brood boxes have been soaking up those two chemicals for how long now? How much of that stuff is lurking there, silently sharing its sub-lethal dose with developing workers and queens and drones. And, not known yet, what is it doing to those queens and drones you already have? Can it be good for them? Can it be good for you?

To keep mites at bay there are no alternatives that work with the same effectiveness. Our only choice is to keep the wax that soaks this stuff up, out of our boxes. Two years? Three? One? One treatment? Two? I can't say, and neither can the scientists, yet. Can you bet your bees or your business on the answer?

•

It's Not Easy Being Free

The postponed referendum for continuing the National Honey Board takes place in February. If you are one of the few who are large enough to contribute, you will get to vote. If, like most of us, you are too small to vote, or too small to care, it won't make much difference how the vote comes out. Or maybe it will.

All of us have used material produced by the Honey Board...recipes, fact sheets, the web page, news releases and the like. They were produced by the Board to help beekeepers promote, and sell, honey. That's what they are in business to do...promote honey, and increase consumption.

They have had some success...consumption has gone up. Opinions on the actual reasons consumption has gone up vary, though, from 'it would have anyway because there are more people' to 'It's all because of the Honey Board's activities.

The fundamental problem now lies with that increased consumption. U.S. honey producers, like most producers of ag products in this country have costs they cannot trim...no matter how hard

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Antidumping may be the first true promotion of U.S. produced honey! This is an action to even the playing field that by my view helps promote U.S. honey. With this "promotion" the price of domestic honey has increased. I believe that is the ultimate goal of the U.S. producer, that is to receive a higher, more livable price for his product. The price needs to inch toward 80¢ per pound in order to have enough money so American producers can recover from the last four to five years of horrible low priced imports. Was the $700,000 invested in the antidumping worth it? If your brain is larger than a marble you can see the benefits. For instance, an average beekeeper that runs 2500 colonies with an average crop of 85 pounds per colony will realize *over $20,000* more in 2001 due to the antidumping action. Now, was it worth it?

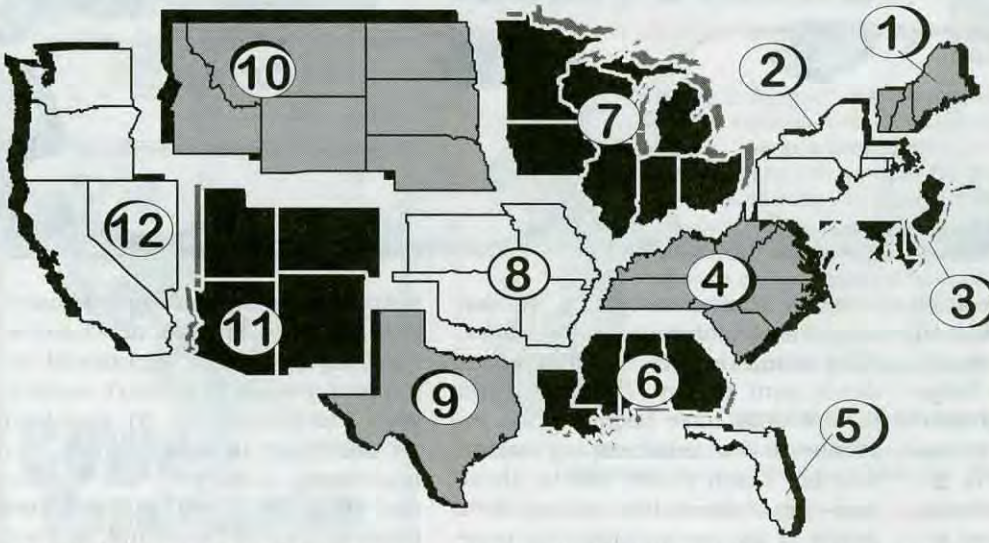
There are still some that haven't contributed to the action, and most of their reasons, it seems, stem from jealousy or stubbornness. They want the price increase but don't want to pay. Do they think there would have been a price increase if the antidumping action had not taken place? Maybe these non-contributors like selling their honey at the pre-antidumping price of 50¢ to 54¢? If so let the Editor know and I will write you a check! And there is still a small group yelling loudly about promoting U.S. honey, but their names aren't on the list of contributors. Even their leader hasn't given anything as far as I can tell – all the benefits but still pays nothing. But I can tell you this, when you look at the names on the list, and the honey they produce it's more than 80% of the U.S. crop this year. *THEY* are the majority here.

It's time honey producers held this minority accountable. If someone hasn't contributed quit doing business with them. If they are benefitting from higher honey prices and sell nucs, queens or whatever, don't buy from them. Why should you support people that don't support you? This is business. We each have an obligation to continue our own businesses to support our families and employees, and we must view those who don't contribute, and still benefit from our hard work, and our hard-earned money with a very skeptical eye. We need to convert everyone. We need to be united.

Will the antidumping solve all of our problems? Heavens no, but in business as in war many battles are fought before a winner is declared. This is one of those battles, and we may have to retake this hill again and again. Competition that is fair should not bother any of us, but you may be competing with people that haven't contributed or helped with this action. Support antidumping.

Wise Guy

JANUARY – REGIONAL HONEY PRICE REPORT



ALL ABOUT LABELS

Looking good on a shelf is important when it comes to selling honey. What do other beekeepers use? We asked our reporters this month about styles, colors, costs, design, sources and extra labels. Here's what we found out.

Almost no one makes their main label at home on their computer. Several, however, use the computer for a second label, for instance a variety, granulation or locally produced. There were some main labels made at home but these, generally, were for home sales.

Local printers didn't fare too well. Only 30% of our reporters have their labels printed locally. However, this probably reflects the rural areas they live in rather than anything else. So where do they come from? Half use labels available from bee supply or label companies that advertise in the bee journals. Interestingly, they are exactly 50:50 on those, too.

We divided label types into several categories. 1) colored paper, 1 color ink - 40%, $7 - 96/1000. 2) white paper, 1 color ink - 26%, $43 100/1000. 3) colored paper, 2 colors ink 24%, $20 100/1000. 4) white paper, 2 colors ink 12%, $9 100/1000. 5) full color process 12%, $9 100/1000. Many use more than one type of label to accommodate different markets, suppliers and costs and label uses. We tried to get an idea of costs, but weren't as successful as we would have liked. Prices do not indicate size or volume of purchase, dyes, plates and the like, so take with some precaution. Labels produced by label companies with full color art, and only name and address of producer added were put in the 3), colored paper, 1 color ink category.

Bar codes are used by 22%, some right on the label, others as an additional label. Self adhesives lead the way with 78%of the market. Additional labels 46% do not use. Of the rest, 27% use nutrition labels, 35% neck tags, 12% variety labels, 19% bar codes, 15% USA labels, 27% state labels, 42% granulation info and 15% other information. Remember that some of this may have been incorporated in the main label.

	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)	75.00	74.33	78.27	71.60	75.00	68.33	62.50	67.50	85.00	65.00	81.50	61.67	61.67-85.00	72.14	70.16	69.29
60# Amber (retail)	70.50	69.46	62.08	70.80	64.00	69.00	64.80	64.50	84.33	61.00	78.00	65.00	61.00-84.33	68.62	67.61	66.07
55 gal. Light	0.71	0.65	0.71	0.62	0.63	0.69	0.70	0.71	0.71	0.74	0.85	0.60	0.60-0.85	0.69	0.67	0.62
55 gal. Amber	0.62	0.63	0.62	0.59	0.64	0.65	0.65	0.62	0.59	0.62	0.50	0.55	0.50-0.65	0.61	0.61	0.57
Wholesale - Case Lots																
1/2# 24's	31.68	28.51	31.35	32.41	31.35	26.75	27.29	31.35	30.00	31.35	31.35	34.70	26.75-34.70	30.68	30.71	30.71
1# 24's	43.20	40.82	40.57	45.11	43.40	47.00	40.81	44.08	44.40	42.00	54.00	49.60	40.57-54.00	44.58	45.04	43.85
2# 12's	48.16	48.54	51.27	49.56	51.27	37.00	37.29	43.86	39.88	41.80	51.27	41.00	37.00-51.27	45.07	39.09	39.39
12 oz. Plas. 24's	39.48	34.86	35.79	34.64	35.79	42.00	32.42	37.20	34.20	35.40	30.00	40.27	30.00-42.00	36.00	36.22	37.26
5# 6's	44.31	43.38	47.13	45.93	47.13	42.00	40.40	39.00	45.10	37.50	52.00	36.00	36.00-52.00	43.32	56.47	42.02
Retail Honey Prices																
1/2#	2.00	1.61	2.83	2.17	1.19	1.57	1.60	1.59	1.74	1.49	2.50	2.19	1.19-2.83	1.87	1.93	1.80
12 oz. Plastic	2.00	2.26	2.27	2.21	2.44	2.32	1.88	2.28	2.60	1.90	2.50	2.35	1.88-2.60	2.25	2.30	2.31
1 lb. Glass	2.75	2.58	2.75	3.26	2.32	2.89	2.39	2.71	3.56	2.52	3.25	3.01	2.32-3.56	2.83	2.89	2.88
2 lb. Glass	5.00	4.40	4.57	5.46	3.69	4.09	4.11	4.76	5.24	3.91	3.69	4.50	3.69-5.46	4.45	4.40	4.39
3 lb. Glass	6.72	7.30	6.80	7.15	6.72	7.83	5.35	6.30	7.00	5.19	6.56	5.25	5.19-7.83	6.51	6.64	6.51
4 lb. Glass	8.79	7.60	8.79	9.50	8.79	9.50	7.76	7.98	7.25	8.79	6.89	8.00	6.89-9.50	8.30	8.20	7.26
5 lb. Glass	10.75	10.00	10.79	10.71	10.00	9.00	9.00	10.99	9.00	9.90	7.89	9.50	7.89-10.99	9.79	10.14	9.46
1# Cream	3.20	3.21	3.20	3.34	3.20	3.26	2.72	3.19	3.20	3.04	4.00	3.11	2.72-4.00	3.22	3.76	3.08
1# Comb	4.00	3.96	4.32	4.55	4.32	4.17	4.09	4.24	4.32	4.32	6.00	5.25	3.96-6.00	4.46	4.58	4.33
Round Plastic	4.00	3.09	3.97	4.50	3.97	3.75	3.80	3.74	3.97	3.97	4.00	3.85	3.09-4.50	3.88	3.86	3.69
Wax (Light)	2.50	3.08	2.85	2.20	1.10	2.95	1.71	1.83	2.36	2.85	1.85	2.17	1.10-3.08	2.29	2.73	2.54
Wax (Dark)	2.88	2.38	2.64	2.10	1.00	2.75	1.55	1.05	2.68	2.64	1.00	1.25	1.00-2.93	1.99	2.13	2.14
Poll. Fee/Col.	50.00	42.00	39.61	36.25	27.50	35.67	39.71	40.00	26.50	39.61	39.61	44.67	26.50-50.00	38.43	38.35	37.52

Mark Winston

The Bee Act

"The Bee Act is chock full of laws concerning the movement of bees, regulations designed to protect regions of our province from infection by diseases or pests that may not be locally present."

I grew up in the United States, just outside of Cleveland, and I lived in the U.S.A. until I was 30 except for some extended periods conducting bee research in gorgeous and exotic tropical countries. A job offer from Simon Fraser University in Vancouver, British Columbia brought me to Canada in 1980, where I've been ever since. To my surprise I soon discovered that America's northern neighbor is not the U.S. clone I had thought it would be.

I say surprised because I shared the predominant American impression that Canada is just like the United States except colder. Not the case; Canadian culture differs from the United States in many ways, from small details like the spelling of "neighbour" to moderate differences such as Canadian's national obsession with hockey instead of baseball.

There also are larger differences between the Canadian and American national psyches, in attitudes that slowly have become more obvious to me the more time I spend north of the United States. Canadians are quicker to compromise and seek consensus, vote more regularly, are more likely to become famous comedians (Martin Short, Eugene Levy, Jim Carrey, and the late John Candy, to name just a few), and read better books than Americans (just compare the bestseller lists in Canada and the U.S. if you doubt my literary judgement).

Canadians also have a different sense about the role of government than Americans do, and are more comfortable when their provincial and federal legislators pass laws and regulations that put the common good before individual rights.

Canadians, their government, and bees came together in my mind the other day as I was reading *Bee Scene*, the fine monthly publication of the British Columbia Honey Producers Association. The September issue featured an article by John Gates, one of the Apiculture Specialists who works for our Ministry of Agriculture. John's article covered American Foul Brood and government regulations. It impressed me as quintessentially Canadian because it was replete with language such as "your responsibilities as a beekeeper," and questions like "Is it right to impose your problems on someone else?"

His writing stimulated me to get a copy of the British Columbia Bee Act, easily found by doing a WEB search for British Columbia Bee Act or going to http://www.qp.gov.bc.ca/statreg/stat/B/96029_01.htm. It's a marvelous document flavored by a subtle dynamic that balances the rights of beekeepers to keep bees with regulations insuring they do so responsibly and without interfering with their neighbours or fellow beekeepers.

The document begins with definitions, and even here subtly expresses the conflict between leaving beekeepers alone to practice their craft and regulating us so that we are not a nuisance to the public or each other. The term "beekeeper" is defined as "a person who owns or controls bees or beehive or beekeeping equipment." I chuckled at the term "controls." Not many beekeepers are arrogant or foolish enough to think that we always are in control of what our bees do. Yet, the sentiment that we should be has deeper meaning, indicating that we are responsible for what our bees may do to others.

After definitions, it does not take long for the Bee Act to establish its tone, that the British Columbia government has expectations of beekeepers and will come down hard on anyone who dares to challenge its authority. Early on the Act demands registration of bee hives and apiary locations, forbidding the ownership of bees or location of hives on property unless they are registered within 15 days. The penalty for failure to register is severe: "An inspector who has reasonable cause to believe that a person is contravening this section may seize and destroy or otherwise dispose of bees or beehive equipment in the possession of or owned by the person."

Search and seizure; strong words requiring only reasonable cause to destroy your hives, indicating the importance our government places on knowing who is keeping bees and where they are doing it. Registration is not the only place where entry to property by inspectors, search, and seizure are enshrined in bee law. Inspectors can stop your vehicle and search it, enter on to your land and examine your hives, take evidence for analysis of diseases, and destroy your colonies if appropriate.

Continued on Next Page

"Canadians are more comfortable when their provincial and federal legislators pass laws and regulations that put the common good before individual rights."

Tough language, but indicative of where the balance point between responsible beekeeping and individual rights is located in our Bee Act. The regulations clearly favor the common good, leaving no doubt that maintaining unregistered bees or colonies with disease will not be tolerated.

Our Bee Act also is chock full of laws concerning the movement of bees, regulations designed to protect regions of our province from infection by diseases or pests that may not be locally present. For example, we have offshore islands that are connected to the mainland by regular ferry service. For many years these islands were kept free of varroa and tracheal mites after mainland colonies had become infected by the simple expedient of forbidding movement of bees from the mainland onto the islands.

Entire provinces also have prohibited the movement of bees into their jurisdictions to limit the spread of mites, and these quarantines have delayed infestations for a decade or more. Compare the quarantine-friendly Canadian attitude with the American response when tracheal and varroa mites were discovered. Quarantines were discussed within the United States but never broadly implemented, and both mite pests spread quickly. This is an excellent example of the Canadian balance between individual freedom and the communal good. Where Canada chose to restrict the ability of beekeepers to move their bees within and between provinces, the United States came down on the side of individual freedom to transport property and maintain unrestricted commerce between states.

Our Bee Act is meant to encourage responsible beekeeping, but also has some clauses that favor the beekeeper over his or her neighbor. For example, our Act follows the ancient British law allowing beekeepers to enter the land of any person to recover a swarm of bees. Although we're expected to control our bees, the Bee Act recognizes that sometimes our colonies do get out of hand and swarm. Beekeepers are permitted to recover their property and pride by following swarms on to the private property of their neighbors.

Of course, the "beekeeper, beekeepers' agent, or employee must not do any unnecessary damage, and is liable for damage caused to land or property by the entry." The message is pretty clear; if you break even a branch off of your neighbor's apple tree while catching a swarm, be prepared to buy your neighbor some apples for the next year or two until the tree sends out some new shoots.

Our swarm laws aren't quite like old English law; we favor beekeepers' rights to reclaim their own bees. In traditional English jurisprudence, whoever sees a swarm first can assert possession by banging loudly on a pot, whereas the B.C. Bee Act doesn't allow non-beekeeping citizens to take precedence over beekeepers simply by being closer to their kitchen.

The Bee Act unfortunately has become a bit like many government services in which cutbacks have strained the system. Our Bee Act insists on responsible beekeeping but our Ministry of Agriculture has seen diminished funds to enforce its regulations in recent years. In practice, many beekeepers do not register their hives, there are not enough inspectors to enter properties and examine hives, and the legal teeth in the Act are rarely implemented because it simply costs too much to pursue beekeepers through the courts for any but the most serious violations of beekeeping etiquette.

Enforced or not, I still like our Bee Act for what it attempts to do, reminding us that taking responsibility for our individual actions is a cornerstone of civil society. Most beekeepers on either side of the border maintain that attitude, recognizing that it is in our own interests to do so besides being the right thing to do. I find it comforting to read through the legal language affirming that keeping bees is a privilege best-preserved by cooperating with other beekeepers and minimizing the impact of our craft on the public.

My wife and I took out Canadian citizenship over a decade ago, but have kept our U.S. citizenship and our ties to friends and family south of the Canadian border. Our dual status has its practical advantages, but also reminds me of what I have come to consider as a dual heritage. I value the independence, aggressiveness, and sentimental patriotism from my American past while treasuring the more measured consensus-driven perspective of my Canadian present.

It is those same combined traits that make for good beekeepers, and it is that balance between independent energy and communal interactions that I also value in the beekeeping community. Our British Columbia Bee Act reminds me of that dynamic, and the underlying tension between individual rights and societal obligations makes for good reading in an otherwise dry document.

Take a look at the beekeeping regulations in your own state or province with that in mind. Our laws and how we express them provide insights into who we are as people and nations. That is as true for beekeeping as it is for the fundamental freedoms and regulations under which we Canadians and Americans live and hopefully prosper. BC

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RESEARCH REVIEWED

Explaining • Defining • Using

Steve Sheppard

"A clear demonstration of the potential for honey bee breeding to assist beekeepers in the fight against Varroa destructor."

Explicit details about reproduction or the lack of it would generally not be considered appropriate in polite conversation. However, in the case of the reproduction of a pest that has the potential to destroy honey bee colonies, we can all agree that less is better. This is just the point of recent research that examined the relationship between selected honey bees and Varroa destructor *reproduction.*

These researchers conducted experiments using queens from two stocks of honey bees that differed in their suitability as reproductive hosts for mites. One stock had been selected for the suppression of mite reproduction (SMRD). These honey bees were the result of years of selection and breeding to be poor hosts for *Varroa* reproduction. In the SMRD bees, female mites enter brood cells just before capping (as is normal), but they do not successfully rear a batch of youngsters. This trait is not expressed immediately when mites are introduced into a SMRD colony, as the mites are able to reproduce a first set of offspring, but subsequently they and their offspring exhibit very low success in reproduction. The other stock of honey bees used by the researchers was a typical commercial strain of unselected honey bees, that were susceptible to mites (SUS).

In the first experiment, the researchers set up 20 mite infested colonies and introduced SMRD or SUS queens to establish 10 colonies of each type. The queens remained in the colonies for 45 days (with a broodless period established by caging the queens from day 32 until day 45). On day 45 each colony had their queen replaced with one of the opposite type (SMRD replaced by SUS, SUS by SMRD). The percentage of mites that failed to reproduce was measured at various times during the experiment until day 103. The results showed that at the outset, both sets of colonies had low levels of mites that did not reproduce (about 15%). This was to be expected, given the fact that the adult worker bees of the starting populations were all of the SUS type. By day 47 however, the percentage of non-reproducing mites had grown to over 50% in the colonies initially headed by SMRD queens. The two treatments remained divergent for up to 20 days following the mid-experiment queen exchange. However, as the bee population changed following this exchange, by the end of the experiment the trends in mite non-reproduction were reversed. Thus, during the period from 66-103 days mite reproductive potential was most affected by the second test queen that had been given to each colony.

In the second experiment, similar colonies were set up (5 each with a SUS or SMRD queen) and allowed to persist for 105 days before the queens were exchanged. Periodic assessment of mite reproduction continued until day 167 Results of the second experiment mirrored those of the first and indicated that few mites failed to reproduce when a susceptible queen was present while, within 30 days of the introduction of a resistant (SMRD) queen, a significantly higher percentage of mites left no offspring.

The overall conclusion of this research was that the genotype of the host bees (SUS or SMRD) had a "strong effect" on the percentage of foundress mites that failed to reproduce. The experiments demonstrated that the introduction of a queen that had been selected for suppression of mite reproduction (SMRD) into a "normal" (SUS) colony led to significant and predictable reduction in mite reproduction. Interestingly, the actual mechanism of this selectable trait is still unknown, although the authors suggest that the immature bees themselves of the SMRD line may be the source of the inhibition of mite reproduction. Whatever the mechanism involved, this research provides a clear demonstration of the potential for honey bee breeding to assist beekeepers in the fight against *Varroa destructor.* Of course, the real value of a trait like suppressed mite reproduction will be apparent when it is successfully combined in honey bee stock(s) that exhibit other desirable traits required by beekeepers. In an effort to do just that with the SMRD stocks, the USDA-ARS honey bee laboratory in Baton Rouge, LA is currently involved in a CRADA (cooperative research and development agreement) with the bee breeding industry. Keep reading your bee journals and other trade publications to follow up this story. BC

Harris, J. W. and J. R. Harbo. 2000. *Changes in reproduction of Varroa destructor after honey bee queens were exchanged between resistant and susceptible colonies.* Apidologie 31: 689-699.

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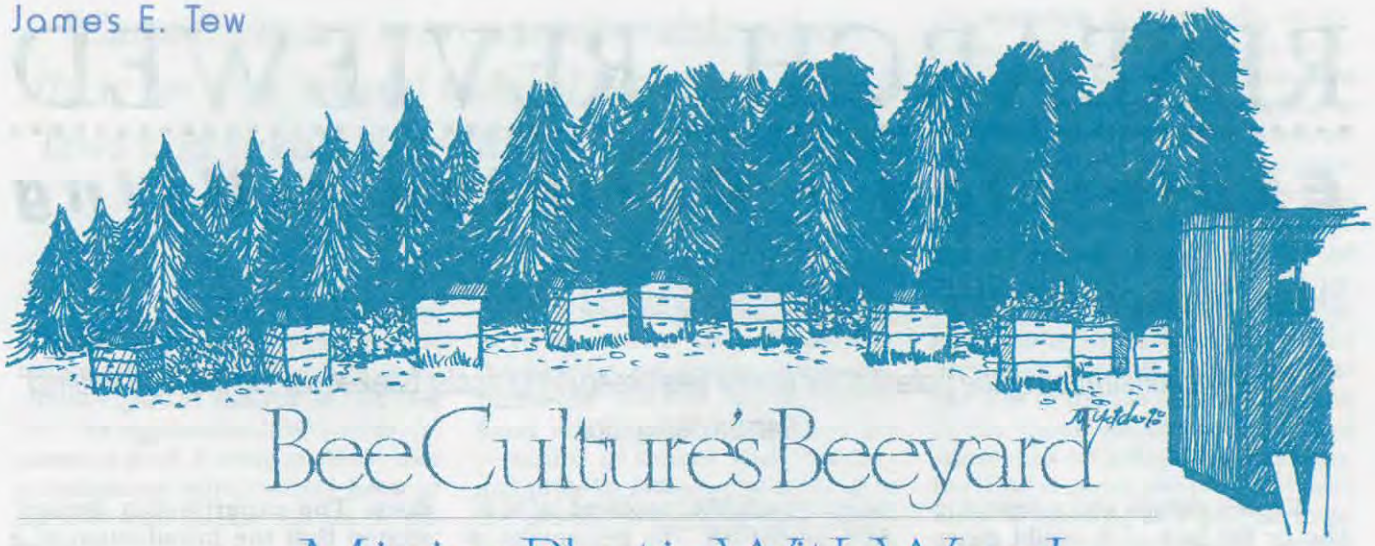
James E. Tew



Bee Culture's Beeyard

Mixing Plastic With Wood

Earlier in November I worked the BC yard and tried to catch up from being gone so much last Fall. I did the routine Wintering procedures – reversing inner covers, arranging frames, and installing entrance reducers. Most things went well except for one problem area.

Last Summer and Fall, as colonies needed manipulating I mixed plastic hive bodies with traditional wooden equipment as necessary. That didn't work. Yes, I knew the bee space was not quite right, but hive manipulation procedures needed to be done so I would just pay the piper later. Well, later came around in November. What a novel headache. The incorrect bee space had been filled in with burr comb – no surprise there – but what was surprising was that the mixed equipment very nearly could not be broken apart. The heavy burr comb soundly attached the equipment together almost requiring that I break the soft plastic equipment to remove it. So I pried, cajoled and manipulated and finally broke the equipment apart. [*Rest assured that this procedure of mixing equipment would never be tried again.*] Once broken apart, I was left with approximately five pounds of burr comb honey on the tops of the wooded equipment. Standing there, with hands on hips, breathing heavy and two bee students watching the fiasco, I pondered what to do, what to do?

The honey was in the right location for wintering clusters. Scraping the mess off would be a lot of work and the honey would be essentially wasted. I could collect up all the mess and put it on top of an inner cover, surround it with an empty super, and let the bees clean it up or I could just leave it where it was and try to be creative. As you probably suspect, I selected the creative route.

In earlier articles I have complained about wooden inner covers breaking apart when removed from a heavily propolized colony. I had several such broken inner covers that had intact rims. On one colony, I put this open rim on, surrounding the burr comb honey, put an inverted inner cover on top of that, replaced the outer cover, and put the perfunctory "hive brick" on top. On a second colony, the burr comb honey was too high to use an inner cover rim. I scrounged the storage shed and came up with a slatted rack. What a neat way to misuse this specialized equipment. I put the slatted rack ***on top*** – not on the bottom board as is typical.

Burr comb caused by incorrect hive spacing.

My plan

My plan was to let the Wintering colony use the burr comb honey during the cold season. Then, in theory, next Spring I will only have to scrape off empty burr comb. The top deep was still filled with bees during this procedure so I put it back on top of the slatted rack intending to come back on a cold day and simply remove the full deep minus the bees. Today was that cold day, yet the bees were still above the slatted rack in the deep. That didn't work. Are the bees in this colony in three deeps? I don't know, but they certainly appear to be.

Unorthodox use of a slatted rack to cover burr comb.

A slatted rack sitting atop a bottom board.

Lemons = Lemonade

So I now have a slatted rack in the wrong place and a deep of honey that still has bees in it at Thanksgiving. It's cold. There's no way I'm going to break the colony apart to get to the misplaced equipment. So standing there earlier today with hands on hips, I decided to leave it on. Suppose, just suppose, that slatted rack up high on the equipment could serve the same purpose during Winter that it serves down below during warmer months? Well, at least that is my current justification for leaving the rack in the wrong place during the Winter. No doubt, I will be discussing this move with you next Spring.

What is a slatted rack anyway? Those of you who already know can take a short break at this point, but for those new to beekeeping, a brief discussion of this uncommonly common piece of equipment is in order.

Apparently, Dr. C.C. Miller[1] in Fifty Years Among the Bees, first described the equipment as a deep bottom board with a wooden rack inside made from 21 strips of wood (3/4" x 3/8" x the width of the inside of the bottom board). Miller reported that the device gave increased clustering space in both Summer and Winter. Later, Carl Killion[2] (1960) suggested putting a solid four-inch board at the front in order to encourage the bees to build comb and store honey all the way toward the front of the hive. In 1968, Koover[3] discussed the "Bovard Rack" which is the slatted rack, as we know it today. The Bovard Rack, according to Koover, modified a standard bottom board to give it all the advantages of the Killion (Miller?) bottom board.

I like slatted racks while many of you don't care for them. Do I use them all the time? No. They're just one more piece of equipment to assemble, maintain, and use, but they appear to be a good idea.

The Multi-Colored Asian Lady Beetle (USDA photo)

Yet Another Beetle in Your Colony

In Your Home Within the past few years, many US states have been introduced to the Multicolored Asian Lady Beetle, *Harmonia axyridis* (Pallas). The beneficial insect looks just like any normal Lady Beetle to the untrained eye. They are typical orange and black and move into your home in October. Sometimes these beetles are called the Halloween Beetle.

The multicolored Asian lady beetle is native to Asia, where it is an important predator that feeds on aphids and other soft-bodied insects that live in trees. In their native habitat, large aggregations of these lady beetles often overwinter in cracks and crevices within cliff faces. Unfortunately, in the United States where cliffs are not prevalent, they seek overwintering sites in and around buildings. This lady beetle was intentionally imported from Russia, Japan, Korea, and elsewhere in the Orient and released in the United States as part of a Federal effort to naturally control insect pests in trees. The rationale was that native species of lady beetles are not particularly effective in controlling tree-feeding aphids and scale insects. The Federal releases were made in California as early as 1916 and again in the mid-1960s, but the multicolored Asian lady beetle apparently failed to establish.

During the late 1970s through the early 1980s, tens of thousands of multicolored Asian lady beetles were intentionally released by the

Continued on Next Page

[1] Miller, C.C. 1915. *Fifty Years Among the Bees*. The A.I. Root Company, Medina, OH pp 51-52

[2] Killion, Carl E. 1960. Ventilation, the Secret of Comb Honey. Gleaning in Bee Culture 88(6) 346-348, 377.

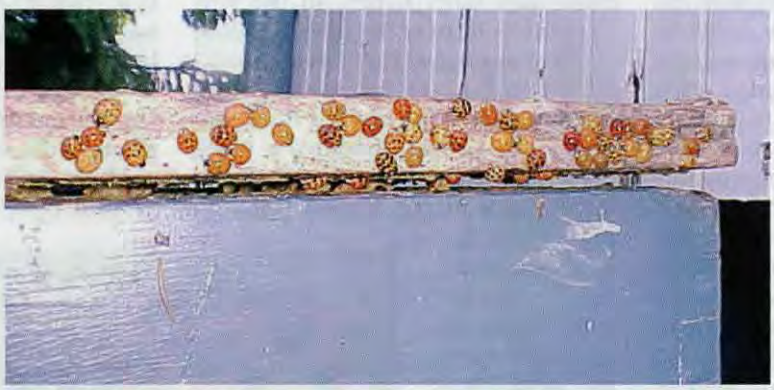
[3] Koover, Charles J. 1968. The Bovard Rack. Gleanings in Bee Culture. 96(6) 340-341.

BEEYARD ... Cont. From Pg. 17

U. S. Department of Agriculture's Agricultural Research Service (USDA-ARS) in an effort to control insect pests that injure trees. The multicolored Asian lady beetle is now well established in the United States, where it currently thrives in many parts of the Midwest, East, South, and Northwest. Having been so successful, this nonnative species appears to be displacing some of our native Lady Beetles in some areas.[4]

The beetle is not harmful to humans; in fact it is very beneficial during much of the year. It seeks a warm place to overwinter, which is why it ends up in our house and in our hives. Ironically, the low humidity in most homes will ultimately kill the beetles.

In Your Hive Though many of you may not believe it, not all Asian Lady Beetles end up in your home. A surprising number can choose your hives in which to pass the winter. These beetles have the capacity to produce a foul odor and their fecal spotting can be annoying, but I don't know of any specific accounts of these beetles negatively affecting beehives. Any comments or observations from you?



Asian Lady Beetles in and around the inner cover of a Bee Culture *hive.*

Normally, the lady beetles seem to prefer the safer areas of the hive. They cluster near the inner cover or beneath the outer cover. The seem to want to hang out together in clusters.

Even though they seem to clump together, individual beetles can be seen within the hive proper. Are they beneficial in any way? I don't know. Would they munch on the occasional dead or dying *Varroa* mite? I don't know. Is there a remote chance that they could carry bacteria or viruses that are harmful to bees? Again, I don't know. In the natural scheme of things, Lady Beetles eat other soft-bodied insects such as aphids. Again, keep in mind that these are beneficial insects.

However, I do have one observation that clearly showed that they are not overly welcome within the hive. Last week, I noted a guard bee really giving a Lady Beetle the "once over" at the hive entrance. I photographed the incident, but the single shot was all I could get and it was not great. The attacked beetle was in a tortoise-like submissive position with legs and body appendages held tightly against its body. I couldn't tell that the attacking bee was making much headway.

An annoyed honey bee attacking an Asian lady Beetle found within the hive.

For the present I don't know of any way to keep the Lady Beetles out of beehives. I'm not totally sure that I even want to keep them from the hive. Except for the one photo, I have no evidence they are harmful. But more on this subject as information is developed. For the present, we apparently have yet another beetle within our colonies.

From the South Dwight, my brother and southern counterpart, has removed all Apistan strips and feels that his colonies are ready for winter. But he has quite a bit of crystallized honey. Presently he is asking me questions about a hot air box that would re-liquefy honey in five-gallon cans that I cannot answer. I only use hot water baths. Any suggestions or plans from any of you? BC

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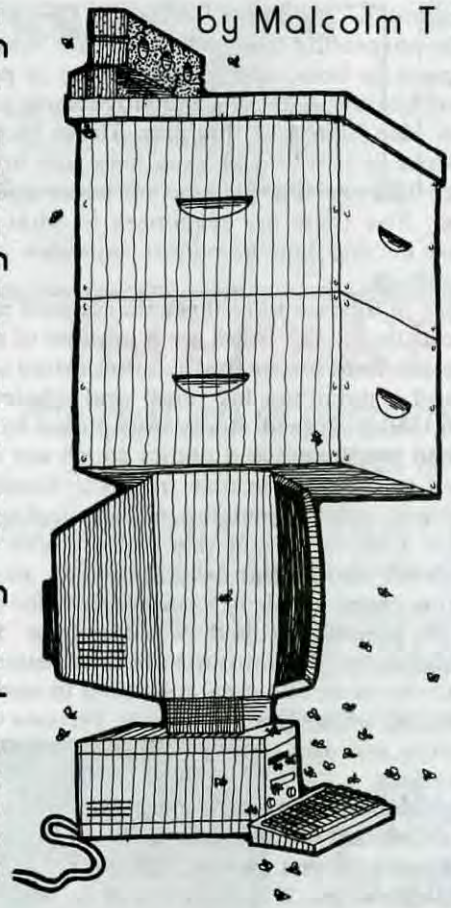
[4] Jones, Susan. Ohio State University Extension. http://ohioline.osu.edu/hse-fact/1030.html

Beekeeping In The Digital Age

by Malcolm T Sanford



Electronic State Beekeeping Resources – The Georgia Example

Since I discussed the situation with reference to beekeeping extension and research in Georgia elsewhere in this issue, it is germane to look at some of the many electronic resources available to beekeepers in that state, and by extension, therefore, elsewhere in the world. The first place is the state association itself. The **Georgia Beekeepers Association** was established in 1920 according to its web site at **http://www.gabeekeeping.com/** The home page sports a scrolling window with featured current events and a prominent link to **members** listed by county. The site has links to its **officers**, **newsletter**, **upcoming events**, and other **links**. The latter features the **Cherokee Beekeepers Club** and the **American Beekeeping Federation**.

The Cherokee page features an archive of **newsletters** published over the last five years as the *Beeline*. These are in Microsoft Word format and can be downloaded. Also there is a photo album commemorating events, including a picture of the club's own Jim Satterfield, who has become known for his top bar hive web site that I reviewed in **February, 2000**. A rather complete **list** of Georgia associations is also found at this site. Those having web sites are the **Tara Assocation**, **Forsyth Beekeepers Club**, and **Metro Atlanta Beekeepers**.

Coincidentally, Georgia has been selected to host the **2002 American Beekeeping Federation convention**, January 16-19. This is a repeat performance of the 1980 meeting in Savannah. Information about the meeting is available on the Federation's web site at **http://www.abfnet.org/** This meeting features the largest **trade show** in beekeeping. The web site also provides information on one of the Federation's most successful ongoing programs, the **4-H Essay** contest. Every year youngsters from 4-H organizations are given an opportunity to write an essay for which they can earn substantial prizes. This year's first three prizes are $250, $100 and $50 cash. In addition, the winner for each state gets a book about beekeeping. This year's topic is a "A Tasting Tour of U.S. Honey Varieties." Deadlines are set by each state, which have to get entries in by March first to the national office in Jesup, GA. Contact your Cooperative Extension Service for details; if they are not aware of how the contest works in their state, they can contact: 4-H Beekeeping Essay Contest, P.O. Box 1038, Jesup, GA 31598 (Street address: 115 Morning Glory Circle, Jesup, GA 31546.) 912 .427.4233, Fax 912. 427.8447 or E-mail **info@abfnet.org**.

Beyond associations, various other resources are available to beekeepers. No compilation would be complete without mentioning the University of Georgia site at **http://www.ent.uga.edu/bees/**. Reference to this resource is also found in the accompanying article in this issue. The site features lengthy sections on how to get **started** keeping bees, honey bee **disorders**, **pollination** and a **synopsis** of bee management in Georgia. The last is important because there are relatively few places where one can find information on southern beekeeping, quite different from that practiced further north, descriptions of which are usually found in basic books on the craft. Five seasons are presented: November January, February - March, April May, June - July, and August - October.

Although the bread and butter information on beekeeping is important, the site also documents research programs in some detail. This is split into two sections, the intended research program for the year 2001 (**papers in progress**) and archives (**papers already published**). The former includes the following: "Interactions of honey bees (*Apis mellifera* L.) and carpenter bees (*Xylocopa virginica* L.) in rabbiteye blueberry (*Vaccinium ashei* Reade)," "Does the presence of brood in colonies affect pollination efficacy of honey bees," "Efficacy of honey bees as vectors of *Bacillus subtilis*, a biocontrol agent for mummy-berry disease in blueberry," "Effects of comb age on egg-laying performance of queen honey bees." and "Delaying economic threshold of *Varroa* mites (*Varroa destructor*) in package colonies with published IPM methodologies." The results from some of these have already been described in the accompanying article on the Georgia research program. However, much more information is available in the **archive** of published papers.

The research leader is Dr. Keith Delaplane (Professor). He has a varied career in beekeeping, and has his own **personal** apiary. He has published some **twenty-eight papers** in both lay and academic journals. The research coordinator is **Jennifer Berry**. Her research is described in the accompanying article on the Geor-

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ELECTRONIC ... Cont. From Page 19

gia program. That article also describes the work of **Mr. Selim Dedej** currently a Ph.D. student in the program.

A research associate **Mr. James D. Ellis** is also listed on the web site. His research, not described in the accompanying article, "... compared the efficacy of the acaricides Apistan® and Apilife VAR® in controlling parasitic *Varroa* sp. mites in the presence or absence of a novel bottom screen device intended to impair the ability of fallen mites to re-mount host bees. Compared to non-treated controls, each acaricide reduced colony mite populations; however there were strong state differences and interactions in the percentage of the mite populations controlled. On average, Apistan® caused 100% mite mortality in South Carolina and 0-44.3% mortality in Georgia, while Apilife® caused 89.3-97.1% mortality in South Carolina and 65.2-90.8% mortality in Georgia. These data suggest the development of comparatively reduced efficacy of fluvalinate in Georgia. The **bottom screen** alone did not significantly reduce colony mite populations compared to non-treated controls, but it did significantly improve the performance of both acaricides in Georgia. Brood production was significantly lower in colonies treated with Apilife® compared to colonies with Apistan®, suggesting a possible negative effect on brood with Apilife®. The bottom screen increased brood production compared to non-treated colonies and also increased brood production in Apilife®-treated colonies, thus suggesting the utility of the device in mollifying negative effects of Apilife® on brood."

Dr. Delaplane has also developed a robust extension education program at the University of Georgia. Perhaps most significant is his Georgia Public Television Series, "**A Year in the Life of an Apiary**." According to the site describing this program, "With a bit of ingenuity and a little knowledge, anyone can successfully raise honey bees. Learn how to set up and maintain your own honey bee colony through this award-winning series seen nationally on Georgia Public Television. In the two-volume video set and accompanying book, Keith Delaplane, Ph.D., one of the nation's foremost entomologists, will guide you through each step, from buying tools and selecting healthy bees, to harvesting and selling honey." The program is available in three formats 1) book only, 138 pages costing $12.50, 2) Two videos only with eight 30-minute programs costing $59.95, and 3) both book and two videos costing $72.45. To order call 1-800-359-4040.

Those interested in finding information about beekeeping are not confined just to the University's academic arena. A **complete listing** of Cooperative Extension bulletins published in Georgia is available covering topics from A to Z. The state of Georgia also has resources published by the **State Department of Agriculture**. Beekeeping, sometimes called "apiary," is found in the **plant inspection** section. This seems to be the case in many states, which ally these social insects more with plants than animals. "The honey bee industry is very important to Georgia, which is among the leaders in the U. S. for commercial queen and package bee production. Honey bee pollination is vital to Georgia crops such as watermelon, cantaloupe, squash, and tree fruit production. The Plant Protection Division is responsible for inspecting beehives to ensure that all queen bees, package bees, and hives are free of pests and are in good health." A list of frequently-asked questions (**FAQ**) is also linked to this site. These include whether a license is required to keep bees (no) and if there is any fee ($25 one-time charge to produce queens and packages). Also there are responses to what bee inspectors look for and how to remove nuisance colonies from dwellings.

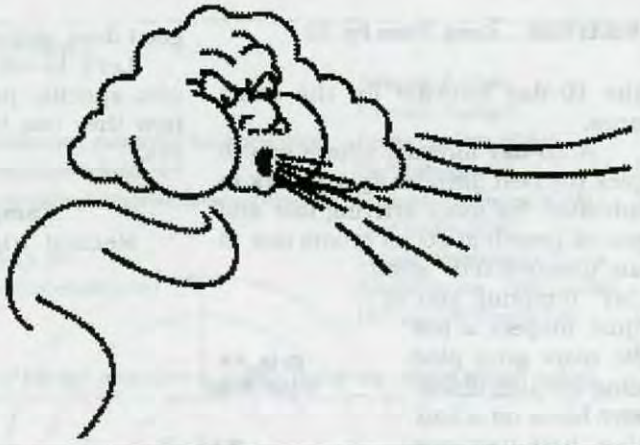
Other areas of interest to beekeepers concern measures to protect the public. There are a number of **consumer protection field forces** that "...administers state laws, rules and regulations for retail and wholesale grocery stores, retail seafood stores and places in the business of food processing and plants which are currently required to obtain a license from the Commissioner under any other provision of law: bakeries, confectionaries, fruit, nuts and vegetables stores and places of business, and similar establishments, mobile or permanent, engaged in sale of food primarily for consumption off the premises. This does not include ``food services establishment" (Restaurants and Institutions)." Those with questions in this area are asked to contact one of **five district offices** for assistance. Persons with labeling concerns can also consult a **fact sheet**_about this important area.

Finally, a number of private or commercial Internet sites can be consulted. Georgia has been a traditional source of **package bees and queens**, besides honey and increasingly **pollination**. It is impossible here to describe all these outfits. One with a unique product is **Rossman Apiaries**. This family has been in the bee business since 1936. Although traditionally a provider of package bees, Fred Rossman took over the business in the 1970s, when his brother Phillip had to retire due to health reasons. He has now developed it into a woodenware supply outlet based on that most traditional of Southeastern wood, **cypress**. According to the site, "Cypress grows mainly in the southern portion of the United States. It is usually found in an area extending from southern Delaware along the Atlantic coastline, through all of Florida, into the Gulf States and up the Mississippi Valley to Indiana. Cypress is contradictory in its growth habits in that handsome trees are often found growing in very dry situations in the parks of many cities. Cypress also is one of only two softwoods found in America that shed foliage in the fall like hardwoods. Larch, also known as tamarack, is the other deciduous softwood." Fred was present at the Georgia meeting described elsewhere in this issue and also the Florida meeting that took place a month later.

Those attending the American Beekeeping Federation convention in Savannah can expect to be exposed to a lot more about Georgia beekeeping. Several tours are planned as part of the event. I urge those attending to first take a crack at the electronic tour presented in this article. Georgia is only one of these great United States. All have a special history when it comes to beekeeping. BC

Dr. Sanford is former Extension Specialist is Apiculture, University of Florida. He published the APIS Newsletter: ***http://apis.ifas.ufl.edu***

Whither Weather



James Fischer

Weather underlies much of beekeeping. Like most agriculture, beekeeping can be viewed as an "engine" that is driven by the weather. And while you can't change the weather, you can use both historical data and forecasts to take advantage of, or at least plan your beekeeping work around the weather.

But are the forecasts in the newspapers any good? While they are more accurate than in the past, why depend upon something found next to the horoscopes? Many better sources of information exist:

The World Wide Web – Clearly, the easiest method if you have computer access. If not, check with the public library, local schools or a nearby college – most have "public access", for free. At the end of this article is a list of websites with official weather data. They are good places to start.

A 10-day forecast for Medina, Ohio.

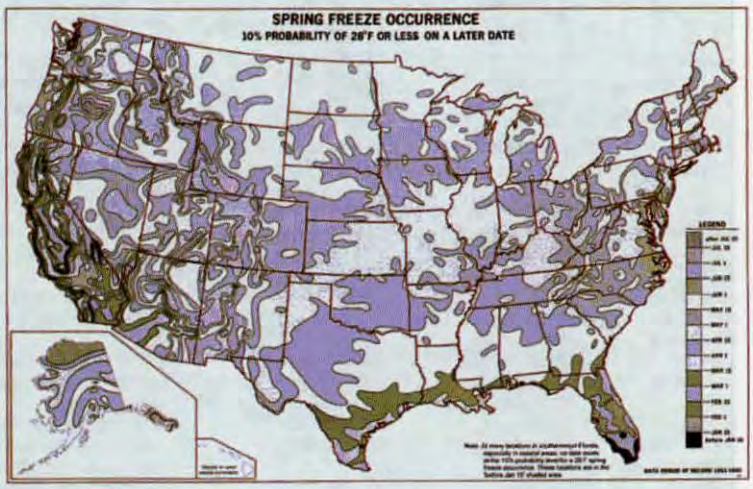
Medina, OH (44256)

Last Updated Monday, October 29, 2001, at 3:14 PM Eastern Standard Time

Printable forecast

		Hi (°F)	Lo (°F)
Tonight Oct 29	Partly Cloudy		43°F
Tue Oct 30	Partly Cloudy UV Index: 2 Minimal	56°F	45°F
Wed Oct 31	Scattered Showers UV Index: 3 Low	62°F	46°F
Thu Nov 1	Partly Cloudy UV Index: 3 Low	67°F	50°F
Fri Nov 2	Scattered Showers UV Index: 2 Minimal	67°F	46°F
Sat Nov 3	Partly Cloudy UV Index: 3 Low	62°F	40°F
Sun Nov 4	Showers UV Index: 2 Minimal	56°F	38°F
Mon Nov 5	Scattered Showers UV Index: 2 Minimal	51°F	37°F
Tue Nov 6	Partly Cloudy UV Index: 2 Minimal	53°F	40°F
Wed Nov 7	Mostly Cloudy UV Index: 2 Minimal	51°F	35°F

State Climatologists – Most states have a taxpayer-funded person or department that focuses on your state. Contact information is listed at the end of the article. The data may be for your whole state, or just a city or region. You may have to dig deeper.



Almanacs – While it takes some effort to understand the arcane notation used in its densely printed pages, "The Old Farmer's Almanac" has been the standard reference for over 200 years.

Local TV Meteorologists – TV meteorologists spend significant time doing things like school visits. Imagine how happy they would be to get some interest from an adult. These people can bury you in information, as TV stations pay big money for access to good data.

The Public Library and Reference Librarians – These people are amazing. If they do not have what you need, they will call other libraries and get it. They are also experts in the art of finding information in general, and know of information sources that you never dreamed of. Their services are free, and they are an under-utilized resource.

Ag Extension and Specialists – They support farmers, and know about weather data that is specific to local agriculture. It should be clear that the best data is the "most local" data available.

Better Forecasts

Is the 3-day or 5-day forecast the best you can get? Far from it. New computer models and better weather satellites now allow accurate prediction of "airmass" events (temperature, for example) as far into the future as 10 days. For example, go to www.weather.com, and type in your zip code or city name.

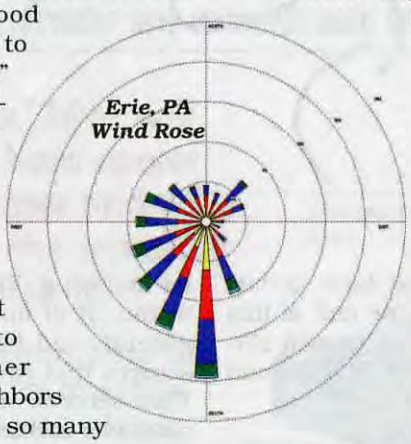
At the top left of the web page are the current conditions, for your 'local' area, and further down is the

Continued on Next Page

WEATHER ... Cont. From Pg. 23

the 10-day forecast for the same area.

A 10-day forecast allows you to pick the best days for apiary work in advance. No more arriving late and out-of-breath at social events due to an unexpected "good day" tempting you to "just inspect a few" No more grim plodding through defensive hives on a bad day, just because you missed out on prior good weather. And, the data supports your argument of not being able to attend the dinner party with your neighbors since there are only so many good days available.



Let's break down the weather into specific parameters, and see how they can be used by beekeepers.

Temperature

Record highs and lows are rarely set. This means that the high and low temperatures for any one day are fairly consistent from year to year. You can use these averages to plan early Spring inspections and reversals, Fall medications, and other seasonal events, that are temperature critical.

Daily Averages and Records

Medina, OH (44256)
October
Sunrise and Sunset Times are in local time for 2001

	28	29	30	31
Sunrise	6:54 AM	6:55 AM	6:56 AM	6:58 AM
Sunset	5:28 PM	5:27 PM	5:26 PM	5:24 PM
Avg. High	56°F	56°F	55°F	55°F
Avg. Low	35°F	35°F	34°F	34°F
Mean	46°F	46°F	45°F	45°F
Record High	80°F (1946)	80°F (1946)	79°F (1946)	81°F (1950)
Record Low	21°F (1936)	21°F (1965)	20°F (1980)	16°F (1988)

Highs and lows are available at www.weather.com. Type in your zip code or city name, and click on "Averages & Records" Click on a month to get the averages and records for each day of that month.

Climatologist Listing For the USA

State	City	Phone	E-Mail	Website
Alabama	Huntsville	256-961-7763	christy@atmos.uah.edu	www.atmos.uah.edu/aosc/
Alaska	Anchorage	907-257-2737	auclima@uaa.aaska.edu	www.uaa.alaska.edu/enri/ascc_web/ascc_home.html
Arizona	Tempe	480-965-6265	azclimate@geography.asu.edu	http://geography.asu.edu/azclimate/
Arkansas	Fayetteville	501-575-3159		
California	Sacramento	916-574-2614	morkb@water.ca.gov	
Colorado	Fort Collins	970-491-8545	pielke@atmos.colostate.edu	http://ccc.atmos.colostate.edu
Connecticut	Storrs	860-486-0135	xiusheng.yang@uconn.edu	
Delaware	Newark	302-831-2294	leathers@udel.edu	www.udel.edu/leathers/stclim.html
Florida	Tallahassee	850-644-6951	obrien@coaps.fsu.edu	www.coaps.fsu.edu/climate_center
Georgia	Athens	706-583-0156	climate@bae.uga.edu	http://climate.engr.uga.edu/
Hawaii	Honolulu	808-956-2324	chu@soest.hawaii.edu	
Idaho	Moscow	208-885-6184	climate@uidahc.edu	www.uidaho.edu/~climate
Illinois	Champaign	217-333-0729	j-angel@uiuc.edu	www.sws.uiuc.edu/atmos/statecli/index.htm
Indiana	West Lafayette	765-494-8105	kens@purdue.edu	http://shadow.agry.purdue.edu
Iowa	Johnston	515-270-6907	iastatec@netins.net	
Kansas	Manhattan	785-532-7019	mknapp@oz.oznet.ksu.edu	www.oznet.ksu.edu/wdl/
Kentucky	Bowling Green	270-745-5983	KYClim@wku.edu	http://kyclim.wku.edu/kcc/
Louisiana	Baton Rouge	225-388-6870	jgrymes@lsu.edu	www.srcc.lsu.edu/LOSC/index.html
Maine	Orono	207-581-3441	gzielinski@maine.edu	www.umaine.edu/maineclimate/
Maryland	College Park	301-405-7223	climate@atmos.umd.edu	http://meto.umd.edu/SC/sc.html
Mass	North Reading	617-275-8860	climat@wx.com	
Michigan	East Lansing	517-355-0231	scmifred@pilot.msu.edu	http://climate.geo.msu.edu
Minnesota	St. Paul	651-296-4214	mcwg@soils.umn.edu	www.soils.agri.umn.edu/research/climatology/
Mississippi	Mississippi St	601-325-3915	wax@geosci.msstate.edu	www.msstate.edu/Dept/GeoSciences/climate/
Missouri	Columbia	573-882-8599	AkyuzF@misscuri.edu	www.missouri.edu/~moclimat
Montana	None			
Nebraska	Lincoln	402-472-5206	adutcher1@unl.edu	www.nebraskaclimateoffice.unl.edu
Nevada	Reno	755-784-1723		
NH	Durham	603-862-3136	bdk@hopper.unh.edu	www.unh.edu/geography/climate.html
New Jersey	Piscataway	732-445-4741	drobins@rci.rutgers.edu	http://climate.rutgers.edu/stateclim/
New Mexico	Las Cruces	505-646-2104	tsammis@nmsu.edu	http://weather.nmsu.edu/
New York	Ithaca	607-255-1749	KLE1@cornell.edu	
NC	Raleigh	919-515-1440	sethu_raman@ncsu.edu	www.nc-climate.ncsu.edu
North Dakota	Fargo	701-231-8576	john.enz@ndsu.nodak.edu	http://ndawn.ndsu.nodak.edu
Ohio	Columbus	614-422-2514	jcrogers@ magnus.acs.ohio-state.edu	www.geography.ohio-state.edu/faculty/rogers/statclim.html
Oklahoma	Norman	405-325-2541	ocs@ou.edu	www.ocs.ou.edu
Oregon	Corvallis	541-737-5705	oregon@oce.orst.edu	www.ocs.orst.edu/
Pennsylvania	University Park	814-865-3197	knight@mail.meteo.psu.edu	www.ems.psu.edu/PA_Climatologist/
Puerto Rico	Mayaguez	787-265-5416	a_winter@rumac.uprm.edu	http://atmos.uprm.edu
Rhode Island	Kingston	401-792-2937	ltn101@uriacc.uri.edu	
SC	Columbia	803-737-0800	brown@dnr.state.sc.us	http://water.dnr.state.sc.us/climate/sco
South Dakota	Brookings	605-688-5678	bender.al@ces.sdstate.edu	www.abs.sdstate.edu/ae/weather/weather.htm
Tennessee	Knoxville	865-632-4222	lwhamber@tva.gov	
Texas	College Station	979-845-5044	n-g@tamu.edu	www.met.tamu.edu/met/osc/osc.html
Utah	Logan	435-797-2190	djensen@cc.usu.edu	http://climate.usu.edu/
Vermont	Burlington	802-656-3060	State.Climatologist@uvm.edu	www.uvm.edu/~ldupigny/sc
Virginia	Charlottesville	804-924-0549		http://wsrv.clas.virginia.edu/~climate/
Washington	None			
WV	None			
Wisconsin	Madison	608-263-2374	stclim@macc.wisc.edu	www.aos.wisc.edu/~sco
Wyoming	Laramie	307-766-6659	stateclim@wrds.uwyo.edu	www.wrds.uwyo.edu/wrds/wsc/wsc.html

When using this data, keep in mind that the "record" is the worst-case extreme of temperature, and "averages" are much more likely.

Degree Days

Degree Days track the cumulative effect of a Winter or Summer in terms of how cold or warm it has been for how long. They come in three flavors; heating, cooling, and growing, but they all work the same.

Beekeepers will be interested in the Heating Degree Days, as they compare one Winter to another, and give early warning of abnormal winters. The data is updated weekly in most cases, so you can use the "cumulative deviation from norm" to see how Winter is shaping up.

Degree Day reports for cities that have official weather stations can be found at NOAA's website but your State Climatologists or a local oil, gas, or electric company will likely have data that is "more local"

First & Last Freezes & Frosts

The last freeze and frost dates allow you to better estimate blooming dates for important nectar sources, and better plan your supering for producing varietal honey. (A more accurate approach would be to start counting Growing Degree-Days rather than calendar days to predict blooming dates.)

A typical Spring freeze map is shown. The first freeze and first frost dates can be useful in planning your winter prep work.

State Climatologists may have even more detailed maps, but all are presented in terms of a 90% probability.

Winds

While local terrain is key to shielding hives from the wind, you need to know what the average winds are at a prospective or existing apiary site. These averages are at NOAA's website.

The prevailing direction of the wind is also of interest when scouting new apiary locations. Since wind directions change over time, a chart called a "wind rose" is used to plot both speed and direction. Good examples can be found at the excellent PA Climatologist web site. A wind rose for Erie PA is shown on the opposite page.

The longer "petals" mean that the wind blew more often from the indicated compass direction. The colors indicate the wind speed, with the long red sections meaning that the wind blew often at 7-10 mph. Clearly, the wind in Erie comes mainly from the South and Southwest, so you want to orient hive entrances to the Southeast to avoid Erie's prevailing winds.

Since wind roses are most often plotted from more than a decade of data, they are much more useful than one's own observations during a limited time period.

Precipitation

The amount of rain affects blooming. You can track precipitation on both a year-to-date and a month-to-date basis. This data is often listed with the average temperature data. A severe "drought" period would indicate the need to consider providing apiary water for one's bees. Monthly precipitation totals for US cities can be found on the NOAA website.

The Sun

Over the course of the year the apparent position of sunrise and sunset move around the horizon as the Earth tilts on its axis.

When placing hives, one may want to verify that terrain will not shade the hives during early spring. This is easy to do with nothing more than a sun azimuth chart and a compass.

An "azimuth" is a compass sighting of the sun at a particular time. It is given in terms like "degrees East of North", a complicated way of saying "degrees as shown on a compass aligned with true north". This data is available at the US Naval Observatory website and in almanacs.

Sunrise/sunset times for any day of the year at any location are also at the USNO website and at weather.com on the same page with the temperature data mentioned before. Clearly, sunrise time can be crucial when moving hives.

Complain about the weather all you'd like, but ignore it at your own peril! BC

James Fischer is nobody important, and likes it that way. He keeps bees and watches clouds in the Blue Ridge Mountains of VA.

Websites of Interest

www.weather.com	Forecasts, Averages
www.weather.unisys.com	Forecasts, Averages
www.cpc.ncep.noaa.gov/products/analysis_monitoring/edus/degree_days/	Degree Day Data (NOAA)
http://lwf.ncdc.noaa.gov/oa/climate/stateclimatologists.html	US Climatologists List
http://lwf.ncdc.noaa.gov/oa/documentlibrary/freezefrost/frostfreemaps.html	First/Last Frost/Freeze (NOAA)
http://aa.usno.navy.mil/data/	Sun Azimuths (USNO)
http://www.msc-smc.ec.gc.ca/index_e.cfm	Canadian Meteorological Service
http://www.meds-sdmm.dfo-mpo.gc.ca/cmos/links.html	Weather Servers – Other Countries
http://www.ucar.edu/ucar/	UCAR & NCAT Weather Data

(Editor NOTE: Contents of this box are subject to massive update and revision without notice!)

THE BEARS & THE BEES

Ursus Interuptus

Patricia Sargent

Weather and hunger forced bear from the high places in Colorado last Summer.

Mid summer of 2001 will be remembered as the year the Sargent Wild Life Bistro opened its doors to bears, elk, deer, and other wild life. It was then – in the dog days of August – we went into the Restaurant for Wild Life business. At our home at the foot of Lookout Mountain, my husband and I experienced the excitement of living in two worlds for several weeks. Even Disney could not have illustrated a greater variety of beautiful beasts wandering through the evening mists in our little corner of the Rocky Mountains. The weather had been beastly hot and dry. Food high on the mountain was scarce, and for that reason wild life came down the hill to have a look around.

In place of the usual bear fare of chokecherries, service berries, and acorns, our Bistro served a menu of succulent young cherry tree leaves and tender branches – from trees newly planted – to hungry deer. Later, we had the good fortune to have served the best rose petals – in an explosion of color – from twenty-seven rose bushes to a magnificent, hungry bull elk. All that will grow back one day, but we were sad to see the skeletal remains of two young trees in the front yard.

After the visits of the deer family and the elk leadership team, more excitement came that first night around midnight when a hungry bear – just passing through the yard – discovered our hives. Like Pooh Bear, he gave the hive a swat, knocked it over, and helped himself to several frames of thick, rich honey. The disarray caused quite a bit of excitement, you might say quite a buzz, both for our neighbor to the north, on whose yard it all spilled, and to us. Dick, my husband, has been a hobby beekeeper for more than two decades. Not once in that time had he seen a bear in the yard. Bears belong to a more primal time.

Early peoples saw the bear as a sign to awaken the power within. Everyone knows that bears have a great fondness for honey, the natural sweetness of life. Honey can be found in colonies, some kept by humans. Colonies can also be found in trees where bees have swarmed away from their original home when the hive gets crowded and the Queen demands a new condominium.

We called "our" bear Theodore rather than Teddy, because Dick had commented as it came over our low, stone wall, "That is one serious bear." It was obvious that Theodore had tasted the honey of life the night before and was not to be deterred from enjoying life even more.

We knew that the bear must be very hungry to have traveled so near to the human village. We called for help. The next morning, Animal Control from the city of Golden advised Dick, a diligent and protective beekeeper, to dip rags in ammonia and hang them on the trees surrounding the hives. Dick dashed down to the automotive store to buy rags because I refused to relinquish my dishtowels, pillowcases, or petticoats to be hung out for all the neighbors to see. He looked cute hanging pungent red automotive rags in the branches of the aspens around the hives. Our aspen groves looked like a rag picker's Christmas decorations with all the dripping red cloths hanging from limbs of trees around the hives. That was okay with me, however, since the Animal Control officer assured us that bears do not like ammonia, and we wanted the bear to go away.

"That ought to fix him," one of the officers said. On the contrary, the ammonia seemed to attract the bears. It was almost like ringing the dinner bell in the aspen groves. As we finished a candlelight dinner on the porch the second night about 8:20, we were discussing the bear. I happened to look up at the south edge of the yard and saw a large black and furry head emerge from

over the wall. "There's the bear! He's back!" I stood up raised both hands over my head to appear as large as possible; I headed post haste for the house. Alarmed at my size or maybe my wrought iron chair scraping loudly on the floor of the deck, the bear stepped back just momentarily.

Remembering the honey from the night before, however, Theodore ignored the stench of ammonia, and our odious presence, and made a beeline to the same hive that he had already savaged. Dick had collected the broken parts and put the hive back in place thinking that if he came back, the bear would choose that same hive rather than the ultra-full one next to it.

An experienced beekeeper, Dick was right. Before our eyes, the bear whacked the hive, knocked it over and repeated his feast. Through the window, we saw that one by one, he had pulled the frames out and with his great rough tongue, licked them clean. Watching all this, we had called Animal Control who sent an officer out to shoo Theodore Bear away. The officer wore no armor, had no whips, and bore no bazooka. Nor did he bring a team of experts with tranquilizer guns and helicopter to anesthetize and remove the bear to higher ground. Having watched many a movie on television, we had expected something a little more dramatic than what we got. Actually, what happened piqued our interest.

The officer, a softhearted animal lover, leveled his shotgun. "Okay, little bear," he said, "I don't want to do this, so I'm going to give you to the count of three to head on out of here." He actually counted, "One, two, three," and reluctantly shot poor Theodore in the hind haunch with a rubber bullet. "Ouch! That stung," I imagined the bear to cry out. Theodore ran off supposedly with the concept firmly entrenched in his bear brain—although that was not where the bullet hit—that ours was not a pleasant place to be. However, we are advised that this is his territory and he most surely would return.

The entire next morning was filled with conversations with three young lovelies from the Golden Police Department and the State Department of Wildlife chit-chatting with Dick and advising him what to do next time the bear came around. They told Dick that he could shoot the bear with rubber bullets, shoot the bear dead because it is destroying our bees, which are considered "livestock," and/or put up an electric fence to discourage Theodore from making our Bistro a gourmet dessert stop on his way home from the Lakewood trash barrels. We chose the electric fence as we imagined the bear would be back.

I told Dick, "Maybe we should call him "Arnold, *I'll be back*, Schwartznegger." I decided then and there that Dick could do whatever he liked, but as for me, I would serve no more late evening candlelight suppers out of doors. Until hibernation calls in October, we will eat by the light of day. Certainly in October we will eat indoors because of the weather. Theodore had disrupted our casual, romantic lifestyle.

Mr. Bear had visited us six nights out of ten in a two-week period. He was shot twice by a rubber bullet in the haunch. However, since we erected the electric fence, which coincided with a cool snap in the weather, he has not yet returned. Jefferson County has had many

When beekeeping within the city limits became an issue in his hometown, Golden, Colarado, Dick Sargent convinced the City Council to rescind an old law and encourae citizens to help with pollination of fruit trees, flowers, and flowering shrubs. The issue was so notable, that the Rocky Mountain News *published a human-interest story in their Sunday edition.*

bear visits recently. I read that one was "arrested" in Lakewood. He was a little guy, only 125 pounds.

"Our" bear weighs more like 350! I saw him twice. The first was the face-to-face eye contact as he came over the wall and into our yard. That was about dusk. I saw him later in the week when I got up in the middle of the night and, peering out the window, I saw him race from one set of hives to the other. I was impressed at how huge he was. Our back exterior lights shone brightly on his shiny black fur and brown mask about his muzzle. "That mask is appropriate," I thought, "because he is stealing our honey."

In the middle of the yard, he stopped short as if to remember the last time he attacked the north hives, and received a rubber bullet in the haunch. He must have had a couple of healthy bruises that spiked his memory. In mid-stride, he swatted our young maple tree with his paw, and changed directions, turned ninety degrees, and bounded up the hill into our neighbor's yard.

Twice I saw the bear, just yards away from where I was standing. I had made eye contact on one occasion and I saw him through the window, in full profile, racing across our yard. Both experiences were like dreams, probably because I never expected to see a magnificent wild creature "up close and personal." Until I married Dick and moved to the mountain's edge just three years ago, I had seen no creatures other than squirrels, birds an occasional rabbit, and domesticated creatures. In the past three years, however, I have seen—beside the bears—a herd of 33 elk, clusters of deer, raccoon, fox, rabbits, and a six-foot long tan snake – in our yard and gardens. Living at the mountain's edge, we sometimes see through our windows a family of deer, perhaps five or six, a herd of elk, a lone raccoon, or a wily red fox cross the yard at night. Life on the mountain has been interesting but a bit unsettling for a city woman.

The bear brings to mind power, unchallenged, and unbridled power. Secure in himself, he has few en-

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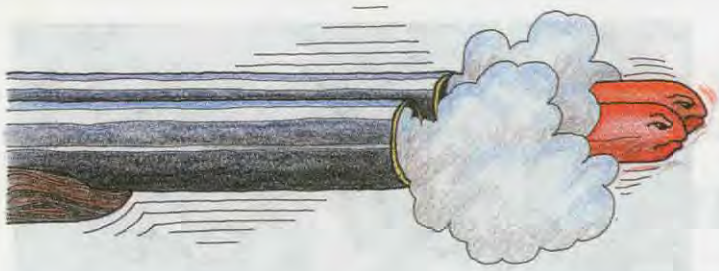


emies—except famine and humans and perhaps a testy mountain lion. The DOW has warned that if Theodore and his friends don't fatten up appropriately by the end of September, they will not last through their hibernation this winter. When your bees are being attacked, you don't think of the bear as one of your own. However, the eco-system is an inter-locked system of mutually dependent and connected coexistence.

In Shamanic Symbology the Bear has to do with "awakening the power of the unconscious." Believe me, my unconscious awakened abruptly when I saw the majestic beast standing before me. My most primal instincts were aroused. My Native American friends think the bear is related to humans because they can stand on two feet and walk. More accurately, bears are actually distant relatives of dogs and are even closer relatives to raccoons.

Tribes like the hairy Ainu, indigenous peoples of Japan, displayed the bear's skull, along with his hide in the tribal circle. In a ritual ceremony the people honored the bear and prayed to its spirit thanking it for allowing them to kill him and eat his meat so the tribe could live. When I saw the bear coming over the wall into our yard, his eyes met mine. I was not terrified – as I was when I ran across a dying mouse in my office – but I was well aware of immediate danger from the bear and quickly moved out of harm's way. By the same token, I am sure that our dinner party startled Theodore. When I quickly stepped into the house, he paused and looked at Dick as if to say, "Well, you're not standing between me and the honey, so just move along v-e-r-y slowly, Buddy, and nobody'll get hurt."

Working with the City Council, Sargent offered to teach adult education classes and mentor interested citizens in the art of beekeeping.

The symbol of strength, the bear also has lunar symbolism. In Greek mythology, the bear was associated with Diana, goddess of the moon. The moon ties to the subconscious and even the unconscious mind. The bear is also a symbol for alchemy, the blackness of primal matter. It relates to all beginnings and primal instincts. Meeting the bear's eyes, my primal instinct was to get out of his way. I had never seen bears up that close even in the zoo.

The bear is also related to the functioning of the kidneys because of the role that they play in hibernation. I was amazed to learn that in hibernation, bears' heartbeat slows, their digestion and excretory systems go into neutral, and they sleep through the wintery period when food supply is inadequate. Mother bears even give birth to cubs in their sleep and expect the wee ones, nuzzled close to their warm fur, to learn where to find dinner on their own and play contentedly with the siblings while she rests. I marveled at that ability and wondered why the entire world does not rest during the winter and why all animals do not have the advantage of hibernation when survival is so hard.

Bears are omnivorous. Usually they will be satisfied eating moths, grubs, fish, and wild nuts. However, when the opportunity arises, they will eat carrion. They thrive on vegetation such as berries – and a little honey for dessert. They do not seek out humans to devour. However, like the bees, bears will strike out when something gets in their way. When met with any kind of interference, bears will attack and maul their opponent.

Naturalists worry about the bears when they are forced into the world of humans. Friends have said that they are glad that Theodore hasn't made his way back to our bees and gotten himself into any more trouble. They fear for the bear because they believe that Animal Control officers are prone to kill them. They are convinced that bears tend to get two chances – and on the third "strike" in human habitat, they are killed in Colorado. Here is a misconception. They hadn't met our friendly local officer.

On the other hand some of our neighbors grew weary that the bear had caused so much inconvenience to them. They had no bees; their garbage was carefully stowed. They fed their dogs and cats inside so that their food would not attract the bears. Their habits and neighborhood hygiene posed no attraction to bears. They told us that they were weary of being wary of coming home late at night. One said she wished the Animal Control people would *do* something, and quickly.

"That bear is going to come back," my Shamanic friend told me. She said it would be important to meditate on the spirit of bear, send it good wishes, surren-

der to his/her teachings, and promise to keep bear medicine within regardless of what happens next. I didn't want to think of the regardless part.

By the same token, people who see the bear as the enemy to livestock, crops, bees, and their personal garbage, disagree. Bears destroy their hives. For example, a major beekeeper in Jefferson County lost seven of his 65 hives. Hundreds of pounds of honey fed a hungry bear as he barreled through an electric fence and flung supers and frames far and wide. The man lost a tenth of his year's income. In addition to the monetary loss, he had the annoyance of the loss of countless hours it took to repair and reconstruct the hives and redouble the protection of the bees' compound.

Last year, my husband convinced the city of Golden to strike the hard-working honey bee from the "Undesirable List" within the city limits. Dick was able to show the city that honey bees are necessary to pollinate flowers, fruits, trees, and shrubs. A city without bees would soon be in trouble he argued. To its credit, the city not only reversed the condemnation of the helpful bee but also went on record as *encouraging* beekeepers to tend bees within the city limits. As a special gesture, Dick offered to teach citizens how to start their own hives in different parts of the city. One couple apprenticed themselves to Dick to learn the art of keeping bees. In addition, one of our neighbors' children, a boy of ten, works with Dick whenever there is a need to tend to the bees. He is learning to respect nature and value the bees' virtue of hard work.

On the strength of Dick's success with the city of Golden, the man who lost so many of his hives had later convinced the city of Castle Rock, Colorado, to encourage beekeeping as well. It was a great coup for the two small cities that have large areas of open space and a crucial need for pollination of their gardens.

Although our bees are in danger, our bear is safe, so far. He's a big boy and this was his ancestral territory long before humans came. Many of his cousins were visiting the lowlands of Lakewood and Littleton in Jefferson County, and all over Southern Colorado because of the dryness and dearth of food in the mountainous regions. Serviceberries, acorns, chokecherries, and other delicacies on his diet were affected first by spring frosts and then by the summer drought. When the rains finally came in mid-August, and the cool weather blanketed the region, Theodore Bear was happy to stay home. Well, maybe.

In late August, Dick had gone out to check the electric fence for the night. We had turned the fence off because our grandchild had come to visit at dinnertime and we didn't want her to get hurt. Although we had not seen Theodore for several nights, I was not excited about Dick moving about in the dark with all our local visitors. I cautioned him to take a flashlight and maybe the shotgun with the rubber bullets as well. Dick ignored my extra caution.

In the midnight moments of darkness, Dick bent over the switchbox, moved the flashlight about to be sure he had read the dial correctly. Slowly, he adjusted his glasses, let his eyes get accustomed to the light contrast, and examined it carefully. Dick, is not one to hurry through a task.

Suddenly, Dick heard a rustling in the bushes behind him. The leaves responded to the disturbance and warned him of possible danger. Dick's heart beat faster. He did not shine his flashlight into the dark, nor did he turn around to face whatever was disturbing the bushes. He did not stand tall and make himself big, nor did he back away carefully. He ran holding tightly to his glasses.

"I ran for the house." He confessed when he came into my office, his heart still pounding wildly. I didn't do any of the things I know I am supposed to do. I just ran with all my might."

I looked into the face of this gentle sixty-plus man and noted a lot of anxiety, a little embarrassment, and a smidgen of mischief.

"When I reached the safety of the door," he said, "I realized that the noise was not the bear. Oh, God," he said, "Thanks." He shifted on the office stool and smiled like a leprechaun.

"It finally dawned on me, when I was safe and sound, that the rustling noise in the bushes was the watering system gurgling and spurting as it began to water the section of the aspen grove where the hives stand." He giggled a bit as he told the story on himself.

"I guess I ran so fast that I didn't get wet." We both laughed.

We have not put the issue of safety behind us. Unfortunately, when Dick had to move half his hives to the other side of the yard to form a protective compound, some of the bees were displaced. They came home from their day's pollen responsibilities to find no home. Like victims of a war returning to their villages to find only rubble and ash, they clustered around tree trunks and clung to rocks in an effort to relocate near the old homestead.

Our bears and our bees, and all other creatures under the sun are in a battle for their lives. Unfortunately, within their bare lifespan of six weeks – only two outside the hives – those displaced bees would soon be dead, but watching them search for their home was sad indeed. It was as if some holocaust had wiped out their familiar surroundings. In a way, it was a holocaust. It was a hungry 350-pound bear hell-bent on survival. BC

Dr. Patricia Sargent is an author, public speaker and busy wife of a hobby beekeeper.

Georgia's 3 Decades of Bee Research

Malcom T Sanford

In an era where reports of funding reductions and shrinking programs related to honey bees are common, it's nice to see an exception. This is true in Georgia, where what some have described as a "miracle" has occurred. Under the guidance of Dr. Keith Delaplane, the University has just completed a brand new facility for beekeeping research and extension. Several things had to happen to make this a reality. First, the program was awarded a full-time technician. At the same time, funding became available from several sources, including the legislature, the Department of Entomology and the University's physical plant services. In addition, an existing honey bee facility was being used to capacity at the University's Horticultural Unit and there was more room on the site for expansion. So much was provided serendipitously as needed, Dr. Delaplane said, that it is impossible to arrive at a cost for the facility ($150,000 is a low estimate).

The principals of the Georgia program left to right – Selim Dedej, Dr. Keith Delaplane and Jennifer Berry.

The new building was informally "blessed" as part of the annual meeting of the Georgia Beekeepers Association, October 12 and 13, in Athens, GA. Mr. Carl Webb, President of the Georgia Beekeepers Association opened the meeting with a welcome to the participants. Dr. Keith Delaplane followed with a description of the things that had to fall into place ("miracles") in order for the building to be constructed. He gave credit to Dr. Alfred Dietz, also on the program, who provided a great basis for a continuing beekeeping program before his retirement in 1995. Without such continuity, Dr. Delaplane, concluded it would not have been possible to sell an idea for a new facility to the powers that be. The building has two large offices, a conference room, and a meeting room (laboratory).

On hand was the venerated Commissioner of Agriculture himself, Mr. Tommy Irvin. Mr Irvin is the certified "dean" of Georgia constitutional offices, having been elected to his office continuously since 1969. He told the audience that he was excited to be a part of the ceremony in the new honey bee facility. He said he has always been involved with beekeepers during his tenure attending bee meetings around the state and advocating for the industry in a number of ways. He said that honey bees are becoming a greater part of the agricultural mix because their pollination services are more and more in demand. This is because the traditional agronomic crops of rural Georgia like cotton, peanuts and tobacco are being replaced by fruits, vegetables and ornamentals as the state becomes more urbanized. Fewer pesticides are also being applied, Commissioner Irvin said, especially on cotton, which is also helping the beekeeping industry. He is proud to be a part of the boll weevil eradication program that not only means less chemical control, but also provides beekeepers, something that could not have been imagined just a few years ago, a cotton honey crop.

Mr. Irvin's vision of Georgia's agricultural future also involves more foreign trade. He said he's always been in favor of this side of the agricultural coin, even advocating exchanges with the Soviet Union before the fall of the Iron Curtain. Currently, he is championing trade with Cuba by attending a meeting early next year in Cancun, Mexico. As part of this continuing effort, the Georgia Department of Agriculture is instituting a $3.2 million dollar specialty crop promotional effort that he said would include an effort to promote Georgia honey in the global marketplace. Finally, Georgia is a leader in publishing important agricultural information; the crown jewel of this, according to Commissioner Ivin is the *Georgia Market Bulletin* <http://www.agr.state.ga.us/mbsite/index.html>

History of Beekeeping Extension and Research in Georgia

It was in 1969 that the modern era of beekeeping extension and research began in Georgia. In that year, a young professor from the University of Maryland took up residence at the University of Georgia <http://

www.uga.edu/>. Dr. Alfred Dietz, coming off a successful stint as coordinator of the 1967 Apimondia meeting, the last time it met in the United States, was hired to lead the fledgling beekeeping program. Dr. Dietz, now an emeritus professor, was present at this year's meeting. Dressed in full Bavarian lederhosen www germanclothes com/Onlineshop/KTOnlinebundhose6.htm, he provided a history of his efforts, beginning with being hired as a 9-month professor, academe's "only bee man in Georgia" at the time. His research budget was $250 per year and he shared a half-time technician with a colleague in the Department of Entomology.

Dr. Dietz said funding comes only from what you have done in academia and this takes time and commitment. With little support at the beginning, he was forced to search for a way to become noticed. He was successful by exploiting a relatively new field at the time, scanning electron microscopy. Of special significance were the first pictures taken of honey bee sensory organs (antennae) and a little-known critter he was familiar with in Maryland, the bee louse (*Braula coeca*). With this modest start, Dr. Dietz expanded into other areas, including his interest in honey bee nutrition. He was a student of the influential honey bee nutritionist, Dr. M. Haydak, at the University of Minnesota. Dr. Dietz's studies on storing pollen led to others concerning queen storage; one of his projects was to promote queen production through the use of emerged queens in mating nuclei, rather than queen cells. He also was able to show that purple brood in south Georgia was caused by pollen of the summer titi (Cyrilla racemiflora). This he says is caused by an "accidental transfer" of pollen, which contains an amine that appears to cause the disease. Generally summer titi nectar has little pollen in it. During his early years at Georgia, Dr. Dietz also began a beekeeping course; the first class had only a few students. He was able to lure them in by posing as the Nobel prize-winning bee scientist of the time, Dr. Karl VonFrisch <http://www.nobel.se/medicine/laureates/1973/>, and presenting a series of lectures in traditional German academic garb about bees around the campus.

Dr. Alfred Dietz and poster of University of Georgia research program.

As he became noticed, Dr. Dietz took advantage of several invitations during his career including exchange professor (Erlangen, 1977) and guest professor (U. of Tubingen, 1995). He was also staff apiculturist for the Animal and Plant Health Inspection Service (APHIS) < http://www.aphis.usda.gov/> in 1990. This was an outgrowth of his numerous experiences in Latin America working with Africanized honey bees in the 1980s. All of these activities provided more visibility for the Georgia program.

Along the way he collected a swarm of students, a group that he called at the meeting "Dietz's drones." These included Steve Jenkins, who pioneered work on the pollination of sea oats, a plant that stabilizes Georgia's beach dunes, and Dr. Rainer Krell, who worked on nectar secretion in Gallberry on the coastal plain. Dr. Krell is now at the Food and Agricultural Organization of the UN (FAO) <http://www.fao.org/> in Rome. Manuel Mejia, a student from Colombia, helped design and participated in Dr. Dietz's studies on the impact of Africanized honey bees in Argentina. They documented that gentleness could be selected for but this also correlated with a reduction of up to twenty percent in honey production. Vivian Maria Butz (not a drone?) looked at interactions among queen honey bees. She was able to find out that the queens eliminated each other, and that this was not due to worker intervention as previously thought. Another Dietz drone, Carlos Vergara, now one of Mexico's top thirty young scientists, was able to show in Mexico that there was significant invasion of Africanized honey bee queens into European honey bee colonies and that this was most often the case in queenless colonies. Dr. Adalberto A. Perez de Leon found that color was relatively unimportant in selection of bait hives by Africanized honey bees. He also showed that larger bait hives provided more attractive nesting sites. Finally, Dr. Jeff Pettis, currently at the Beltsville Bee Laboratory, and this author, now retired from The University of Florida among are products of Dr. Dietz's academic program.

Dr. Dietz's tenure also profited from other exchanges. Among others, Dr. Karl Weiss, now retired director of the Bavarian Honey Bee Research Institute, was a visiting scholar. Dr. Dietz also hosted now retired Dr. Yaacov Lensky, head of Israel's Triwaks Bee Institute <http://www.beekeeping.com/tbrc/> at the University of Georgia and worked with several post doctoral students, including Dr. Frank Eischen, known for his experiments with different kinds of smoke in Varroa control, now at the Weslaco Honey Bee Research facility <http://weslaco.ars.usda.gov/bios/EischenF.html>.

All this effort indeed provided visibility and funding. The Georgia bee program was able to hire a stu-

Continued on Next Page

Group picture in front of new research facility at the University of Georgia.

dent technician early on. This author filled that spot for several years. In 1983, Dr. Dietz's program was the largest recipient of grant money in the College of Agriculture. During his tenure, he obtained a total of over $2 million in grant money. In addition, a successful short course was instituted and a small building constructed at the horticultural farm, which became the basis for the exapanded facility now at that site. A turning point was the 1980 American Beekeeping Federation convention that took place in Savannah, GA. A chunk of money made by the Georgia Beekeepers Association was awarded to Dr. Dietz's program. This was used to construct the first permanent honey bee research facility at the University.

Dr. Delaplane came on the scene in 1990 < http://www.ent.uga.edu/personnel/faculty/delaplane.htm>. He is a graduate of Louisiana State University, and although trained in beekeeping and mentored by Dr. John Harbo, was coming off a four-year sabbatical in termite study. He started out as one-hundred percent extension, but later was integrated into the entomology department as an academic faculty member after Dr. Dietz's retirement in 1995. Since coming to Georgia, Dr. Delaplane has been remarkably productive. Of special significance for his extension program is his Georgia Public Television series "A Year in the Life of an Apiary." <http://www.gactr.uga.edu/tv/videocatalog/bees.html> He also implemented the Young Harris College Beekeeping Institute, which how has a ten-year history of service to beekeepers in the state.

Dr. Delaplane's research has been outstanding and varied <http://www.ent.uga.edu/bees/Research/archives.htm>. He has a long list of publications, including significant articles in Bee World, authorship with Dan Mayer of a pollination book that is considered an important update of McGregor's classic book: Insect Pollination of Cultivated Crop Plants. <http://bee.airoot.com/beeculture/book/index.html> Most recently, he was the editor of the new book published by Dadant & Sons, Inc. Mites of the Honey Bee. He has collaborated with Dr. Mike Hood of South Carolina in determining treatment thresholds for Varroa mites, and showed that vegetable oil extender patties helped control tracheal mites and that feeding Terramycin® prevented weight loss in *Varroa* parasitized bees. Other efforts include showing that bottom supering did not significantly improve honey yield and brood production is reduced in old comb.

A large part of Dr. Delaplane's program will be the full-time technician position provided by the Department of Entomology, he concluded, a spot now filled by Ms. Jennifer Berry. Ms. Berry provided an overview of her current research, various studies concerning the comb's effects on the queen. Ms. Berry carried out studies in small cages, where bees were given choices between old brood comb and that just drawn from foundation. She found that newly-drawn comb is preferred by queens and they lay more eggs in it as well. The comb also produces more bees. Workers from new comb weigh more (fewer cast skins?) and on the average a greater number of workers are produced per area than in older comb. There are more eggs in new comb and bees store more honey in old comb. Thus, there is often less room to lay eggs in older comb (a reason for honey bound queens?). Ms. Berry's studies provide solid reasons for every beekeeping operation instituting some kind of comb renovation program.

A final part of Dr. Delaplane's research program is extensive study of bumble bees (*Bombus sp.*). He has published a series of much sought-after articles on rearing of these bees, which are used extensively in greenhouse pollination. Dr. Delaplane hosted a Fulbright Scholar from Albania, Selim Dedej, who is now a Ph.D. student. He first researched chalkbrood control and showed that hygienic queens are responsible for a decrease in mummy numbers in affected colonies. Mr. Dedej is currently studying the pollination of southern rabbiteye blueberries. He showed the audience data that honey bees do increase fruit set and that the effects of carpenter bees (*Xylocopa sp.*) are also important and not necessarily deleterious to the pollination process. Carpenter bees are implicated in slitting open blooms, which then attract so-called "side-working" honey bees that avoid the pollination mechanism of the flower <http://apis.ifas.ufl.edu/apis91/apjan91.htm#3>. Mr. Dedej concluded that there is always a "background pollination" effect in rabbiteye blueberries of about fifty percent, mainly due to the great variety of insects always present. However, this effect can be doubled in most cases by adding honey bees to the pollinating mix.

Other Speakers

Dr. Jim Tew at The Ohio State University www.oardc.ohio-state.edu/www/people/tew1.html was the featured out-of-town speaker at the meeting. He provided two provocative discussions, full of common sense and humor that those who have listened to Dr. Tew over the years have come to expect. His hilarious stories of collecting swarms punctuated descriptions of more serious swarm control techniques. These include providing more drawn comb, cutting queen cells (only for the most committed), adding foundation, and finally, when those fail, as they often do, using a bee vacuum powered by a conventional bee blower (Dr. Tew's own design). Swarming continues to be a vexing problem in beekeeping, Dr. Tew concluded, and many continue to scratch their heads or tear out their hair at what can only be described as the quintessential quixotic behavior of the honey bee. I am reminded that even the most revered bee masters, like the experienced C.C. Miller,

author of *Fifty Years Among the Bees*, have become despondent when failing to control swarming.

The "energy eaters" of beekeeping have become mites, according to Dr. Tew, who shared his dirty dozen other challenges faced by modern beekeepers. Paradoxically, aside from mites, the issues facing beekeepers today are much the same as those recounted in old bee journals he said. Examples of these include: learning time management, building and maintaining enthusiasm, controlling other pest problems (small hive beetle), acquiring timely information, exploring honey usage (new products), finding apiary locations, dealing with differences among beekeepers (personality, objective, goals, time), living with decreased technical support, relating to "our sometimes not so friendly" friends (non-Apis people, university and research administrators), surviving pesticide use, and finally getting (and keeping) people interested in beekeeping.

Both Barry Smith and John Rudeseal of the Georgia Department of Agriculture were present at the meeting. Mr. Smith is in charge of apiary inspection, but also has responsibility for other agricultural inspection efforts <http://www.agr.state.ga.us/plant_ind/html/plant_protection.html>. There are now four full-time inspectors in Georgia. The state is considered fully infested with small hive beetle (*Aethina tumida*) and there appears to be evidence of misuse of the new coumaphos-based CheckMite+ strips. The latter is troubling, Mr. Smith said, as any documented cases make it more likely the material will be pulled off the market by the Environmental Protection Agency <http://www.epa.gov/>. Mr. Rudeseal provided an explanation of how honey house inspections are carried out in Georgia at a workshop presented at the meeting.

Other workshops included how to get entries ready for the 2002 American Honey Show <http://www.abfnet.org/Convention/honeyshow.html> at the American Beekeeping Federation meeting in Savannah, GA, January 16-19, 2002 <http://www.abfnet.org/Convention/news.html>, and examples of successful beekeeping promotional efforts around the country.

Other Events

Like many bee meetings, the Georgia one featured a honey show. The cadre of judges, however, was not run of the mill. Rather, they were "certified," being trained at last year's Young Harris Beekeeping Institute by Mr. Michael Young, chief judge of the British National Honey Show <http://www.honeyshow.co.uk/contacts_for_the_national_honey_.shtml>. Rumor has it he will be back for the 2002 event and all prospective judges are invited to attend. There was a silent auction and a catered banquet. Fred Rossman, the Master of Ceremonies, shared his knowledge of Georgia Beekeeping history and various awards presented for service to the beekeeping industry. The meeting was topped off with an ad hoc shrimp boil and local bluegrass band.

The continuing success of the University of Georgia beekeeping extension and research program is a tribute to the efforts and commitment of a lot of people, both past and present. The new facility should help coalesce all parts of the state's beekeeping industry from equipment manufacturers to the traditional queen and package bee operators to hobbyists into a unified effort to push forward the boundaries of basic knowledge and research about honey bees. Other states may wish to look at this program for guidance as one of the prime examples of how both basic and practical beekeeping study can be teamed up to improve the lot of both honey bees and beekeepers. BC

Dr. Sanford is the former Extension Specialist in Apiculture, University of Florida. He published the APIS Newsletter: htt::// www.apis.ifas.ufl.edu/

IS THERE A PACKAGE PROJECT IN YOUR FUTURE?

James E. Tew

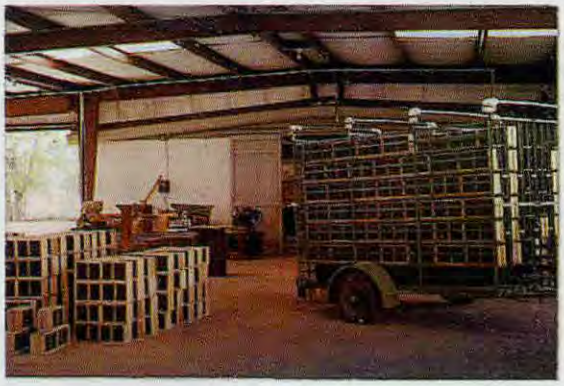
Should you go get your own packages rather than having them shipped? Easy question to pose, but very difficult question to answer.

You could justify picking packages up if:

1. You're looking for an adventure or short, unconventional vacation.
2. You're buying a quantity of packages – probably ten or more.
3. You're able to pool your order with other buyers in order to get a quantity discount.
4. You have a dependable truck or other appropriate vehicle.
5. You have decent driving stamina and are keen to make the trip.
6. You are a significant distance away from the package producer requiring the packages to be in the mail system for several days.

You would have difficulty justifying picking up your packages if:

1. You think you will save substantial money in shipping.
2. You think you can make meaningful money by hauling packages for other people.
3. Your truck is old, but will "probably" make the trip.
4. You are not a strong night driver.
5. You require long breaks to eat and rest.



The primary reasons for hauling your own packages are: Savings on shipping (on large orders), best delivery time, best delivery conditions, lowest package price (if quantity discount applies) and best procedure for getting your bees in the best shape.

Hauling your own packages home is a personal decision; any decision you make won't be either exactly right or exactly wrong. I addressed this topic in *Bee Culture* in December, 1997 in an article called, "It May Soon Be the Year for the Smaller Hauler." Since I wrote that article four years ago, nothing has gotten any better in the package shipping issue. Rates have gone up even higher – in fact the US Postal system annually threatens to stop shipping packages. Additionally, the headache involved in trying to claim insurance on a dead or dying package cannot be ignored. By the time you get a package replaced, the season will be late and the second package will be rushed to build up in time to survive the first Winter.

Sequence of Events for Hauling Your Own Packages.

I. Make the decision to go
   i. You either own or have access to a dependable truck (or van).
   ii. You either have enough need yourself or you can pool orders from others. More on this subject follows.
      1. If you haul packages for others, be certain they understand that live delivery is not an absolute guarantee.
      2. Determine who is responsible for the packages once they are delivered.
   iii. Your personal stamina is high or you have a dependable friend to ride along.

II. Choose two – three Package & Queen Producers (Anytime)
   i. Accessibility and convenience are important (ergo, how far is the drive to the company?)
   ii. Check the producer's reputation with others who have already used the company's product. Are they dependable, especially in their scheduling?

III. Contact the selected producers. (November – early December)
   i. Ask for prices on your package order, including quantity discounts.
   ii. Present your chosen dates for acquiring the packages.
   iii. Find out how the proprietor requires payment.
   iv. Other than weather, are there any reasons why your order may not be filled on your selected date?
      1. Labor shortage.
      2. Diseases or pests.
      3. Being bumped by a bigger order.

IV. Select a producer (November – early December).
   i. From those you contacted, select the one you feel best about.
   ii. Confirm your decision with others for whom you may be hauling packages.

V. Contact the producer with whom you chose to do business. (November – early December)
   i. Confirm your date of delivery
      1. Choose a range of 2-3 days, not a specific day, for pickup.

2. Unless otherwise specified, you will probably get your order late in the afternoon.

ii. Submit your package order – probably 3-pound packages..

iii. Give your truck dimensions in preparation for loading.

iv. Order one to two extra queens per ten packages of bees.

v. Arrange for payment
   1. Partial payment to book and remainder at the time of delivery.
   2. Payment in full at time of delivery.
   3. Cash, check or credit card

vi. Give your address, phone, and email address to the producer for future communications.

VI. Contact the producer again (Late February – March)

i. Confirm that everything is still on schedule.
   1. No disease, pesticide, flooding, or other setbacks are occurring within the operation.
   2. If necessary, fine-tune your order.

ii. Confirm your shipping dates.

VII. Final contact (7-10 days before the trip)

i. With the producer, select the actual date of the trip.

ii. Determine the best time to be at the company (morning or afternoon)

iii. Clear up any loose ends.
   1. Final number of packages and queens.
   2. Final payment plan.

VIII. The Trip Down (Late April – early May).

i. Just before leaving, call the company and tell them you are departing. Give them your cell phone number, if you have one, and you should.

ii. So much as possible, have a relaxing ride down.

iii. Know where you are going.

iv. Don't forget your cell phone.

v. Take a water hose (You won't need it if you take it.).

vi. Take a basic tool kit with a few pieces of wood strips and ratchet straps. Include a small saw, battery-powered drill, drill bits, hammer and a nail assortment. Always have a flashlight and duct tape.

vii. As a disaster plan, have the national phone numbers for truck rental companies.

IX. At the company.

i. Be on-time.

ii. Get the adjusted loading time.
   1. Local weather may cause some delay.
   2. Occasionally, you can be loaded earlier.

iii. Some producers may allow you to go the yards, but keep in mind this is a very busy time for the producer. Try as you might, you probably won't be helpful.

iv. Be considerate of the personnel. At this time of the year, the staff is literally working night and day.

v. Be leery of packages held for several days in coolers.

vi. Be involved in how your load is positioned and secured. Once you leave, the load is strictly your responsibility.

vii. Take photos.

viii. Make your final payment and say goodbye.

"Right now, there is a specialized need for special people to haul special livestock . . . are *you* that person?"

X. The trip home.

i. Once you leave the company, the load is solely your responsibility. The company no longer has any liability.

ii. The sun is not your friend. If your truck is in the sun, it should be moving (except for traffic controls and refueling stops.)

iii. Don't drive while exhausted, but drive as briskly and as much as possible. Don't speed or do anything reckless. The bees are only worth so much.

iv. Check the load at every stop. There should just be the satisfied hum of thousands of confined bees.

v. If you stop during the day, stay out of the sun and open all windows on the camper shell. Even if you stop at night, open the windows. While it is fairly easy to overheat the bees, it is much more difficult to chill them.

vi. If you are caught in traffic jams or construction, open all windows and possibly the back upper door – depending on the day temperature. If the temperature is unusually high (80° F+) and you have been forced to sit in the sun, consider lightly hosing the packages with water. This should be a drastic situation. Normally, even overheated packages won't need it.

vii. Be considerate of others who are not beekeepers. Don't park in the front door of McDonald's. Don't linger at the gas pumps. Park away from the motel entrance.

XI. Arrival Home.

i. You probably will anyway, but keep the home folks informed as to your progress.

ii. You're tired but move the load from the truck to a dark, cool garage or put the entire truck in such a garage. Always set the packages flat in the normal position.

iii. As soon as you are able, put the call out to others for whom you may have hauled packages.

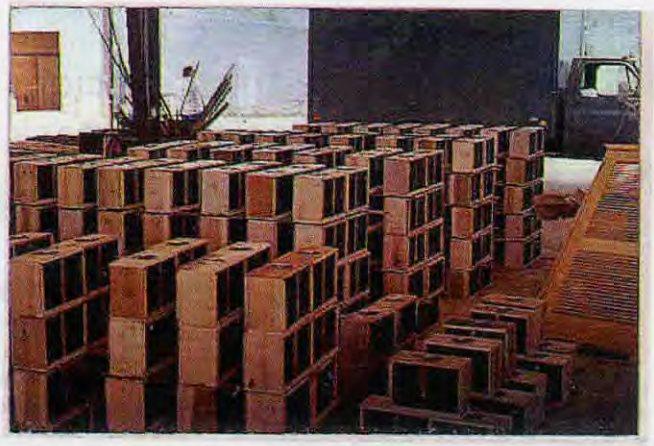
Loose Ends

The vehicle If you use a truck with a heavy suspension system, the rough ride will jar the syrup from the cans. Nothing can be done about this, but keep in mind that these packages will need feeding after you get them home.

If you drive a van in which you and the bees are in the same compartment, many people experience mild allergic reactions to the bee hair and pheromones that the bees are releasing. Running the ventilation system in the car will help, but if you have a documented allergy to such bee by-products, consider another vehicle.

The camper shell can be raised, using ¾" wooden blocks, off the body of the truck giving an entrance for air. It is possible to get about 90 3-pound packages in a common pickup with a camper shell. A box-type truck is

Continued on Next Page



best, but it too will need ventilation.

Don't haul packages on an open truck or trailer. Since they flap and shift, tarpaulin covers are marginal protectors of package bees in transit.

Dave Heilman, from the OSU Honey Bee Lab at Wooster, used heat-sensing thermocouples that he purchased at Radio Shack to constantly monitor the temperature of the packages while in transport.

The US Postal System will only ship live animals four zones away from the producer. Last year's shipping rate was $15.05 per package. Last year, individual packages averaged about $43 $44 per package making a single shipped package cost about $60. Whoa. [1]

Your home customers Most people are prompt in picking up their packages, but occasionally, some people can be amazingly slow. One year, we had 5 packages sit in our lab for five days after we got them home before the owner came for them. How much commitment you make to such packages will have to be your own call.

Insurance on live bees is difficult to get. Your customers need to understand that a true disaster will mean that they lose their money and their bees. Though you and your vehicle can be easily covered, live bees are another story. Be clear that all the people for whom you are hauling bees understand this remote risk.

Alternatives to the US Postal System. Occasionally, a delivery company such as UPS will deliver packages but only by next-day-air. The delivery cost can easily equal the cost of the package, but the package arrives the next day at your door. However, again, live shipment may be difficult to insure.

Why would anyone want to make this trip?

I cannot deny that it is an adventure, but it is an adventure that an increasing number of beekeepers are making every year. State beekeeping organizations could be instrumental in coordinating with county groups and individuals in pooling package orders. No doubt some procedure along this line will evolve as commercial shipping alternatives become more difficult. Apparently, the primary concern the U.S. Postal System has is the syrup leaking from feeder cans in transit resulting in a slippery floor. But others exist.

When I review this subject again three-four years from now, who knows what the situation will be. We may have special "bee-haulers" in our state industry who truck packages from the producers or we may have improved relations with the postal system and with commercial delivery companies. I don't know. But right now, there is a specialized need for special people to haul special livestock – honey bees. Are you that person? BC

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[1] Thanks to Wilbanks Apiaries, Claxton, GA for some of the information contained in this article

?DO YOU KNOW?

Parasitic Mites

Clarence Collison
Mississippi State University

The world wide dispersal of mites parasitic on honey bees has been one of the most serious problems encountered by modern beekeeping. The devastation of most feral honey bee colonies and the impact on managed colonies in the affected regions, has totally changed colony management. Now it is practically impossible to keep bees without treating them with chemical acaricides. Even though most beekeepers are primarily concerned with controlling *Varroa* mites, it is important to realize that tracheal mites are still a serious problem, in many areas of the United States. How familiar are you with the parasitic mites associated with honey bees?

Please take a few minutes and answer the following questions on this important topic.

The first nine questions are true or 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. ____ Dispersing honey bee tracheal mites appear to use cuticular hydrocarbons to discriminate between old and young bees.
2. ____ Male and female tracheal mites migrate to new host bees by exiting the trachea through the spiracles.
3. ____ Buckfast honey bees have been imported into North America on two separate occasions.
4. ____ *Varroa destructor* is a new parasitic mite of honey bees recently found in the United States.
5. ____ ApilifeVAR® is an essential oil-based product that is available for *Varroa* mite control in Europe and is currently being tested in the U.S.
6. ____ The Russian lines of honey bees that have been imported, developed and tested by the USDA ARS Bee Lab at Baton Rouge, LA have been selected for resistance to varroa mites, and appear to have resistance to tracheal mites, as well.
7. ____ A second line of honey bees that have been developed at the USDA ARS Bee Lab at Baton Rouge, LA, the SMR line is resistant to varroa mites because they suppress mite reproduction.
8. ____ *Varroa* mites are ecto-parasites of the honey bee species *Apis cerana* and *Apis mellifera.*
9. ____ A proportion of adult female varroa mites naturally fall to the hive bottom board in both treated and untreated colonies.

(Multiple Choice Questions, 1 Point Each)

10. ____ *Varroa underwoodi* is a parasitic mite associated with:

A. *Apis mellifera*
B. *Apis dorsata*
C. *Apis florea*
D. *Apis cerana*
E. *Apis laboriosa*

11. ____ Believed to be the original cause of "Isle of Wight" disease.

A. *Acarapis dorsalis*
B. *Acarapis externus*
C. *Varroa jacobsoni*
D. *Acarapis woodi*
E. *Tropilaelaps clareae*

12. ____ The external *Acarapis* mites feed on:

A) blood of adult bees
B) pollen adhering to bee's body
C) blood of bee brood (larvae and pupae)
D) honey
E) royal jelly

13. Two acaracides in recent years were registered in the U.S. for *Varroa* mite control but were withdrawn from the market because of problems. Please indicate why Amitraz and Formic acid are no longer available. (2 points)
14. Name four pathological and detrimental effects that have been observed in individual worker honey bees as a result of tracheal mite infestations. (4 points).
15. When a foundress female *Varroa* mite enters an open brood cell, she goes to the bottom of the cell below the developing larva, becomes immersed in the brood food (worker or drone jelly) and becomes immobilized. Describe the characteristic position of the mite in the bottom of the cell and explain how it survives in this liquid environment. (2 points)

Please complete the following by selecting the correct answer.

In the *Varroa* mite reproductive cycle, the foundress female mite's first egg is (16) _____ (fertilized, unfertilized) and becomes a (17) _____ (male, female). This first egg is laid (18)_____ (in the top part of the cell near the entrance on the cell wall, on the pupa, in the bottom of the cell). A female *Varroa* mite lays an egg approximately every (19) ____ hours (5-10, 15-20, 25-30). The developing eggs swell the body of the foundress mite, and since the developmental periods of individual eggs overlap, the foundress remains in a swollen state until egg laying ceases. Each egg hatches into a (20) _____ (larva, deutonymph, protonymph).

ANSWERS ON PAGE 46

ANTI-DUMPING FACTS

The U.S. government handed a sweet victory to U.S. honey producers in early November by ruling that honey imports from Argentina and China injured the domestic industry.

The International Trade Commission (ITC) issued the ruling, which was the final step in a year-long investigation into alleged unfair trading activities practiced by Chinese and Argentinean honey exporters and the government of Argentina. The ruling authorizes the U.S. Customs Service to impose antidumping duties ranging between 33% and 61% on honey imports from Argentina and between 26% and 184% on Chinese imports. An additional countervailing duty of 6% will be imposed on imports from Argentina to offset the unfair subsidies granted by that country's government to its honey producers.

Important Numbers (million lbs.)

Imports From	1998	1999	2000	2001 (Through Oct.)
Canada	13.19	27.55	29.28	13.92
China	27.53	47.87	53.56	47.03
Argentina	77.37	86.20	98.91	53.56
All Countries	**135.4**	**174.3**	**194.2**	**NA**
U.S. Production & Carry Over	**301.1**	**284.6**	**307.2**	**NA**

The ITC ruling essentially wrapped-up an unfair trade case filed on September 29, 2000 by the American honey Producers (AHPA) and the Sioux Honey Association (SHA). According to AHPA President Richard Adee, whose organization represents about 800 domestic beekeepers, "We are delighted that the U.S. government's investigation into these unfair trading practices confirmed what U.S. honey producers have been up against for years. We are particularly pleased that the ITC affirmed that critical circumstances exist, which means that there are millions of dollars of potential dumping duties to be collected." The U.S. honey industry charged that Chinese exporters flooded the U.S. market with honey just prior to the imposition of the preliminary antidumping duties last May. As a result of yesterday's decision, the U.S. Customs Service will impose antidumping duties on Chinese honey imports from the exporters who engaged in the import surges that entered the United States up to 90 days before the announcement of the preliminary determination.

> For purposes of these investigations, the products covered consist of natural honey, artificial honey containing more than 50% natural honey by weight, preparations of natural honey containing more than 50% natural honey by weight and flavored honey. The subject products include all grades and colors of honey whether in liquid, creamed, comb, cut comb, or chunk form and whether packaged for retail or in bulk form.

Said SHA President Jerry Probst, "Clearly, these imports were being dumped in the U.S. at less than fair value and stealing U.S. market share. The hundreds of domestic honey producers who belong to the Sioux Honey Association and suffered injury due to these unfairly traded imports can now return to a leveled-off playing field and compete fairly and squarely."

According to the petition filed by the AHPA and SHA with the U.S. government, in 2000, combined honey imports into the U.S. from Argentina and China were 158 million pounds, up from only 100 million pounds in 1998. Over the same three year period, the price of these imports in the United States fell about 25%. Although the amount of honey consumed each year in the U.S. has increased significantly between 1998 and 2000, U.S. market share for domestic honey producers fell, while the share held by imports from China and Argentina increased significantly. BC

FIRE Ants Beekeeping & California

Kim Flottum

Moving colonies from an area with RIFA to California this Spring is going to be a bit less difficult - maybe.

Everyone who lives in the southern areas of the U.S. has to deal with fire ants on some level. Even the most urban dweller, isolated from field and farm contributes, if indirectly to the hundreds of millions of dollars spent each year dealing with these insects.

But not all fire ants are created equal. Two species, the tropical fire ant and the southern fire ant are considered native. There are also two imported species of fire ants. The black imported fire ant, *Solenopsis richteri* arrived about 1918, and the focus of this article, the red imported fire ant (RIFA), *Solenopsis invicta* came ashore in the late 30s. Both were unceremoniously dumped here in soil used as ship ballast and entered at the port of Mobile, Alabama from South America.

The RIFA is significantly more aggressive than its cousin and within 15 years had spread to 10 states. Today it occupies land from southern North Carolina, south to all of Florida, and west to California. It has replaced the two native species of fire ants and mostly displaced it cousin, the black fire ant, which survives only in the very northern areas of its habitat.

RIFA spreads through mating flights or floating on water during floods, but primarily through man-assisted activity. Grass sod and horticultural products led the way, and were the initial commodities for federal quarantines in the late 50s. Though slowed since then RIFA has reached California (as far north as Sacramento in October, '01), Kansas and Maryland.

RIFA is omnivorous, eating both plants and animals. Ground nesting birds, snakes, turtles and field mice are susceptible, cutting by half these populations when RIFA moves in. Other vertebrates and non-vertebrates are similarly affected, especially soil-inhabiting insects. They also feed on the germinating seeds of corn, sorghum, soybeans and okra, can destroy citrus seedlings, and tunnel in potatoes and peanuts, plus they can girdle young orchard trees, plug irrigation nozzles with their nests and can and will reduce pollination of some economic plants.

In an urban setting they cause similar animal and plant problems, but can cause structural problems as well. Nesting under sidewalks and roads they can cause cracking and cave-ins, while nesting in heat pumps, air conditioners, telephone junction boxes, traffic lights and even house walls also pose problems on a routine basis.

That they can, and do make playgrounds, golf courses, parks, backyards, gardens, shorelines, pastures, fields and other areas difficult or impossible to use for recreation or agriculture goes without saying, but not without significant cost.

RIFA responds aggressively with disturbed. They can sting repeatedly, causing an intense burning sensation initially, followed in 24 - 48 hours by a white pustule that itches and can last for weeks.

Control is expensive in time, dollars, and ecological damage. Individual mounds can be drenched or fumigated or baited. Broadcast treatments over large areas are effective but slow acting, and some effective biocontrols are being introduced that hold promise.

Property, agricultural, recreational and ecological destruction, human physical danger and a monumental control cost . it's no wonder California doesn't want these invaders moving in, and they don't, big time. Moreover, they've been pretty successful in keeping them out, at least until 1998. Landscape plants, and beehives on pallets that have moved into (and out of, in the case of hives) the state have brought with them RIFA.

The state is doing everything possible to eradicate the populations that exist, and working even harder to keep more from entering.

A major thrust last year was in-

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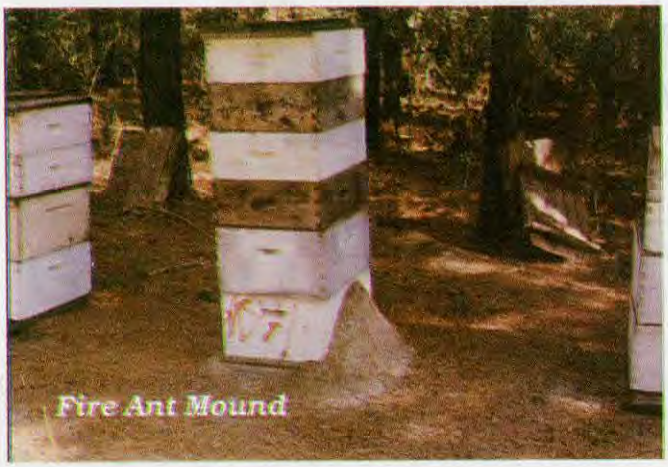
Fire Ant Mound

specting trucks carrying beehives, at the New Mexico/ Arizona border, headed for California almonds. This activity, partially funded by CDFA was aggressive and extremely disruptive to the orderly movement of trucks and their bees. Some beekeepers, ordered to wait while single ants were identified, lost bees in the heat. Others had to travel miles out of their way to accommodate inspectors, thus increasing costs. This was not fun, but the border stayed shut (except for a few enterprising beekeepers who alluded the checkpoints).

This year, growers in California who need the timely delivery of bees, beekeepers delivering them and several state departments of agriculture have devised a plan to reduce these problems. But California still holds the trump card.

In a memo put out in October the CA Department of Food and Agriculture laid out this year's rules.

- All honey bee shipments entering California will be placed under **QUARANTINE HOLD** and subject to destination inspection by the county departments of agriculture.
- Inspectors at California's border stations will notify the appropriate county agricultural officials of the pending arrival of colonies.
- The driver will contact the country agricultural commissioner upon arrival at destination.
- Colonies will be inspected for the presence of RIFA; if found, appropriate action will be taken including treatment or destruction of the infested colonies. If determined to be free of this and other serious pests, the colonies will be released from hold.
- To avoid delays colonies should be free of dirt and debris and checked for RIFA contamination at origin.
- Drivers must provide exact physical locations where the colonies will be placed (a post office box will not be accepted), total numbers of colonies included in the shipment, and the state of the most recent origin.
- If colonies are found infested with RIFA they will be subject to rejection from entry into California with the following exception:

  Colonies free of soil and debris but found to be lightly infested with RIFA may, on a case-by-case basis, *be allowed to transit to a specified site near Needles, California and be cleaned at the owner's expense under State supervision. When satisfactorily cleaned, shipments would be allowed to proceed to destination for final inspection by county agricultural officials*

  This procedure would apply only once to any shipper found to have colonies contaminated with ants at the border. Second and subsequent shipments containing ants would be rejected from the same shipper.


Red Imported Fire Ant

What To Expect

Border inspections can be rigorous. California's inspection protocol is described here because it is similar to protocols in other States.

- All bee shipments (100 percent) originating in imported fire anti-infested states are inspected. Inspections occur during daylight hours. Beehives must be inspected and released (if no imported fire ants are found) prior to final placement in the field.
- Bee shipments originating in states not known to be infested with imported fire ants are inspected at a rate deemed necessary. The inspection rate may be determined by factors such as the origin of the shipment and prior history and experiences with the beekeeper and bee broker.
- Ideally, inspections are performed as the bee colonies are being unloaded. The following inspection procedures are utilized.
- The top and all four vertical exterior sides of each hive body are visually scanned for ants.
- Special attention is paid to dirt clods associated with the shipment. Dirt clods are broken open to reveal any ants within.
- If the bee colonies are transported on pallets, the interior space between the pallet slats is examined for dirt clods and debris.
- Bee colonies on individual bottom boards are carefully examined for rotted portions that might harbor ants.

If you're moving bees to almonds this year, and happen to have bees in any of the states that have resident RIFA, be on guard you don't share with those who don't want them. Inspect colonies and pallets before loading. Clean with high pressure wash before loading if you find mounds in or around your beeyards. Make sure your truck beds are clean of dirt mounds, too. Of course prevention is always better, so when you return this Spring, investigate the many baits and

individual mound treatments available so RIFA aren't in the area when you get ready to load *next* year.

Prevention also minimizes problems your bees can have with foraging ants, and protects anyone working the colonies during the season. Walking in mounds is at the very least time consuming, and at the very worst, lethal for those select few allergic to the ant's venom.

Be ready to be rid of Red Imported Fire Ants this year, whether you move or not.

For more information on the CA Department of Food and Ag rules on RIFA, call them at 916.654.0312. Their web page (www.CDFA.CA.gov) has more information on RIFA, counties quarantined, treatments and legal constraints. BC

Not Happily Ever After

Ann Harman

"Once upon a time..." so start many of our favorite fairy tales. And after the wicked witch is vanquished and the fiery dragon slain, the ending is predictable ..."and they lived happily ever after."

Well, once upon a time there was no National Honey Board. Any sort of advertising or promotion of honey was simply up to the person producing it. A hobbyist, with but a few hives, did not need to worry. Friends and neighbors and swarms took care of his crop. The sideliner with many more hives fluctuated between having enough, being short, and having too much to sell before the next crop. Large commercial honey producers were concerned that consumption of honey was static. Home use and food industry use seemed to be at a standstill. However, the large producer was in a better position to promote honey, at least a little.

Pork, cotton, wool, milk and other such items had marketing boards. You have probably purchased a sweater and noticed the "Woolmark" logo and laughed at the beef and milk commercials. Why not a marketing board for honey? So about 15 years ago the National Honey Board was established. Basically its mandate was the promotion of honey. Just that. The guidelines are set by both USDA and Congress. The NHB just cannot do something out of the clear blue sky. Protocol must be followed although the funds come from people: producers, and, importers, large and (kind of) small.

The Board has elected representatives from the honey industry who meet and develop both questions and strategies. These Board members are elected by representatives from each state's honey industry, from hobbyists to commercial. In the beginning states primarily dominated by hobbyists either knew nothing of the honey industry or felt that the NHB was for "the big guys." Unfortunately that attitude still persists in some places.

At the time the NHB was established very little was known about the uses of honey or even who bought it. Everyone concerneed with honey sales had their own idea who bought their honey for what purpose. Hobbyists sold to people who used it for sore throats and put it in their tea. Sideliners worked small stores, farm markets, bakeries, shops and from their houses too. Commercial producers, if they also packed, could put honey in supermarkets and sell to the bakery industry. A very few exported and some imported. Otherwise, they just sold to packers. All in all it was an old-fashioned approach. The media assault on consumers for various products had left honey behind in the dust. Television had us changing breakfast cereals every time a "new" one was produced. Let's face it, Frosted Flakes ® were just a new form of corn flakes. We changed our brand of beer if the ad convinced us one was superior in taste to another.

What did we want at that time? What did we want the NHB to do? The simple answer was to get people, individuals and food industry, to buy honey. Which meant, in our minds at that time, our honey.

In order to advertise honey it was necessary to discover who bought honey, why they bought it and how, and when. The first tasks of the NHB were to answer those questions. Statistics they are called when collected and compiled. The same sort of questions were asked within the food industry, those who buy in bulk in large quantities.

Once honey had a background, it became easier to determine where advertising dollars would be effectively spent. The budget, from money collected from the industry, was, and still is, small in comparison to other marketing boards. Therefore the NHB tried to use the advertising money effectively – piggybacking on other foods such as tea or biscuit mix.

As the NHB grew in scope, it was able to develop recipes for using honey, not only for family use but also for large-quantity users, such as schools and institutions. The Board started a hotline to answer questions about honey and its use. Honey became one of the foods visible at food industry trade shows, both national and international. All of these projects, and more, are basically out of the reach of even the biggest honey producers. Big packers could, however, manage some of this.

Besides, not everyone is good at advertising. Those producing honey do what they do best – keep bees and harvest the honey. Packers are good at buying honey and doing something with it (seldom do they effectively market it). Honey just passes through the hands of importers and exporters. Very, very few of these people have the time or the expertise to create and perform the many facets of the NHB.

As the years go by, everyone and everything changes. Unfortunately we never stop to look back and think how different our world is from the one last year or the year before. Somehow we believe, today, that we always have had computers, satellite TV, cell phones. We accept these things and blunder our way pell mell into tomorrow.

We do not have the ability to look over the horizon. If we did, then perhaps we would have had a different National Honey Board ten years ago,

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HAPPILY ... Cont. From Pg. 43

or perhaps even from the beginning. Did we, 15 years ago, foresee Chinese or Argentine or Mexican honey being brought here in large quantities at a cheap price? No.

The world market is continually changing depending on the tastes and economy of a particular country. Just take a look at the United States. Today "low fat" are the buzz words in the food industry. What were they 10 and 15 years ago? Did you ever hear the word "neutraceutical" 15 years ago? It may have existed somewhere but it was not a part of our everyday culture.

Perhaps we need to take a good hard look in our "attic trunk" full of memories of 15 years ago and compare them with those we experienced just yesterday or this morning. Change will be obvious.

It is interesting to think that perhaps as we criticize could we actually be blaming ourselves for not recognizing change sooner and accepting it and moving ahead in the changed direction?

Perhaps it is time to think of the National Honey Board as it came into existence. Did it serve a need at that time? Yes. It was the first time honey joined the ranks of the "big guys" like beef and milk. Did the NHB produce useful information, things we never had before? Yes. New ways to reach the food industry and things that even the smallest hobbyist could use. Has the Board changed over the years? Yes. However constraints exist on what the Board can do. Those have existed since the beginning.

Can those constraints be changed? Yes – but within limits. Limits not set by beekeepers but by USDA and Congress. (Please remember – we elected the members of Congress.) Is this the time for change? Definitely. "Change" is happening all around us right now.

Let us suppose the program of the NHB changes. Fine. For right now. What about five years from now? Remember, we cannot see over the horizon. Are we willing to create change again when needed? Certainly, if we keep our heads on tight.

As we move ahead in this industry it really is time to thank the National Honey Board for the things that have been done. All beekeepers, whether they realize it or not, have taken advantage of the Board's efforts and productions. We need to recognize all those who tried to serve the world of honey.

At this time discussions about the National Honey Board and its future are being waged hot and heavy. We seems to be in the midst of the wicked witches and fiery dragons. Unfortunately the outcome of this story is not going to be "...and they lived happily ever after." BC

Ann Harman is a sideline beekeeper and international marketing consultant.

The King & I

Robert Kreitler

Chapter 1. How I met Ed.

Late one late afternoon our eight-year-old son, Charlie, came into the kitchen and proclaimed that he wanted a beehive. Charlie always had challenging interests but this request really surprised my wife and me. Knowing the attention span of a third grader was no longer than a typical TV commercial, we shrewdly stalled by saying that if he could come up with half the money to pay for a beehive, we would provide the other half.

Charlie never mentioned the beehive again until five months later when he walked into the kitchen and asked, "I have $62.50. Is this enough to buy a bee hive?" He took us to his room and there his savings were – pennies, nickels, dimes and quarters – that he had pulled from his piggy bank, earned over those months and quietly hoarded away. We were stuck.

After a little research we found the only way to solve this problem was to visit the bee guru who lived in nearby Wilton, Connecticut. My entire family soon hopped into our bright yellow microbus and drove to Wilton to meet Ed and Anita Weiss in their little shop beneath their home. I was struck by their steep, circular drive, a garage at the bottom, and beehives all over with signs warning you not to go near them.

Charlie brought along his jar loaded with pennies, nickels, dimes and quarters that he proudly carried into Ed's shop and placed carefully on the counter in the middle of this small room. Soon Ed outfitted us with all the components required to make a beginner's hive adding to it a smoker, veil, hive tool and feeder. Ed gave us his stern 15-minute lecture on how to assemble it and dump the bees in it. The latter sounded pretty scary. I later learned that Ed gave this lecture to all new beekeepers. If we had questions we were to consult our new book, *The Queen and I*, which Ed authored. Even my younger son, Paul, who was 4, remembers this expedition.

Ed & Anita Weiss at EAS 2000

Charlie carefully counted out $62.50, placing it in small piles. Anita double-checked the counting while wearing a great big smile. Charlie was probably the youngest beekeeper who had come through their door. I wrote out a check for the other half and we proudly loaded all our packages into the back of our bright yellow microbus. Father and son built our new hive and then picked up a package of bees at the Fairfield post office. They were really glad to get rid of this dangerous package. We dumped the bees into the hive as Ed had instructed and Charlie became a full-fledged beekeeper.

Chapter 2. How I got into the bee business.

It was a great father/son project. Charlie and I were partners. Our next big investment was a honey extractor from the A.I. Root Company in Medina, Ohio. Boy was it exciting when the Postal Service delivered an enormous box to our door. As we had done before, he paid half and I paid half. This was getting to be an expensive hobby. I don't remember if we sold any honey, but we had lots to use at home or give away.

The bee business was a great educational tool. Charlie convinced his third grade teacher to come out to see his hive. She bravely watched from a distance as he inspected and showed off his new bees. The bee business also became an easy way to explain relatively complicated economic ideas to my two sons. At the dinner table, I would answer finance or economics questions by using our bee business as an example.

Teaching Charlie to regard his beekeeping as a business seemed to work. How do I know? Several years later Charlie came down to the kitchen in the late afternoon and announced that he wanted me to buy out his partnership share. Boy, had he learned a lot. He wanted to move on to other interests. Beekeeping had been a really good one and it certainly outlasted a TV commercial. Charlie got all of his money back. I then became sole owner of a bee business including a fancy extractor from the A.I Root Company.

Chapter 3. How Ed got my money.

I then faced the problem that all other beekeepers face. I needed additional equipment. I needed comb supers. A slatted board became necessary. Pretty soon it was a screened rack that I had to have. Jars of all shapes and sizes had to be purchased. I had to stock a cabinet with medicines to keep away pests and diseases whose names I can't even pronounce. I battled mites I couldn't see. A second hive then followed, and of course I needed new queens. Fortunately, Charlie, who is now 27 and six feet tall, works in Wilton where Ed lives. To solve a crisis he can stop by to purchase a new queen or some gadget I must have. A charge account would really work well at Ed's. I don't dare count up the money I spend each year. However, with a year like this one, with my two hives piled high with supers, purchased from Ed and loaded with honey, that will fill jars purchased from Ed, I am sure I will get it all back. And, even if I don't, there are all the friends I have made in beekeeping. BC

Bob Kreitler has been raising bees off and on since he was in fourth grade. He has been on Board of the Backyard Beekeepers Association since its founding. He still manages two beehives. He is the author of a book, Getting Started in Global Investing *which introduces* The Island Principle *and he runs an investment firm in New Haven, CT.*

?Do You Know? Answers

1. **True** Normally mated adult female tracheal mites disperse from older host bees to young bees less than three days of age. Dispersing mites are able to differentiate between young bees and older bees as potential hosts. Recent research has shown that dispersing mites use cuticular hydrocarbons as cues in host location. Mites in a laboratory bioassay responded positively to extracts of young bee cuticle as opposed to controls and old bee extract.
2. **False** Mated female honey bee tracheal mites move to new host bees by exiting the prothoracic trachea through the spiracular opening. Adult males apparently do not leave the host in which they develop.
3. **True** Brother Adam at Buckfast Abbey in southwest England began breeding in 1916 from colonies that had survived the early tracheal mite problems and over the years developed a line of bees reported to be resistant to tracheal mites. Queens of the Old World Buckfast stock were imported from Great Britain to the United States and Canada after tracheal mites became such a serious problem in North America. Buckfast bees went through a standard USDA quarantine procedure and were tested by the USDA ARS Baton Rouge Bee Laboratory. In Canada, the Buckfast stock was evaluated by personnel at the University of Guelph.
4. **False** Recent molecular studies have demonstrated that the varroa mite, formally known as *Varroa jacobsoni* is actually a complex of species that have been reproductively isolated from one another. Genetically, the varroa mites found in the United States are different than the original *Varroa* mite described on *Apis cerana* in Java (Indonesia) in 1904. Therefore, *Varroa* mites in North America have been given a new scientific name, *Varroa destructor*.
5. **True** Currently, one essential oil-based product is available for varroa mite control in Europe and is being tested in the United States. This product has the trade name ApilifeVAR®. It is a porous vermiculite tablet impregnated with a blend of thymol (76%), eucalyptol (16.4%), menthol (3.8%), and camphor (3.8%).
6. **True** The Russian honey bee lines that have been imported, tested and are being developed and released by the USDA ARS Bee Research Laboratory in Baton Rouge, LA were originally evaluated for resistance against varroa mites. Subsequent tests have also shown that some of these lines are also resistant to tracheal mites.
7. **True** The new SMR line of honey bees developed by John Harbo and associates at the USDA ARS Bee Laboratory at Baton Rouge, LA exhibits a new varroa mite resistance mechanism; suppressed mite reproduction. Foundress female mites when they enter a brood cell, feed on worker or drone jelly and larval hemolymph but fail to reproduce or reproduce at a reduced level.
8. **True** *Varroa* mites are ectoparasites of two honey bees, the Asian honey bee *Apis cerana* and the western honey bee, *Apis mellifera*. The mites original host was *A. cerana* and it does not suffer seriously from the mite. When man moved western honey bee colonies into the Asian region, in time the mite moved over to the western honey bee, and has had devastating impacts on its new host since then.
9. **True** Both alive and dead adult female *Varroa* mites fall to the bottom board of the hive whether the colony is being treated or not. In recent years, this behavior has been identified as a phenomenon that might be exploited for control purposes i.e. development of the screened bottom board. Several systems that prevent live mite fall from returning to the colony have been examined.
8. D) *Apis cerana*
9. D) *Acarapis woodi*
10. A) blood of adult bees
11. Amitraz was registered for use in the U.S. under the trade name of Miticur® but the product was withdrawn from the U.S. market due to beekeeper reports of colony injury and litigation. Formic acid, a gel-based formulation was approved in the U.S. in 1999 but was removed from the market due to leaking packages.
12. Shortened honey bee longevity
    Increased bacterial count in the blood
    Deterioration of flight muscles and nerve ganglia
    Infested tracheae deteriorate progressively with crust-like lesions and become stiff and brittle
    Increased winter mortality
    Degeneration of brood-food glands
15. Immediately upon entering the brood cell, the female *Varroa* mite goes underneath the bee larva to the cell bottom and enters the larval food. They take a characteristic position, upside down, with the ventral surface of the mite facing the opening of the cell. The entire body is submerged, except for the peritremes (two aquatic respiration tubes), which are rotated away from the body to protrude out of the liquid food, perpendicular to the body of the mite. These tubes act as "periscopes" to allow the mites to breathe while submersed in the "worker jelly" or "drone jelly" which has a consistency similar to royal jelly.
16. unfertilized
17 male
18. in the top part of the cell near the entrance on the cell wall
19. 25-30
20. protonymph

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

GLEANINGS

JANUARY, 2002 • ALL THE NEWS THAT FITS

IOWA LOSES INSPECTION

As a result of significant budget cuts across the board, the Iowa Department of Agriculture has eliminated their Apiary Inspection program. Box Cox, State Apiary Inspector, whose position was eliminated, noted that even after the terrific job Iowa beekeepers did last year to save the program, the cut this year was too deep. It was noted that when small programs like this are eliminated, they seldom reappear when funding is again less severe.

In a related incident, the Ohio Department of Ag received two cuts off their original budget. The first took the meat, the second hit bone, according to an ODA spokesman. The second cut squarely threatened several regulatory programs in the department, including the Apiary Inspection program. Ironically, that particular program was deemed important enough to legislators years ago that they made it a law that a state regulator position be funded.

"Ohio has one of the most vigorous inspection programs in the country, with two regional and over 60 county inspectors. Without the state program, and the personnel who fill it, guidance and supervision at the country level will be seriously compromised," said Kim Flottum, President of the Ohio State Beekeepers Association.

Budget details were to be finalized by mid-December and a campaign to contact key legislators was underway at press time.

CANADA'S POLLINATION VALUE

The estimated total value to Canadian agriculture is estimated to be about $782 million. This is approximately eight times greater than the annual farm value for honey and wax, which had a value of $93.5 million in 1998. The value of honey bee pollination represents 21% of the total farm value of approximately 26 selected crops.

Provincial values for pollination provide an estimate of the benefit of honey bees to pollination in each province. Provinces with high production of highly dependent crops show the highest values even though they do not have the highest populations of honey bees. This explains the higher demand for colony rentals in Ontario and British Columbia.

Approximately 93,000 rentals of honey bee colonies for crop pollination took place in 1998, mostly for apple, blueberry and canola production in Quebec, Ontario and Alberta. The estimation of a cost/benefit ratio for apples in Quebec indicated that for each dollar spent in rental fees, producers realized a gain of $185. Because of low blueberry production in Quebec due to a killing frost in the Spring of 1998, the cost benefit ratio was approximately $5 compared to $41 in 1990. Quebec apples had a cost benefit ratio of $185 in 1998, compared to $192 in 1990.

Conclusion

The 1998 value of honey bees as pollinators for Canadian crops was assessed to be $782 million, up from $444 million in 1990. This estimate is conservative, as many minor crops were omitted. Therefore, the vital importance of honey bees to agriculture, not only as honey producers, but also as pollinators, is clearly demonstrated.

The cost/benefit analysis, using data from Quebec, showed that each dollar invested in pollination services produced very attractive returns to apple producers, while corresponding figures for blueberries were down significantly due a killing frost at blossoming. The rental of honey bee colonies is an important management tool to assure the highest possible yields and quality of product.

FRIED BEES?

Issue: What should ARS do about the potential impact of the U. S. Postal Service's (USPS) mail irradiation process on research materials?

Facts:

1. According to SureBeam Corporation, the manufacturer of irradiation equipment, irradiation would negatively affect research materials. It would cause seeds not to germinate and change DNA in specimens.

2.. All USPS mail (including packages) destined for Government offices in the D.C. metropolitan area is being subjected to irradiation. Mail destined for Government offices outside the DC area is currently not being irradiated.

3. FedEx is not irradiating any packages or envelopes according a FedEx government accounts management official. This information corrects information recently provided to the National Seed Laboratory, Colorado by a local FedEx associate.

4. Researchers tend to use FedEx rather than USPS for research materials because of the special handling and tracking FedEx provides.

Recommendation: Under current USPS practices, we only need to be concerned about research materials destined for the D.C. metropolitan area, which includes the Beltsville Agricultural Research Center. Senders of research materials should use FedEx for shipments to BARC. Shipments to other research locations can be made using either USPS or FedEx, although it may be safer, at this point, to use FedEx for those shipments as well.

Contacts:

The ARS mail manager contacted Dr. Michael Kiley, ARS Research Program Safety Officer, who concurred with the information developed above. Also contacted were the USPS security office, June Bryan, USDA Mail Manager, Lynn Williams, Mail Manager, Northern Plains Area, and John Middlebrooks, FedEx Government Accounts Prime Contact, Greenbelt, Maryland. The FedEx.com web site has safety and security information as does the USPS web site.

If information becomes available that changes the above conclusion, you will be notified.

FSA CHIEF NAMED

Agriculture Secretary Ann M. Veneman has appointed James R. Little as Administrator of USDA's Farm Service Agency. FSA administers farm commodity and conservation programs, farm loan programs, and emergency and food aid assistance.

"Jim Little's 30 years of experience with USDA and knowledge of FSA programs make him an ideal choice for this position," Veneman said. "The Department has relied on Jim as Acting Administrator since January, and I am confident that he will continue his capable leadership of FSA."

Before accepting the Acting Administrator role, Little was the USDA's Associate Chief Financial Officer for Financial Operations. He began his career with USDA as a staff accountant with the former Rural Electrification Administration, now a part of the Rural Development mission area.

As Administrator, Little also serves as the Executive Vice President of the Commodity Credit Corporation, a wholly-owned government corporation that finances many of USDA's commodity and international programs.

Running A Booth?

10 MISTAKES TO AVOID

We all make mistakes, however, if we are aware of the pitfalls that can occur, there is a better chance we can avoid errors that, more often than not, can be fairly costly. The following are 10 of the most common mistakes exhibitors make pre-show, at-show and post-show:

Pre-show

1. Failing to set exhibiting goals.

Goals, or the purpose for exhibiting, are the essence of the whole tradeshow experience. Knowing what you want to accomplish at a show will help plan every other aspect - your theme, the booth layout and display, graphics, product displays, premiums, literature, etc. Exhibiting goals should complement your corporate marketing objectives and help in accomplishing them.

2. Forgetting to read the exhibitor manual.

The exhibitor manual is your complete reference guide to every aspect of the show and your key to saving money. Admittedly, some show management make these easier to read than others. Albeit, everything you need to know about the show you are participating in, should be contained in the manual - show schedules, contractor information, registration, service order forms, electrical service, floor plans and exhibit specifications, shipping and freight services, housing information, advertising and promotion Remember that the floor price for show services is normally 10-20% higher so signing up early will always give you a significant savings.

3. Leaving graphics to the last minute.

Rush, change and overtime charges will add significantly to your bottom line. Planning your graphics in plenty of time 6-8 weeks before show time will be less stressful for everyone concerned and avoids many blunders that occur under time pressures.

4. Neglecting booth staff preparation.

Enormous time, energy and money are put into organizing show participation display, graphics, literature, premiums, etc. However, the people chosen to represent the entire image of the organization are often left to fend for themselves. They are just told to show up. Your people are your ambassadors and should be briefed beforehand - why you are exhibiting; what you are exhibiting and what you expect from them. Exhibit staff training is essential for a unified and professional image.

At-Show

5. Ignoring visitors' needs.

Often staff members feel compelled to give the visitor as much information as possible. They fail to ask about real needs and interest in the product/service. They lack questioning skills and often miss important qualifying information. Pre-show preparation and training is the key.

6. Handing out literature and premiums.

Staff members, who are unsure of what to do in the booth environment or feel uncomfortable talking to strangers, end up handing out literature or giveaway items just to keep occupied. Literature acts as a barrier to conversation and chances are, will be discarded at the first opportunity. It is vital that people chosen to represent the organization enjoy interacting with strangers and know what is expected of them in the booth environment.

7. Being unfamiliar with demonstrations.

Many times staffers show up for duty only to discover they are totally unfamiliar with booth demonstrations. Communicate with your team members before the show and ensure that demonstrators know what is being presented, are familiar with the equipment and how to conduct the assigned demonstrations.

8. Overcrowding the booth with company representatives.

Companies often send several representatives to major industry shows to gather competitive and general/specific industry information. These people feel compelled to gather at the company booth not only outnumbering visitors, but also monopolizing staffer time and restricting visitor interaction. Have strict rules regarding employees visiting the show and insist staffers not scheduled for booth duty stay away until their assigned time. Company executives are often the worst offenders. Assign specific tasks to avoid them fumbling around the booth.

Post-Show

9. Ignoring lead follow-up.

Show leads often take second place to other management activities that occur after being out of the office for several days. The longer leads are left unattended, the colder and more mediocre they become. Prior to the show, establish how leads will be handled, set timelines for follow-up and make sales representatives accountable for leads given to them.

10. Overlooking show evaluation.

The more you know and understand about your performance at shows, the more improvement and fine-tuning can take place for future shows. No two shows are alike. Each has it own idiosyncrasies and obstacles. There is always room for improvement. Invest the time with your staff immediately after each show to evaluate your performance. It pays enormous dividends.

WTO & MARKET ACCESS

The fourth Ministerial Conference of the World Trade Organization (WTO) ended (November 14) with an agreement by the 142-member organization to launch a new agenda for trade negotiations aimed at expanding global markets and reducing trade barriers. Agriculture was central throughout the discussions because of its importance to nearly every WTO country. "This is an historic agreement that provides a tremendous boost for trade negotiations to further open markets and reduce trade barriers that impede the competitiveness of American farmers," said USDA Secretary Ann M. Veneman. "Expanding global markets for our farmers is vital to the long-term prosperity of our highly productive agriculture and food sector." Veneman participated in the meetings as part of the U.S. delegation led by Trade Representative Robert B. Zoellick. In a press briefing following the meetings, both Zoellick and Veneman noted that an overriding objective of new trade talks is to gain greater market access for U.S. goods and services, including farm and food products.

SEND IN YOUR MEETING NOTICES TODAY

FOREIGN NEWS

Canadian Prairie honey producers recorded a mixed year.

In Manitoba, there was a slightly above average harvest of almost 15.5 million pounds with average production estimated at 170 pounds a hive.

Saskatchewan beekeepers recorded production of 21.5 million pounds with the average per hive put at 215 pounds.

In Alberta the yield was affected by a drought. The harvest of about 17 million pounds was some 25 percent below the average.

A pair of Australian twins who spent several months researching the antibacterial properties of honey for a high school leaving certificate project have won a trip to the United States.

Matthew and Michael Tonini from St Joseph's Catholic High School in Albion Park, New South Wales, were studying how effective honey could be in treating wounds – and which ones worked the best.

"Some anti-bacterial creams disrupt the process, but honey can help in the healing of wounds," Matthew said. "It's natural, and it's cheaper to produce than anti-bacterial products."

The pair tested 11 varieties of eucalypt, including ironbark, stringbark and yellow box and found all inhibited bacterial growth to some extent but some varieties were better than others. Ironbark was particularly effective.

They have been jointly nominated for the Young Scientist of the Year Award for their work and won the Intel Australia Award which will sponsor their trip to Louisville, KY, to present their findings at a science fair next May.

Alan Harman

MAILBOX ... Cont. From Pg. 7

consumption and the image of honey. This someone invests in marketing opportunities and is probably glad to take the responsibility of your ownership in NHB away from you. Oh, at a cost, too – there's always that bottom line, and marketing costs money.

Our industry seems to have returned to the worst case of "us-versus-them" scenario since the National Honey Board was created. Honey packers and marketers of honey are once again vilified, and protectionism and government subsidies are seen as the only hopes for survival.

It's very easy to be cynical nowadays. This publication seems to seek readership through a guest editorial column that regularly demeans industry folk who have sacrificed countless hours and efforts to create better conditions that benefit both producers and packers. Why all this constant effort to further fractionalize the industry? Does the state of the honey market before the National Honey Board existed look all that great?

There is no doubt we need long-term farm policies that benefit beekeepers. Yet how long can a tiny agricultural industry sustain itself with subsidies? Did anyone ever consider that Mexico could be the next China, and Canada could be the next Argentina, and they are right in our own backyard? Domestic honey prices are up now, but where will we be in the next five years?

This is only the opinion of a honey packer who packs only U.S. honey, but the National Honey Board continues to be the best, lowest-cost marketing tool available for U.S. honey. The new health and variety research is clearly skewed towards U.S. honey.

NHB's programs of research, promotion, and consumer information are low-cost tools for the industry, not guarantees of higher prices. I can understand the dissatisfaction of those not involved with marketing of honey. The world market situation is more competitive nowadays. Those not seeing a return on their penny investment are hard put to find a reason to continue this investment.

Yet the marketing of a product in the modern world, and the public relations and technical superiority needed to compete, keep a sterling image, and protect against threats to this image, takes big bucks. We live in a world where food safety, contamination and adulteration have become issues of national security.

Luckily, there is a movement underway to continue the National Honey Board's activities under a different funding apparatus.

This support would come from companies and entities that understand the value of marketing, but not necessarily the promotion of U.S. honey. This will be a very much smaller group of players involved than the present NHB stakeholder base. It will be very interesting to see which players get on board.

So my question to those considering their vote on the next referendum – do you want to be a player, or do you want to sit on the sidelines?

Doug McGinnis
Tropical Blossom Honey Co., Inc.
Edgewater, FL

Pollination Myths

The article by Mark Winston (October issue) is an excellent overview of a major pollinating industry that has sprung up very rapidly in agriculture – the use of bumblebees to pollinate greenhouse tomatoes.

But I was dismayed to see Professor Winston repeat a pollination myth: that tomatoes are self pollinating. If they are self pollinating, why is the rest of the article devoted to helping them get pollinated?

Tomatoes are self pollenizing (pollenizer is the plant that supplies viable pollen), but they don't reliably pollinate themselves (pollinator = the agent of pollination).

The pollination field has a number of myths (a mixture of truth and falsehood), that get repeated endlessly. We, who are professionals, should be helping to put away the mythology.

Dave Green
SC

Author's Response: Thanks for your message. Perhaps, but common usage of the term "self-pollinating" includes plants like tomatoes that provide their own pollen, and whose pollen is close enough to the receptive surfaces of the female part of flowers that wind, insects, or other agents are not necessary to move the pollen. For tomatoes, bees increase the quantity and precision of pollen movement, leading to bigger and rounder fruit, which is why growers don't rely soley on self-pollinating, or self-pollenizing.

Rid Of Skunk Smell

This may not have much to do with bees, unless you or your dog has gotten sprayed by a skunk while in a beeyard. Our dog got sprayed at EAS this past August. Even with the traditional tomato juice bath, the dog still smelled of skunk for almost two months.

The other day, she got sprayed again outside the honey house (slow learner). This time, we tried a different home remedy.

16 oz. hydrogen peroxide
1/4 cup baking soda
1 tsp. dish soap

The smell was instantly gone, and didn't come back even when the dog's coat got wet.

Michael Palmer

CALENDAR

♦INTERNATIONAL♦

Beekeeping and Agricultural Tour to Costa Rica and Panama February 8-18, 2002. This tour will be very reasonably priced. For information contact Dr. V. Sivaram, President, 91-80-3102695, FAX 91-80-3348346, sivaram900@yahoo.co.uk

6th AAA International Conference is scheduled for February 24 to March 1, 2001 in Bangalore, India. The conference is held every two years in a different country.

The conference will be held in the Five Star Hotel in the heart of Bangalore city. For first circular and other details please visit the website: www.beekeeping.com/aaa/

Seale-Hayne Residential Weekend Beekeeping Conference July 12-14, 2002.

Lectures on Scientific and Practical Beekeeping given by scientists and beekeepers of national and international standing. Visit the beekeeping department of Buckfast Abbey.

For more information contact Mrs. Jane Ducker, Oak Cottage, Chapel lane, Manaton, Devon, TQ13 9UA, Phone 01144 1647 221255, email: jane.ducker@hemscott.net

♦ALABAMA♦

The Alabama Extension System, Auburn University will hold its Annual spring Beekeeping Symposium Saturday, February 9 at the Chemistry Building, Auburn University, Auburn. Registration is at 8:00 a.m., the symposium will start at 8:45 a.m. until 3:30 p.m.

Dr. James E. Tew will speak on Alabama Beekeeping. Other topics include Finding and Setting Up Your First Yard, Installing a Package, Raising Queens with Plastic Devices and more.

For information contact Angie Rodgers, Department of Entomology and Plant Pathology, 301 Funchess Hall, Auburn University, 36849-5615, 334.844.5006, FAX 334.844.5005, email: rodgeas@auburn.edu or call Dr. Tew at 330.263.3684, tew.1@osu.edu

♦ARIZONA♦

The American Honey Producers Association will hold their annual convention in Phoenix, January 7-13, 2002, at the Embassy Suites/Phoenix North.

For information regarding the convention contact AHPA, 536 Ashmont Road, Madison, SD 57042.

♦CALIFORNIA♦

The 2002 Association of Applied Insect Ecologists (AAIE) Annual Conference will be February 3-5 at the Berkeley Marina Radisson Hotel.

For information contact Jill Klein, 530.758.8909, www.aaie.net.

♦GEORGIA♦

The American Beekeeping Federation will meet in Savannah for their annual convention January 16-19, at the Savannah Marriott Riverfront.

The convention will feature a pre-convention trip to Wilbanks Apiaries in nearby Claxton and a three-day post-convention bus tour through North Florida and South Georgia.

The Kids and Bees program sponsored by the American Beekeeping Federation Foundation will be Saturday, January 19 at the Oatland Island Educational Center at 711 Sandtown Road in Savannah from 11:00 a.m. to 2:00 p.m. There will be many hands-on, learning activities for all ages centered around honey bees. For information on the kids program contact Kim Lehman at 512.627.0113, misskim@flash.net or call the center at 912.893.3980.

For information on attending or exhibiting in the ABF Trade Show contact the ABF Office, P.O. Box 1038, Jesup, GA 31598, 912.427.4233, fax 912.427.8447, info@ABFnet.org; www.ABFnet.org.

♦ILLINOIS♦

The St. Clair Beekeepers' Association will hold their one-day beginning beekeeping workshop, February 2, 2002, 9:00 a.m. to 4:30 p.m. in either St. Clair or Madison County, IL. Location will be announced later.

For more information contact Tony Erwin, 757 Schlueter-Germain Rd., Belleville, IL 62220-5237, 618.277.9442.

♦MINNESOTA♦

Beekeeping In Northern Climate Short Course University of Minnesota, March 9-10. The method of colony management taught in the course is based on Dr. Basil Furgala's system, which ensures high honey production and wintering success. Other topics covered are equipment needs, disease and mite control, and extracting, bottling, and marketing honey. The cost for the two-day course is $60 if you register before February 21 and $75 after that date. Registration includes a 68-page manual, lunch, and refreshments. A discount on an accompanying video is available to those who attend the course.

Dr. Marla Spivak and Mr. Gary S. Reuter teach the course on the St. Paul campus of the University of Minnesota. For further information and registration brochures, please call, write, email or visit our web site. 612.624.3636; University of Minnesota, Department of Entomology, 1980 Folwell Ave., Room 219, St. Paul, MN 55108-6125; email: spiva001@tc.umn.edu; www.entomology.umn.edu/

♦NEW YORK♦

The First International Organic Beekeeping Conference will be held March 8-10, Chrstnut Ridge, NY, focusing on The Plight of the Honey Bee: Causes and Remedies. Speakers will include Gunther Hauk (U.S.) and Thomas Radetzki (Germany), among others.

For more information contact The Pfeiffer Center, 845.352.5020, Ext. 20 or info@pfeiffercenter.org.

The Southern Adirondack Beekeepers' Association will hold a Spring Seminar March 30, 2002 on the SUNY campus in Albany.

Speakers include Nick Calderone, Tom Seeley, John Skinner, Jim Tew and Kirk Webster.

For more information contact Aaron Morris, Amorris@uamail.albany.edu, 518.899.6113.

♦OHIO♦

The Tri-County Beekeepers' Association of Northeastern Ohio and The Ohio State University Extension Service will hold their 24th Annual Beekeeping Workshop, Saturday, March 2 at The Ohio State University, Ohio Agricultural Research and Development Center (OARDC). OARDC is located on State Route 83 south of US 30 in Wooster, OH.

The keynote speaker is Reg Wilbanks, Wilbanks Apiaries, Claxton, GA. His topic is A Year at Wilbanks Apiaries – The Package Bee Industry. In addition smaller group sessions will be held on Cooking With Honey, Bee Races, Beeswax, Disease Identification, Queen Rearing, Apitherapy, Spring Management and Basic Beekeeping.

Registration starts at 8:00 a.m. with the program starting at 9:00 a.m. until 4:00 p.m. Pre-registration is $10, at the door $12.

For information contact Sue Shipitalo, 740.622.8218 or Dave Heilman, 330.263.3684, heilman.2@osu.edu.

Mid Ohio Valley Beekeepers Association will hold its annual Beekeeping Basics School, on four Tuesdays in February beginning February 5 to 26, 7-9 p.m., at the Washington County Career Center, State Rt. 676, Marietta. In West Virginia at the Parkersburg South High School Vocational Agriculture Bldg. on Saturdays February 9th and 16th from 8:00 a.m. till noon.

$20 registration fee per family includes Dadan'ts *First Lessons in Beekeeping* book, first year's membership in the MOVBA, door prizes and raffles. Speakers will include the WV State Apiarist and other beekeepers.

For information contact WV University Extension Service at 304.424.1960.

The Southwestern Ohio Beekeepers School will be held at Princeton High School, near Cincinnati, Saturday, Mary 9, 2002. Registration begins at 8:00 a.m. with the meeting beginning at 9:00 a.m.

Keynote address is on SMR Hygienic Behavior Breeding. Other topics include Pre-Beekeeping, Getting Started with Bees, Installing Bees, pests and Diseases of the Hive and more.

Pre-registration is requested. For information contact The Ohio State University Extension office in Butler County, 513.887.3722, www.ag.ohio-state.edu/~warr/ag/Bschool.

INNER ... Cont. From Page 8

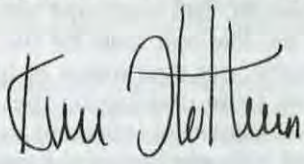
they try. Labor, fuel, taxes, suppies like all things in life cost more today than last week, and last year. Meanwhile, these same things, especially labor, cost less in most other countries. Thus, it costs more to produce a pound of honey in the U.S. than almost anywhere else in the world.

So, with increased consumption of honey in the U.S. has come increased imports. They pay their share, that penny a pound to support the Board, but they cost less to begin with...so what honey are packers going to use? The least expensive, of course. U.S. honey sits in warehouses, unsold, or when sold, at prices that do not cover the cost of production.

It's a rock and a hard place. Word is that the referendum will fail, (but that's not for certain), and the Honey Board will go away. Word is too that the Packers, Importers and Handlers will form another Board, similar in some aspects to what it is now. Maybe even the same people running it.

So either way the honey industry will continue to have some of the things it has relied on...crisis management, information resources, statistics. But maybe not everything, or not everything free. Think about this....would a board, run by and supported by a group of packers, be willing to pay for all the free recipes, brochures and the like, so you can sell honey (that they won't be selling then?). Maybe, but I doubt it.

I think our 15-year free ride, at the expense of large honey producers is about over. And maybe that's not a bad thing. If something has value it should be paid for. You don't give honey away, because it has value. If those things we took for granted, and advantage of for so long have a value then they should have a price. If you need it, you will pay for it. It was easy when it was free, but maybe it's time we grew up.



Display Advertisers

Grampy's Sales Pitch

John Gould

When it was essentially prudent, my grandfather was scrupulously honest, but there were those in the community who advised not to trade cows with him. You may understand the difference better if I relate how he sometimes sold honey at the fairs.

My grampy had many colonies of bees, and he sold honey in the comb in little basswood boxes provided by the A.I. Root people for that purpose, sized exactly right so the bees capped the comb off at one pound. The basswood box fit into a pasteboard container, also from Root, and the whole thing sold for 25 cents. Grampy never owned an extractor, and he didn't foresee clear honey in a glass jar.

Grampy had made a screened cage 10 feet square that he took to the fairs with a hive of bees. With the bees flying inside the cage, it made a spectacular attraction. And with Grampy inside, ready to sell honey, fascinated spectators would stand about to hear his bee lecture and then buy a box of honey through a little slot in the screen.

Grampy would be in his shirtsleeves without gloves and veil, and to the public this seemed a daredevil stunt. Grampy had feeders suspended in the cage, filled with sugar syrup, and his bees were occupied in peace, carrying the syrup into the hive to digest it into honey. They were too busy to sting anybody. So he'd hand a box of honey out through the slot, collect a quarter, and say, "Next!"

Grampy was a fixture at the fairs, and never missed the last one of the season, which came in October at Topsham. (Now it is held in August.) This was late in the bees' Summer. From Spring flowers to Fall asters, the honey flows were over, and by October, many mornings were too cool for his bees to fly. The bees he took to Topsham Fair often found it too cool in the exhibition hall to fly around in his cage, and would have to wait until a crowd assembled and body heat warmed the place.

He wouldn't begin his sales spiel until his bees were flying and he had a crowd. He had short paragraphs prepared, mostly selections from his bee journal, and he had ready answers to the most frequently asked questions. He was able to deliver all these prepared words as if they were off the cuff, playing beautifully his part as a real hick from the boondocks.

Instead of observing Columbus Day on October 12, our town always substituted the middle day of the Topsham Fair. So I had a no-school day to go and sell honey with Grampy! I was 10 the first October I did. But I was no stranger to Grampy's honey bees.

He'd taken me among his hives, and I had my own veil and leather gloves. Grampy had told me never to be afraid, but always to be cautious, and I did know how to listen and tell if the bees would be unfriendly. I was never stung by one of Grampy's bees. Grampy said bees have no ears and can't hear if you shout at them, but it's still wise to say hello when you pass.

Grampy had told me our best honey is from apple blossoms, and next is from white clover. He said that when honey flows taper off, bees fly farther and farther to find nectar, so he always planted a field of buckwheat close to home and spared them mileage. Late-season nectars, he said, produce darker honey, and lack the delicate flavor of apple and clover.

I was real important when I stood in my shirtsleeves inside the cage at Topsham Fair! I even heard a lady say, "Lookit that kid? You couldn't hire me!" I was having more fun! I handed out little samples of honey, and Grampy stood by me selling the honey. The bees circled about us, coming and going, and every so often we'd need to put more sugar syrup in the feeders. One of Grampy's tricks while he was giving his bee lecture was to pick one up by the wings and hold it to the screen so folks could see the stinger. I noticed, but the audience didn't that each bee he held up was returning to the hive from a feeder, and was so loaded with syrup she didn't want to make a fuss about anything.

Then something happened that was not in the script. I had handed a sample of honey out to a gentleman who had taken it, tasted, and said, "Very good! I'll take a box."

I stood back so Grampy could use the opening in the screen. Grampy said, "Yes, sir?" The gentleman said, "I'll take a box of honey."

Grampy reached out a box to the man and said, "That will be 25 cents."

The man put a dollar bill in Grampy's hand. And Grampy said, "Yes, sir. Here you are, sir." And he handed out three more boxes of honey. Grampy seemed pleased with himself.

The man said, "I gave you a dollar."

Grampy said, "Next!"

The man said, "I don't want this honey! Give me my change!"

Grampy said, "What say?" pointed at his ears, and shook his head. Deaf?

My grampy could hear a penny fall on a featherbed at 500 paces! The scene that followed was a dumb show well worth a fantasy trip back into the Middle Ages, and the man finally gave up and walked away, no doubt muttering that something should be done about these midway swindlers that show up every year at Topsham Fair.

I now knew why people mentioned cow trades. All Grampy said was, "Nobody argues with a swarm of bees! I didn't cheat him! He gave me a dollar, and I gave him a dollar's worth of honey!" Which was true, but I think the man felt he got stung. Did he?