Bee Culture

NOVEMBER 1994

INSIDE

TRACKING AFRICAN HONEY BEES

COST EFFECTIVE INSPECTION

USING BEESWAX FOR PROFIT

Novem

COLUMNS

DEPARTMENTS

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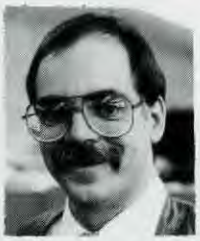
Publisher



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Subscription Rate:
United States, one year, $16.50; two years, $30.00. Newsstand price: $1.95. All other countries, (U.S. Currency only), $7.50 per year additional for postage. Send remittance by money order, bank draft, express money order, or check. Published monthly. Change of Address: Return completed form contained inside issue. Articles are solicited. Opinions expressed by the authors are not necessarily those of the publishers.

ISSN 1071-3190

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Postmaster:
Please send form 3579 to: The A.I. Root Co., 623 W. Liberty St., Medina, OH 44256 Tele. 216-725-6677.

Circulation Figures reviewed by Deloitte & Touche, CPAs, and are available on request.

The A.I. Root Co., Publishers 623 W. Liberty Street Medina, Ohio 44256

Second Class Postage Paid at Medina, OH and additional offices.

Bee Culture is Printed on Recycled Paper

VOL 122 ⬡ NO 11

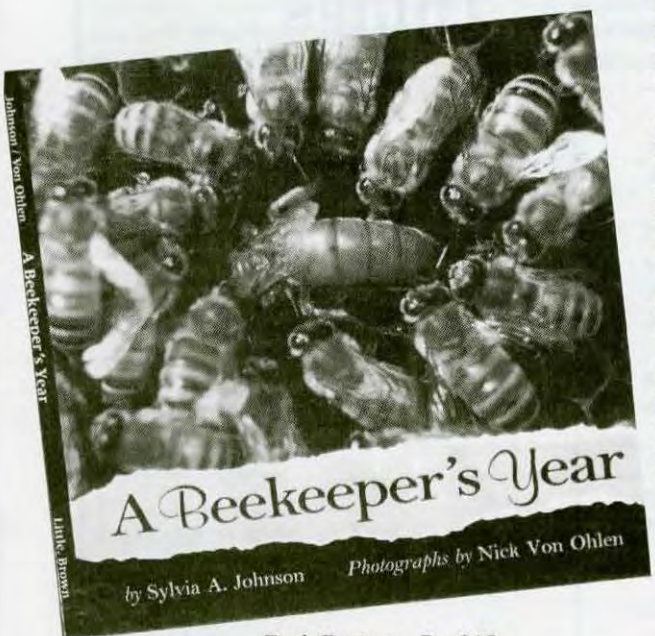
ber '94

Using Beeswax, Pg. 645

FEATURES

Cover
This sedum plant is but one of many homeowners can plant to attract honey bees t their yards and gardens. Though questionable to the amount of honey donated to their final yield, the pleasure they give, to bees, their keepers and anyone who enjoys the beauty of these flowers canno be measured.

photo by Kim Flott



Book Reviews, Pg. 616

Richard Taylor & Connie Bright Pg. 647

INNER COVER

1995 marks the 100th anniversary of the passing of L.L. Langstroth, the man whose vision propelled the beekeeping industry of the world into the future. It also marks the 40th anniversary of the founding of the Eastern Apicultural Society. This double celebration comes together the first week of August in '95, appropriately enough, in Ohio, Langstroth's home.

EAS '95 has taken these two events and brought them to the fore as the theme for their annual conference and short course. Langstroth's vision, and the opportunity to bring hundreds of beekeepers together for a common cause is the theme for EAS '95, The Year Of The Hive.

The 'Hive' is central to all we do. Absolutely everything associated with beekeeping starts with, spends the day with, or results from – a hive.

To that end the majority of the talks, workshops and the short course will focus on some aspect of the hive. The science, the history, the future and the anatomy of the hive make up all the sessions and meetings.

Over the next few months I'll give more detail on each of these, and on all the other peripheral places and things and parts of the rest of the meeting. For now, plan on July 31, Aug. 1-4, 1995 to venture to Wooster, Ohio for what I think will be one of the most intriguing meetings of the year.

•

Literally hundreds of reports came to this office this fall of colony loss between honey harvest and winter prep. Callers described an (average, below average, wonderful - take your pick) harvest, and, a few weeks later, when inspecting for winter, empty colonies, some-to-lots of honey left, and, though rarely, piles of dead bees out front.

Only two questions were needed to (probably) determine what happened: 1) did you treat for *Varroa* this spring? and 2) did you treat for *Varroa* last fall?

Most, but not all, responses were the same for both – no. For the rest, it was a 1) yes, 2) no, series.

I don't know how much more can be said about this, but, especially if your bees are *anywhere* near other bees, they will be *reinfected* between fall and fall treatments. And that means a spring – as late in the spring as the label allows – treatment, along with a fall – the same day you take your honey supers off – treatment. No ifs, and or buts. Don't treat and you don't have bees if they have *Varroa*. And, they get infested *real* easy, *real* fast.

I wouldn't be surprised if as you are lifting old strips out of the top, new mites are walking in the bottom. I'm not kidding. Not one bit.

Commercial beekeepers, or at least a lot of commercial beekeepers have been seeing this for a couple of years or more. The pattern was the same this year, but now it is visiting those with fewer colonies, in more distant places – with the same deadly results.

Varroa mites are not going to go away, and even if you treat, your neighbor that didn't, or that (probably last) feral colony is going to share their wealth, and their mites with every colony you have.

You can, like many, simply let it happen, searching for that one in a hundred or so that doesn't succumb. Then building from that stock – hoping for and looking for resistance or tolerance or luck. There are bees out there that seem to continue, uninterrupted and unaffected. But not many, not yet.

Continued on Page 652

About Lots Of Things . . . Some Good, Some Not

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We encourage letters to the editor on any subject whether appearing in the magazine or not. Direct your letters to: Editor, P.O. Box 706, Medina, OH 44258. We reserve the right to edit letters for content and length, but will avoid this if possible.

Coming Soon

1995 promises to be an interesting year for those who keep bees, whether you have 1,000 colonies or only two out back. It'll be the first year without a loan program – but maybe it just might, could possibly come back. The new farm program hasn't been set in stone, yet.

The China syndrome should be solved, or maybe will be solved, to probably no one's complete satisfaction – but no matter who wins, or loses, the producer-packer syndrome will heat up.

Which leads to how many producers can weather any or all of these storms. For years, when a producer changed jobs the colonies left behind were used – fewer beekeepers maybe, but nearly as many colonies producing honey and pollinating crops.

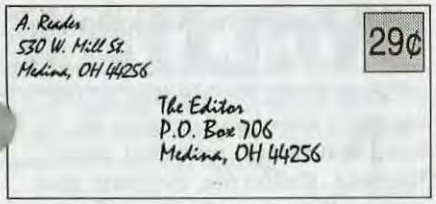
The question is, how long can those colonies keep being absorbed into the system? And, how many colonies will be available for pollination? For the large crops, where truck loads are used, the picture will be pretty much the same because growers and beekeepers work in that scale. But for the smaller operators, will there be bees?

Meanwhile, *Bee Culture* has some pretty ambitious plans for next year, too. A year-long series on observation hives starts soon, so if you're planning one for next season stay tuned to this – it will be the best how-to on this subject EVER!

What about your association? Is it thriving? Or, could you use a boost? Next year we'll have lots on boosting association memberships, meetings, newsletters and more!

Selling honey a problem? We're beating that drum loud next year, too. Labels, markets, pricing and more. The public wants honey – there's no doubt about that. We'll have some good ideas on getting your honey and their money together.

So, stay tuned to *Bee Culture* for what's happening soon, and the not quite so soon.



MAILBOX

New Zealand Imports?

Regarding USDA Docket #89-117-3; See Federal Registry, Page 36373 Vol. 59 No. 136 Monday July 18, 1994. Comment period closed Aug. 17, 1994. Proposed rule, at the continued request of the New Zealand beekeeping industry since 1990, would allow for the import of live bees and bee semen from New Zealand to the U.S. This rule would be an exception to the U.S. Honeybee Act of 1922 (No foreign bees to the U.S. excepting Canada) and would presumably preempt the Hawaii Statutes Chapter 150 A. (No live or dead bees from anywhere including the U.S.)

Please help:

1. Object to exception in Honeybee Act 1992; No New Zealand bees to U.S.
2. Exclude Hawaii from any legislation regarding exceptions to Honeybee Act 1922.
3. No Transshipments or transiting of New Zealand bees through Hawaii to avoid possible contamination by known diseases and pests, should N.Z. bees be allowed into mainland U.S.
4. Resolutions needed at State and Federal level to recognize and protect the only certified clean honey bees in the U.S. which exist in Hawaii today.

NOTE: Canada required five years of protocol development to allow Hawaiian queen bees into Canada after they closed the border in 1987 and New Zealand refuses to allow import of Hawaiian certified clean queen bees. New Zealand currently does not have a certification protocol established to certify the alleged disease and pest free status of New Zealand bees. Allowing N.Z. bees into the U.S. constitutes no economic benefit to the U.S. or Hawaii, and the contamination of the clean Hawaiian bee stock would quickly destroy the Hawaiian Beekeeping Industry.

Please help preserve, protect and enhance the growing Hawaiian Beekeeping Industry. Call immediately for additional information.

Walter Patton
Hawaiian Beekeeper, 808-964-5401

Simple Supplements

In the August 1994 issue of *Bee Culture* Mailbox Section, Steven Willis of Renton, WA, refers to Mark Winston's article in the May 1994 issue. Dr. Winston indicates in the article that pollen mixed in a pollen supplement may pose a risk of disease transmission. He further states that synthetic attractants derived from natural attractants would be very useful in supplement formulation. Mr. Willis asks if this synthetic attractant is "Fruit Boost" from Phero Tech Inc or some other product.

Dr. Winston in his article stressed the importance of adding natural pollen to pollen substitutes to enhance their attractiveness to bees. Since natural pollen may contain bee disease-causing bacteria, he indicated it would be very useful if natural attractants found in pollen could be isolated and produced synthetically. These could then be used in place of natural pollen to increase the attractiveness of supplements to honey bees. Such natural attractants have not been isolated and are not presently available.

Fruit Boost mentioned by Mr. Willis, is a pollination enhancement product and Bee Boost, a beekeeping tool, are products resulting from Dr. Winston's research work on the queen mandibular pheromone. They are produced and marketed by Phero Tech Inc. 7572 Progress Way, Delta, B.C. V4G 1E9, Canada.

Doug McCutcheon
Apiculture Consultant
Phero Tech Inc.,

Removing Wax

The problem is at season's close: the difficulty of lifting accumulated wax from surface of the last honey. Also it applies when you simply wish to lower honey in the storage-tank, and some particles persist in hanging onto the sides of tank.

Passing by one usual method whereby a small amount of surface residue can be lifted off using a very hot, damp cheesecloth – here is our newer discovery.

To try this new method on the mass of surface wax, I was aware of past difficulty dipping off such wax after having drawn it into one place by using a light touch moving some large spoon across the surface. The old habit is to then insert the spoon again and again beneath this gob until most of the residue (what is not stirred into the honey) is lifted out.

In my wife's pantry, on a rack, I found this invaluable item. She calls it a "batter-beater" (also called a whisk). If you can't get this cross-wired spoon, just make one. The spoon-surface is just over 2 x 3"

First loop a strong wire, so its two ends can be inserted into a wooden handle. The loop itself is to have some cross-wiring.

The process for its use (to remove the scum or wax on surface of a honey-tank or barrel of liquid honey) is as follows. After taking your strainer off, gather the surface wax to some extent by sliding the tool lightly over the wax-surface, sliding the amount accumulated to the near side for dipping it off.

Next, do **NOT** insert the spoon-shaped wire dipper beneath this gob of wax with honey. It has sufficient adhesive property, due to wiring across the spoon, to not only get contact when you press it down, but also to lift the wax itself by simply revolving the spoon (not beneath the honey in usual manner, which picks up honey beneath the wax). Only the honey immediately beneath the wax comes up by this method. And therein lies its advantage over dipping a spoon beneath the surface of the wax. You don't dip, but press down and then revolve the spoon about 3/4 turn –

Continued on Next Page

MAILBOX

just enough to let the gob come free of the main honey itself.

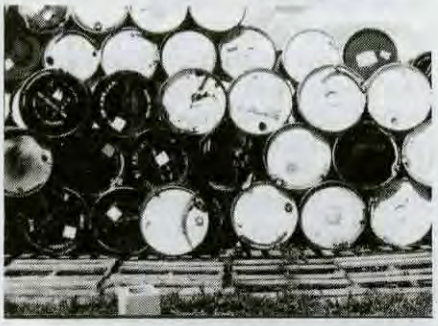
Cleverness of the process is its very last stage. Usually there is difficulty having the spoon *let go of* the gathered mess of wax and honey (most beneath the wax itself). Now you simply let any wax and honey that clung to the whisk to slip through it when brought into contact with the receptacle or wax already in it. The wires are easily cleared on the first dip: to easily gather a few subsequent dips which will clear substantially, most all the honey-surface.

Wayne Keller
Oskosh, NE

Easy Honey!

I thought you might find this photo interesting. My wife and I think this might be the answer to the cheap Chinese honey. We will just train all the bees to put the honey directly in the barrel and cut out all the expense of supering and extracting. It would not only be cheaper to produce honey, but also easier on the beekeeper!

Actually, a swarm has quietly set up housekeeping in a barrel stacked beside the warehouse. The stack was four barrels deep and



five barrels high and the bees chose a barrel in the middle of the pile and back in the second row. The barrel had a lid on it which I removed to take the picture. The lid was first removed by one of my men who failed to see the humor of the whole situation as he beat a hasty retreat to the warehouse.

Gary Milligin

Prolific!

I have a story about a swarm of dark bees that I hived in mid-June 1992. The origin of this swarm is unknown. In 1993 this hive swarmed three times and stored three shallow supers. I put no supers on these swarms.

In 1994, the original hive swarmed once and stored three shallow supers, swarm #1 swarmed once and stored four shallow supers, swarm #2 swarmed once and three shallows and #3, which I put in my backyard in the center of a city subdivision swarmed four times and stored three shallow supers. Number one swarm from this colony stored two shallow cut comb and one round section super, #2 swarm stored one shallow. I put no supers on #3 as it was a small swarm. I hived #4 on Sept. 17th. It is looking good after 10 days, so in two years, this one colony has become 11. Is this production of bees and honey by a colony remarkable or has someone else had similar results?

Kenneth J. Cook
Allen Park, MI

Mixed Messages

The American Beekeeping Fed. is asking Honey Acres for funds for an anti-dumping lawsuit against Chinese honey. The National Honey packers and Dealers Assn. is asking Honey Acres for funds to fight an anti-dumping law suit.

The idea of spending hard-earned dollars ($500,000) to fight each other with the only certain winners being the lawyers on both sides seems to me to be ridiculous.

FACTS:

1. Price of Chinese honey is low.
2. No U.S. lawsuit is going to stop production of Chinese honey. If it can't be sold in the U.S., it will be sold somewhere. World market will absorb this honey and price will adjust accordingly.

It would seem the money would be better spent on promotion and quality assurance.

There is no quick solution to this problem. The only good solution will come from co-operation by all parties; not by government imposed solution.

Walter Diehnelt
Eugene Brueggeman
Honey Acres Inc., Ashippun, WI

More Southern Beekeeping

Could we please have some articles about beekeeping in the south? I have read articles on northern states, mid west states, Canada, California, England and many other areas but very few about the South.

James Lee
Odessa, FL

Editor's Note: We try to produce balanced coverage and many of our articles are more or less 'generic' in that the information can be applied nearly anywhere. But your question deserved a second look, so in 1993 we had articles on Georgia, North Carolina, Arizona, wax moths and wintering in the south. In 1992 we did an article on fire ants feeding in the south, and so far this year we've looked at mite control, Arizona beekeeping, races of bees in the south and York Bee Company.

Not overwhelming, certainly, but some for you to digest. Meanwhile, we'll look a bit harder from up here for info about down there.

More E-Mail

While accessing the Internet via my Delphi Internet service, I found a new area being offered under Delphi's Gopher menu. I have briefly scanned the information and it appears quite useful for beekeepers. Also, quite extensive. Incidentally, A.I. Root Co. is included under Menu Item #4.

I just thought you might find this beekeeping source to be of interest. Incidentally, I just caught a new information release I thought was promising. Apparently, the state of Maryland feels the Internet is of such importance, they are now offering inexpensive access to all Maryland residents. Internet email access is offered for $35. per year, while full Internet access is available to residents for $100. a year plus the cost of a local telephone call. Quite a deal and quite innovative on the part of the state of MD.

Bees and Beekeeping
1. Index of Information
2. Basic Beekeeping Information
3. Model Certification Plan
4. Sources of Beekeeping Supplies, Info.
5. Africanized Bees
6. Bees and Beekeeping Newsletters
7. Cooperative Ext. Serv. State Publ.

MAILBOX

3. U.C. Davis 4-H beekeeping publ.
. USDA/ARS Current Bee & Pollination Research (Full-text search)

Stan Kain
STANKAIN@delphi.com

Hay Fever & Pollen

I want to talk about an old subject as far as bees are concerned, hay fever. I can remember my early hay fever when I was seven years old. I am now 98 so I have a fair experience. It was far the worst when I was in my 30s and 40s, but I am cured now.

I had hay fever first when we lived in different sites in CA. Then we moved to IL and different sites there, finally moving to the D.C. area and its suburbs where I have lived for 55 years.

I came to this location to have enough space to grow hollies. Soon after I started collecting hollies, I realized I needed a realiable source of bees to pollinate them. I decided to keep two hives of bees. I didn't like the taste of my holly honey until my wife put it on the table and I began putting a teaspoon in my tea. I do that 6 mornings a week, plus once a week I have oatmeal with two teaspoons of honey. Some place along there, my hay fever disappeared. I attribute my improvement to honey.

Why didn't the allergy skin tests show up some of the pollens causing my hay fever? The reason, in my mind is the pollen had to be pure. What might have been causing my hay fever was a mixture of different kinds of pollen. We ought to start out not with what the scientists say is pure pollen but a mixture of what we are inhaling and what is found in honey.

It wouldn't take many tests throughout the country for a valid test. The source of honey must be local, room temperature, taken regularly for 6 months. A sucessful test could mean a steady market.

Arnold R. Gould
Bethesda, MD

Year-round Patties?

I read Dr. Taylor's Q&A and can't understand why he would encourage anyone to contaminate honey with grease and sugar. He said to leave patties on during a honey flow. I'm sure it would control mites, but your magazine and the bee industry has spent alot of time and money educating beekeepers to keep foreign substances out of honey. Oil, sugar, menthol, water are edible but I don't want them in my honey. I've talked to beekeepers that feed grease and sugar all year, I don't think its ethical practice. They may not store oil with honey but I think they could store sugar. I think of Mr. Taylor as one of the gods of the bee world, so I hope he doesn't take offense to my comments.

Dave Duncan
Crestline, OH

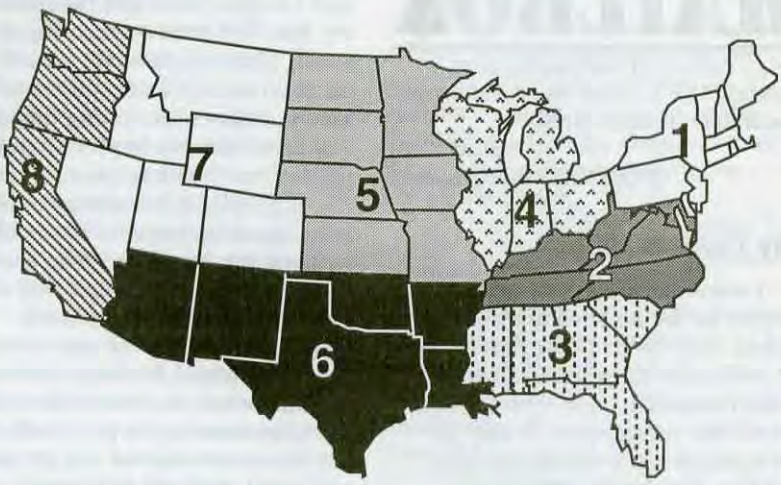
Editor's Note: Using a grease patty on a colony, in the brood nest will not contaminate the honey stored above in supers. As of yet there are no recommendations for timing of grease patties. The amount of sugar in a patty in no way could adulterate the product, however, the ethics involved are unclear. If you question the practice, don't do it.

NOVEMBER Honey Report

November 1, 1994

REPORT FEATURES

Prices shown are averages from many reporters living in a region, and reflect that region's general price structure. The Range Column lists highest and lowest prices received across all regions, from all reporters.



Extracted honey sold bulk to Packers or Processors	Reporting Regions 1	2	3	4	5	6	7	8	Summary Range	Avg.	History Last Month	Last Yr.
Wholesale Bulk												
60# Light	41.25	42.50	42.01	37.87	29.40	42.58	48.50	41.40	29.40-56.00	43.00	40.62	44.85
60# Amber	39.03	42.08	29.75	34.90	39.40	38.30	43.90	38.20	24.60-51.00	40.76	37.82	41.82
55 gal. Light	0.56	0.53	0.60	0.51	0.54	0.54	0.53	0.61	0.45-0.90	0.58	0.58	.607
55 gal. Amber	0.51	0.53	0.52	0.47	0.52	0.48	0.50	0.53	0.41-0.78	0.53	0.53	.558
Wholesale - Case Lots												
1/2# 24's	22.03	23.74	22.95	24.88	29.95	20.35	22.50	19.47	19.20-30.00	22.92	22.09	21.93
1# 24's	28.06	29.83	34.50	20.20	30.14	31.17	32.50	28.67	1.00-37.90	29.74	31.19	31.03
2# 12's	28.00	28.60	30.75	27.98	29.35	27.03	29.30	32.00	25.20-35.31	29.17	29.58	30.20
12 oz. Plas. 24's	27.26	27.43	31.95	27.78	26.08	25.11	29.35	24.10	22.46-38.40	28.13	27.92	27.87
5# 6's	29.97	31.00	30.70	31.75	31.34	27.28	28.50	29.15	27.25-38.00	31.27	29.75	30.28
Retail Honey Prices												
1/2#	1.46	1.80	1.25	1.25	1.19	1.51	1.15	1.14	0.99-3.50	1.45	1.38	1.06
12 oz. Plastic	1.63	1.76	2.00	1.64	1.47	1.80	1.65	1.41	1.19-2.09	1.70	1.59	1.63
1 lb. Glass	1.88	1.91	2.00	2.18	1.83	2.04	1.94	1.72	1.39-2.89	1.93	1.83	1.80
2 lb. Glass	3.23	3.34	3.50	3.38	3.22	3.14	2.98	3.65	2.79-4.00	3.36	3.24	3.14
3 lb. Glass	4.28	4.68	4.50	5.60	3.85	3.99	4.82	4.55	3.50-5.60	4.47	4.34	4.25
4 lb. Glass	5.48	6.06	5.50	5.90	6.13	5.50	5.15	6.25	5.15-7.50	5.75	5.48	5.86
5 lb. Glass	6.83	7.43	6.25	6.88	7.30	5.99	6.10	6.49	5.89-9.50	7.07	6.52	6.51
1# Cream	2.43	2.67	3.19	1.79	1.96	2.91	2.10	1.89	1.79-4.25	2.50	2.69	2.52
1# Comb	3.03	2.73	2.80	3.25	2.99	3.40	3.50	3.55	2.15-4.50	3.16	3.14	3.48
Round Plastic	2.97	3.13	2.95	2.90	3.00	3.18	6.00	2.75	1.75-6.00	3.04	3.02	3.05
Wax (Light)	1.63	1.44	1.85	1.50	1.50	1.66	1.93	1.34	1.00-3.50	1.65	1.98	1.72
Wax (Dark)	1.30	1.23	1.55	1.35	1.30	1.07	1.15	1.21	1.00-2.75	1.31	1.48	1.25
Poll. Fee/Col.	29.46	27.50	28.75	32.50	32.73	20.17	35.00	32.00	12.50-55.00	30.69	28.83	30.38

MARKET SHARE

Moving honey in the winter, especially new crop honey lends itself to several opportunities. After you have loaded down friends and family (but don't overdo that, it takes away that Christmas treat) consider farm markets, gift packs, decorated bears, fall festivals, craft fairs and other hive products. Don't fret about moving honey – with just a bit of looking, you'll actually need more.

Region 1

Overall the region had a 10-25% reduced crop this season, ranging from 40-75% of normal. However, some areas, especially with adequate moisture nearly doubled expected output. Prices are, accordingly, rising for local product. Gift baskets popular as promotions for holidays two or three honeys, candles, honey products do well.

Region 2

Overall the region appears to have a slightly above average crop this season due to generally mild winter, adequate moisture at the right time and good forage. Some spots down, especially for mid-summer flows. Promotions in the region include free recipes, honey give-aways, decorated bears, candles in unique molds and some direct mail to customers.

Region 3

Over an average crop for the region, which still means a lot of honey. Summer generally too wet for great crops, but spring strong. Fall flows average to great for overwintering. Promotions tend toward festivals and farm market shows, along with gift baskets and decorated bears for the holidays.

Region 4

A fairly productive season for the region overall, which comes in at just a tad above average. Spring and summer crops not stunning but fall flows outstanding to make up the difference. Promotions for holidays run toward gift boxes (*very popular*), along with one or two day promotions/specials at stores, farm markets and fall festivals.

Region 5

A strong season for most producers. Those who controlled mites made 100-130% average crop. Those who didn't made 25-30%. Easy to tell which did best. Overall, the region came in at just about right for the year. Promotions used here include gift baskets, seasonal price 'specials' to retailers, free demos in stores and farm markets and fall festivals.

Region 6

85-125% crop reported across th region, following the rainfall. Overall a bit down for the region, but not by much. Any short fall blamed on dry spring. Promotions in farm markets and fall festivals produce good results, especially when gift packs, candles and other hive products are featured.

Region 7

Not an outstanding season this year. Lots and lots of pesticide problems early on slowed any great crop potential. The region was generally down, because of fewer bees more than anything. Promotions even slowed because of this, but tourist items do well small gift packs, candles and the like.

Region 8

Very reduced crop across the region with the exception of eastern WA this season. Dry, dry, dry was the word, and the reason. Promotions at year-round farm markets work well here, as do already-prepared and mailed for clients' gift baskets. Mall demos do well, too.

Books, Books . . .

How To Photograph Insects and Spiders. Larry West with Julie Ridl. Published by Stackpole Books, 5067 Ritter Road, Mechanicsburg, PA 17055. 118 pgs. Soft. $16.95. 1-800-732-3669.

This latest installment in Stackpole's popular *How To Photograph* series is filled with valuable information for beginning, intermediate, and advanced nature photographers. For beginners, all of the basics of 35mm equipment and technique for close-up photography of butterflies, bees, ants, and even scorpions are thoroughly covered. Intermediate and advanced nature photographers will benefit from Larry West's expertise in the more complex aspects of insect photography, and from the results of his experimentation with new fill-flash techniques made possible by recent advances in photographic technology.

Noted nature photographer Larry West lives in Mason, Michigan. Julie Ridl lives in Holland, Michigan.

Like many beekeepers, I photograph bees – in the hive, on flowers, on frames, at the entrance – for both pleasure, decoration and occasionally profit. Most of us who take photography seriously use equipment more sophisticated than the popular point and shoot models. This book covers equipment, technique, special focus on insect position, and composition, plus hundreds of absolutely stunning photos of insects and such, plus the equipment used for the shots.

I recommend this book for anyone who wants to improve their skills, and become absolutely intimate with a honey bee.

Kim Flottum

Bee Venom: Exploring The Healing Power. Mihály Simics. Published by Apitronic Publishing, #204, 1331-15th Ave. S.W., Calgary, Alberta, Canada T3C 0X8. 80 pgs. Soft. $8.95

This is the first book that provides you with detailed information on various methods, treatments and products containing bee venom. It is everything you need to know about bee venom and its healing effects when practicing apitherapy.

In carefully following the instructions you will discover how to treat different ailments with bee stings and prepared bee venom products such as: multiple sclerosis, rheumatoid arthritis, psoriasis, topical ulcers, lumbago neuralgia, tennis elbow, etc.

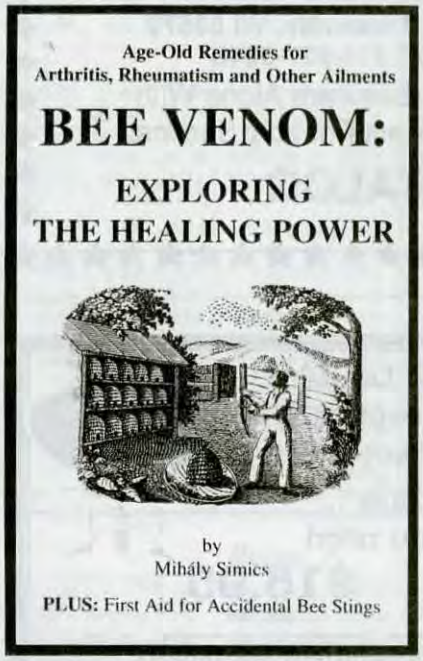
Chapters include bee biology, various forms of using bee venom as medicine (stings, creams, ointment, liniment, tablets, inhalation), using venom for various ailments, how to apply these medications, other products from the hive and first aid.

This book adds another chapter in the quest for more information on using honey bees in the aid of mankind's ailments.

There is an extensive appendix, source list, reading list and bibliography.

If your interest lies in apitherapy this is a valuable addition to your library.

Kim Flottum



Pollen Grains of Canadian Honey Plants. Clifford W. Crompton and Walter A. Wojtas. Published by Minister of Supply and Services Canada. Available from Canada Communications Group – Publishing. Ottawa, Canada K1A 0S9. 228 pgs. Soft cover.

If you have ever wondered where your bees have been, or what kind of honey is this, really? Then this book will answer every question.

But probably more importantly, if you export honey you need to know, and to prove what variety of honey you are selling.

The correct name for this activity – studying with a microscope the pollen grains found in honey – is melissopalynology. It is the primary method of characterizing honey for grading purposes used all over the world, except, of course, in the U.S. and Canada. This can put exporters to some disadvantage if they cannot meet the standards of receiving countries.

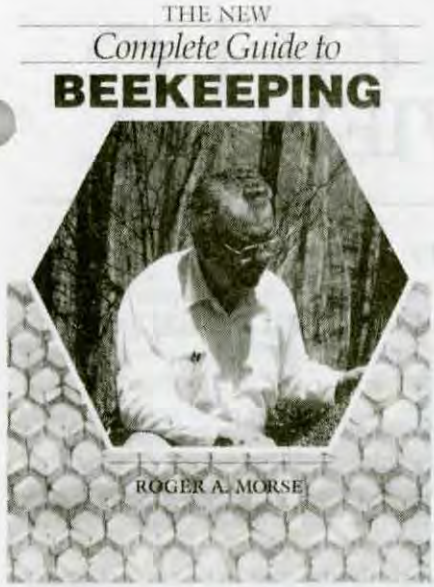
This book contains chapters on technique, extensive keys to identify pollen grains, and hundreds of photos of pollen grains, both microscope and SEMs.

A typical entry gives three or four common names of the donating plant, a detailed description of the pollen grain itself, the distribution of the plant (in Canada), its bloom period and ecological notes as to where it grows.

Although it doesn't discuss distribution in the U.S., dandelion pollen is dandelion pollen. Nor does it address those plants hardy only in the extreme southern U.S. (nor, I suppose would you expect it to).

If you need, or want to know where your bees have been, have access to a microscope, and some time on your hands, this is a worthwhile book to use and study.

Kim Flottum



The New Complete Guide To Beekeeping. Roger Morse. 188 pgs. Soft. $15.99

Roger Morse has updated his popular beekeeping guide for beginners, intermediate and professionals. This is the fourth edition, the first published in 1972, the last in 1986.

Much has happened in the beekeeping industry since 1986 and Morse's new edition addresses those changes. Most notably are all new sections on pollination and honey plants, tracheal and *Varroa* mites and certainly the large addition on African honey bees. There's also an excellent glossary in this addition, along with several more photos and diagrams than previous editions.

There are sections that have not been carried into this edition from the previous, most notably that of honey wine.

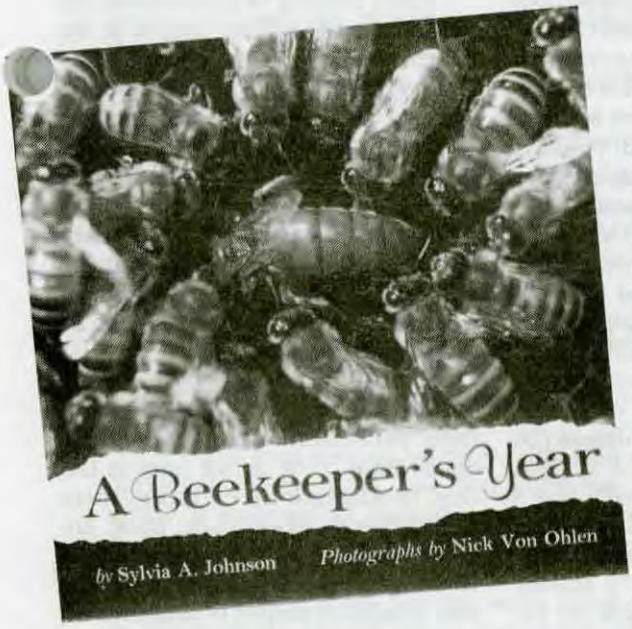
However, there are a few subjects that have not been updated and probably should have been, the most interesting is Morse's overwintering chapter. Although he advocates winter wrapping, he does not include the newer techniques of cardboard or plastic boxing, increasing in popularity. Nor does he address wintering in the southern part of the U.S. These are not serious, and are overlooked by nearly every modern author.

Probably the best part of this update is that Morse actually did rewrite this book from scratch. Although much is the same as the 1986 edition (afterall, beekeeping hasn't changed much) there are lots of things new and updated. And, since rewriting was required, Morse has abandoned much of his academic style in favor of a much more user friendly style. This, I have always felt, is absolutely necessary for those beginning in bees. Other beekeeping books that have adapted this attribute have always been successful. This edition embraces that attitude.

The New Complete Guide To Beekeeping is available from The A.I. Root Co. for $15.99 postpaid, Cat No. X33, 1-800-289-7668.

Kim Flottum

. . . & More Books



Two children's books on bees, and beekeeping have been released recently. They are vastly different.

A Beekeeper's Year. Sylvia Johnson, Published by Little Brown and Co. 32 pgs. Hard cover. $14.95.

A Beekeeper's Year, by Sylvia A. Johnson, is an absolutely delightful book depicting a year in the life of John Wetzler, a sideliner from southwest Minnesota. The story is detailed enough to hold the interest of even adults, but written such that five and six-year-olds can understand what's happening. The photography is excellent, and shows enough to be interesting, but not so much as to scare the timid. And, interestingly Dr. Marla Spivak helped with the manuscript, so you're assured it is correct.

There's only 30 pages in the story itself, so it can be read in 20-40 minutes (depending on how long you look at the pictures), plus there's a short piece on commercial beekeeping and a glossary (taken from highlighted words in the text). There's even some honey recipes at the end.

If you deal with children at almost any level and want to explain the intricate but wonderful world of honey bees and beekeeping, this book is a good place to start.

•

Honeybees At Home. Lynne Harwood. Published by Tilbury House, Gardener, ME. 34 pgs. Hard cover. $16.95.

I very seldom say anything about bee books that don't make the grade. It's just better to ignore them, I think. They always go away.

But *Honeybees at Home* by Lynne Harwood deserves mention. It details the author's experiences with bees over several years in Maine. There are numerous biological errors, more than allowable I think, even for a children's book. And I tend toward the generous when anthropromorphic comparisons are made, especially to describe confusing biological or management problems.

The layout and design is confusing and difficult to use. Nor did it pass our in-house kid test for attention span or attention-getting art, and it's 34 pages are expensive at $16.95

But mostly, it was depressing. Not that keeping bees is always a joyful experience. We know better. But if you want to entertain and educate children about the ways of bees and beekeeping it seems to me that you not dwell on the negative.

Kim Flottum

RESEARCH REVIEW

roger morse cornell university ithaca ny

"There's more to running a colony than meets the eye."

How people kept bees and what they did with their honey and beeswax in Sweden prior to the 1600s is the subject of a 397 page, 1994 thesis, written in Swedish except for a seven-page English summary. The summary, however, contains sufficient interesting history that one hopes the text may someday be translated into English. The notes below touch on only a small portion of what is written.

Most of the honey was used to make honey wine described as "a strong alcoholic drink made from fermented honey, served at the royal court on special occasions." Mead was "not for daily use" since it was not sufficiently abundant. Aging for more than six months was common.

Butter and honey had about the same value on a per pound basis but a pound of beeswax was worth ten times the price of a pound of honey. The most important use for beeswax was in making church candles. "Important documents always had wax seals." Beeswax was also used to make salves, in horticulture to aid in grafting, as a polish, in metal casting and as an engraver's tool.

Bee tree hunting was common and often beekeepers used bait hives. Beekeepers were encouraged to bring swarms home. Apparently the crown owned many of the colonies and illegal honey hunting was punished. How colonies were managed is less clear but in the fall light weight colonies were apparently gassed with sulfur and the heavier ones were wintered.

How A Colony Is Governed

We understand the following from previous research: No one bee governs or rules in a beehive. A large number of worker bees in a hive appear to make few, if any decisions. These are not lazy or unimportant bees but rather what one author has described as soldiers ready to work on a variety of projects when they are needed. Decisions in a colony are made by a smaller but still large number of bees that reinforce the actions of each other. These bees assume more responsibilities than others, but still are not leaders. Out of this seeming disorder comes order, and in fact, great success. Honey bees are animals that are widespread on earth demonstrating that they are able to compete with what is a hostile world insofar as many animals are concerned.

Thomas Seeley of Cornell University has a new paper that reports on how bees obtain and distribute information about the best food sources that are available in the field. The key, of course, is the dance language but dances can vary in intensity and length both of which reflect a scout's enthusiasm for a food source. Earlier papers by Seeley show that bees being recruited follow and take the advice of the first dancing bee they find. Thus, the bee that dances longest, and over the greatest area, is the one that will influence the activities of the greatest number of recruits.

How does a scout bee's brain work? Or, differently stated, how does the mind of a bee define the profitability of nectar source? To answer these questions Seeley took an experimental colony to a remote part of the Adirondack Mountains in new York State where there were no other honey bees and almost no flowers. In this way he could create experimental situations and control where and when the scouts fed. He established two feeding stations some distance apart. The station near the hive had a lower sugar concentration while the one further away was higher. By balancing sugar concentration against distance he could create a situation in which both stations "elicited dancing at about the same intensity." In this manner it was possible to measure energy gain, energy lost (thorough flying) and the time necessary to collect and carry food to the hive.

The answer to these questions is interesting. Time is apparently not a factor. What is important is the amount of energy involved. Honey bee brains, which afterall are not very large, ask how much energy is needed and how much is gained. This dictates a bee's enthusiasm for a food source.

Each dancing bee reports on the profitability of a food source at its current level. In other words, as the quality, and therefore the profitability of a food source improved, or slowed, individuals responded accordingly. It was shown that not all bees are equal in their response but individuals are consistent in the way they report information. This eliminates any guesswork and the question of whether a food sourse appears to be getting better or worse.

Scout bees do not dance in one spot within the hive but distribute their information over much of the dance floor. (The dance floor is the area, usually near the entrance, where the dancing takes place. Most are eight to 10 inches in diameter.) In this way bees following dances may take a random sample of what is available. And, scouts come into contact with a large number of recruits. BC

References:

Husberg, E. *The history of beekeeping: Honey, beeswax & mead in Sweden during the middle ages & the 16th century.* Univ. of Gothenburg. 397 pages, 1994. (Available for $20 from the author Prastgardsangen 11, 412 71 Goteberg, Sweden.)

Seeley, T.D. *Honey bee foragers as sensory units of their colonies.* Behavioral Ecology & Sociobiology 34:51-62. 1994.

? DO YOU KNOW ?

Selling Honey

clarence collison

For many beekeepers, another season is finished, the honey crop has been harvested and colonies have been prepared for winter. Now it is time to be concerned with marketing that crop, and to begin planning for a new year. As with many other commodities, the world honey supply and international trends impact our own domestic markets, even at the local level. Understanding the world situation and current U. S. conditions and regulations will help you interpret local market conditions and possibly assist you in developing your own marketing strategy.

How familiar are you with honey production trends, honey supplies, and marketing regulations? Please take a few minutes and answer the following questions to determine how well you understand these important topics.

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

1. ___ In recent years the number of producing honey bee colonies in the United States and Canada has declined.
2. ___ China is the world's largest exporter of honey, followed by either Argentina, Mexico or Canada.
3. ___ The United States is the world's leading importer of honey.
4. ___ As of May 8, 1994 all U. S. beekeepers packing and selling honey are required to place a honey nutrition label on the container.
5. ___ Honey imported into this country is required to have the country of origin on the honey label when it is bottled and marketed in this country.
6. ___ Foreign packers consider high levels of HMF (hydroxymethylfurfural) as a sign of excessive heating and long storage of honey.
7. ___ The Lovibond honey grader is a device that is used to measure the diastase levels in honey.
8. ___ The food service industry, both commercial operations (restaurants, fast-food and other chains) and non-commercial operations (schools, nursing homes etc.) is the largest volume user of honey at the present time.
9. ___ In recent years the per capita consumption of honey in the United States has remained fairly constant at approximately 3 pounds per person.

10. Name three of the top five honey producing states. (3 points)
11. Name five different forms in which honey is marketed in North America. (5 points)
12. Give two sources of non-floral honeys. (2 points)

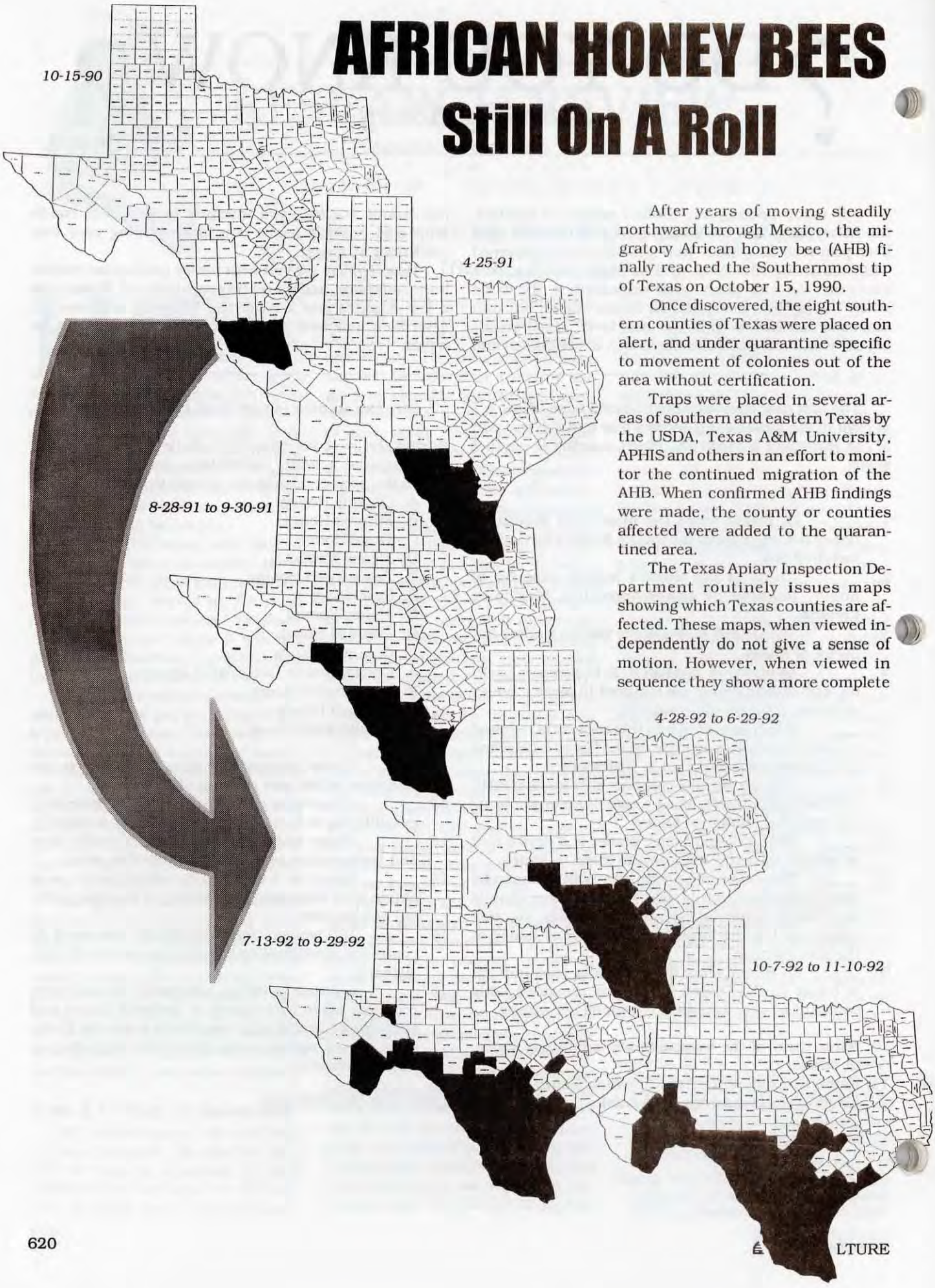
During the past year the U. S. National Honey Board has prepared a honey definitions document. Please match the correct term to the proper definition.

A. Organic Honey
B. Filtered Honey
C. Dried Honey
D. Honey Extract
E. Pasteurized Honey
F. Raw Honey
G. Honey Spread
H. Blended Honey
I. Creamed Honey
J. Crystallized or Granulated Honey
K. Ultrafiltered Honey
L. Strained Honey
M. Adulterated Honey

13. ___ Honey processed by filtration to remove extraneous solids and pollen grains.
14. ___ A homogeneous mixture of two or more honeys differing in floral source, color, flavor or density.
15. ___ Honey which has been heated under time and temperature conditions that destroy yeast.
16. ___ Honey as it exists in the sealed comb or as obtained by extraction and settling or straining without applied heat.
17. ___ 100 percent honey physically processed by controlled crystallization to a smooth spreadable consistency.
18. ___ A variety of edible, extremely viscous honey products made from honey or creamed honey and sometimes blended with ingredients including fruits, nuts, flavors, spices or margarine and excluding refined sweeteners.

ANSWERS ON PAGE 650

AFRICAN HONEY BEES
Still On A Roll



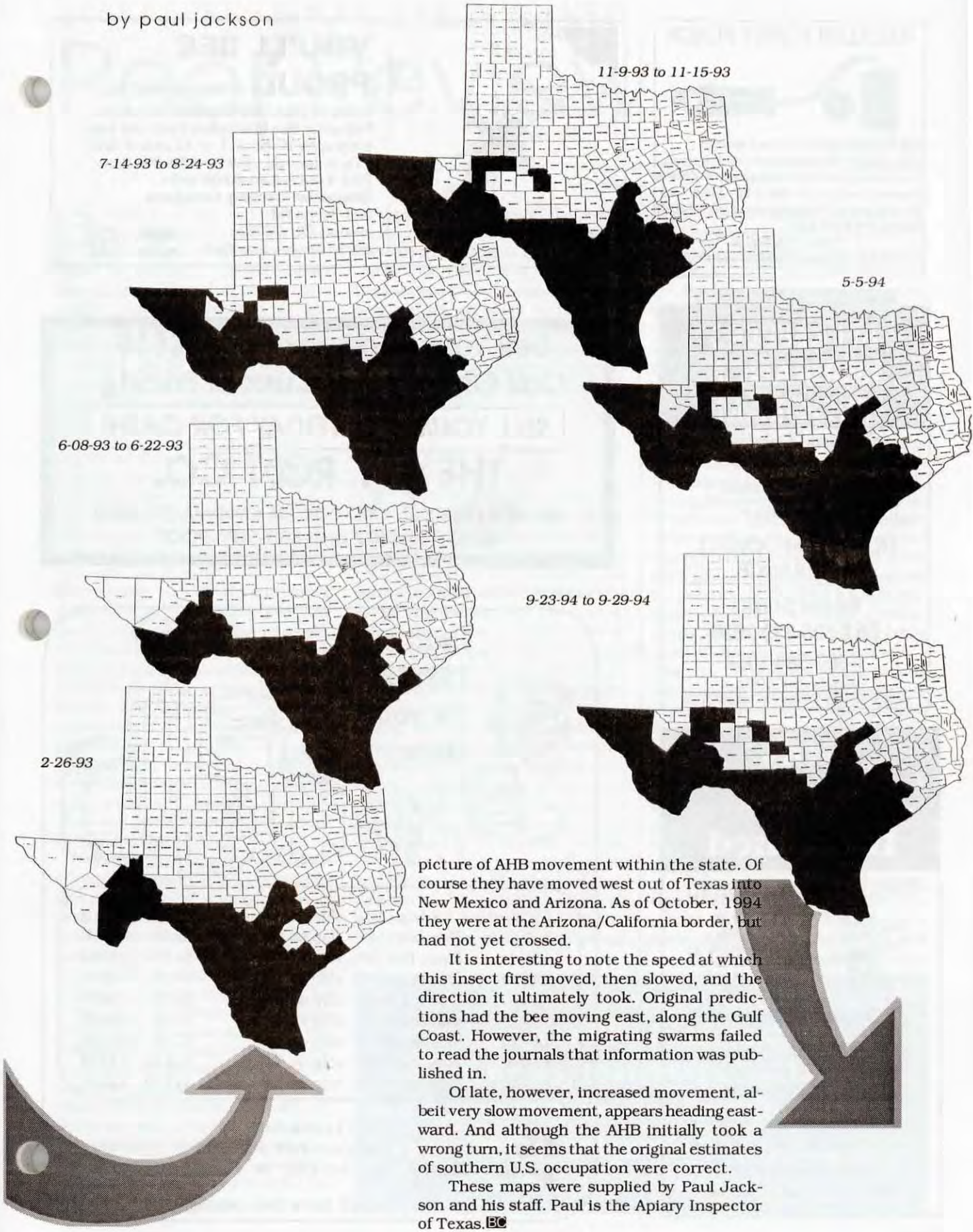
After years of moving steadily northward through Mexico, the migratory African honey bee (AHB) finally reached the Southernmost tip of Texas on October 15, 1990.

Once discovered, the eight southern counties of Texas were placed on alert, and under quarantine specific to movement of colonies out of the area without certification.

Traps were placed in several areas of southern and eastern Texas by the USDA, Texas A&M University, APHIS and others in an effort to monitor the continued migration of the AHB. When confirmed AHB findings were made, the county or counties affected were added to the quarantined area.

The Texas Apiary Inspection Department routinely issues maps showing which Texas counties are affected. These maps, when viewed independently do not give a sense of motion. However, when viewed in sequence they show a more complete

by paul jackson



picture of AHB movement within the state. Of course they have moved west out of Texas into New Mexico and Arizona. As of October, 1994 they were at the Arizona/California border, but had not yet crossed.

It is interesting to note the speed at which this insect first moved, then slowed, and the direction it ultimately took. Original predictions had the bee moving east, along the Gulf Coast. However, the migrating swarms failed to read the journals that information was published in.

Of late, however, increased movement, albeit very slow movement, appears heading eastward. And although the AHB initially took a wrong turn, it seems that the original estimates of southern U.S. occupation were correct.

These maps were supplied by Paul Jackson and his staff. Paul is the Apiary Inspector of Texas.BC

BEEKEEPERS SHOULD BE INVOLVED

Peer Review

mark winston

Believe it or not, scientists are people, with our own set of arcane rules by which we practice our craft. Science is more similar to art than it is to what you might commonly think of as "science." That is, scientific practice is highly personalized and, although we scientists like to consider ourselves rational and data-oriented, our individual quirks and biases influence our work more than we would like to admit. In that sense we are artists, using the medium of scientific publications to express ourselves rather than canvas or clay. Indeed, the authorship of the publications we produce can easily be identified by their signature properties of style, form, subject and perspective, much as a Rembrandt, van Gogh, or Monet painting is recognizable by even the most untrained viewer. For example, regular readers of *Bee Culture* can easily tell whether an article was written by Roger Morse or myself, by both its style and its perspective. Science performs a different function than art, however, and is supposed to provide unbiased and fact-oriented analyses for society to use to advance knowledge, promote economic advancement and make decisions about how to manage our world.

This conflict between what society thinks science should do and be and the reality of science as art is resolved through the process of peer review. When a scientific publication is submitted to a journal, the editor routinely sends it to two or three scientists working in related fields for review. The identities of the reviewers are kept from the authors of the manuscript, although the reviewers' comments and recommendations are transmitted anonymously to the authors following review. Generally, articles are not accepted for publication unless the reviews indicate that the manuscript contains new information, the work was conducted properly, the data analyzed correctly, and the interpretation of the results fit the data. This process of peer review also extends to grant applications, which can be sent to ten or more reviewers who provide advice to granting agencies as to which grants to fund. Thus, the process of peer review is an essential component to our scientific practice, since it mediates who gets funding and who gets to publish.

What does peer review protect us from? One important protection provided by peer review is to differentiate between perspective and bias. Research is very personal, and should be, but a valid perspective can easily degenerate into the "axe to grind" syndrome, in which two research camps degenerate into advocacy research, with each side designing projects in subtle ways that prove they are right and the other side is wrong. The bee research world has had its share of these controversies, in which personalities have elevated healthy differences in perspective into pitched battles between "true believers." Many a career has sputtered or foundered in these controversies, but in the end peer review of grants and papers is an effective mediator. Continued axe grinding research without solid data backup will rapidly lead to loss of grants and rejection of overly biased publications, so that peer review serves as a regulator to separate good science from advocacy research.

Peer review also encourages research to be conducted by independent laboratories, thereby protecting us from industry funded, product-driven research that attempts to prove a new product "works." Some of you may grouse about your tax dollars going to support government or university research laboratories, but would you rather rely on industry research to tell you whether menthol or fluvalinate are effective, or on researchers that have no economic investment in the product? A good example of this credibility issue is the label recommendation that Apistan strips be discarded after a single use. Many beekeepers re-use Apistan strips, believing that they are being misled into purchasing new strips when the old ones are perfectly good for numerous applications. Recent independent research conducted by a Washington State government laboratory has shown that the recommendation to use strips only once is correct; Apistan strips lose much of their activity after a single application in a colony. This research is credible because it comes from a source with no axe to grind.

Peer review has another function that is under-utilized, and that is to protect all of us from bad writing. I am a highly trained, educated and

Continued on Next Page

Peer review encourages research to be conducted by independent laboratories, thereby protecting us from industry funded, product-driven research that attempts to prove a new product "works."

PEER REVIEW ... Cont. From Pg. 623

experienced scientist, yet I can't understand many of the scientific papers I see in technical journals simply because they are poorly written. I figure that, if even I can't make heads nor tails of these articles, how is the average beekeeper going to figure them out? This common failure among scientists to communicate effectively is largely the fault of poor training in the communicative arts, but peer reviewers have a responsibility here to reject manuscripts that are not clearly written. I have occasionally returned manuscripts to editors without review, asking that the editors insist on clear writing before I will take my time to review a paper. Perhaps journal readers should do the same; next time you read a bee article that is hard to understand, return the issue to the editor and ask that it be rewritten so that you can understand it!

Peer reviewing itself is an art form, requiring considerable tact and a willingness to suspend your own opinions and provide an unbiased review of a competitor's work. Just as authors of manuscripts can have an axe to grind, so can reviewers. Oddly enough, however, the peer review system works well, because of the unwritten but heavily and informally policed ethic that reviewers should not permit their own perspectives to degenerate into biased reviews. Yes, there are occasional miscarriages of reviewing justice, but my own experience is that I have very rarely received an unfair review. When it does happen, editors are very willing to have a manuscript re-reviewed by additional reviewers to determine whether a review has been fairly given. Editors and granting agencies remove names of potential reviewers from their lists if there is repeated evidence of biased reviews; a few angry letters from authors, if substantive, will quickly remove a problem reviewer from the process.

I do have one radical suggestion that I think would substantially improve the peer review process: I believe that beekeepers should serve as voting members of granting agency review panels for bee research, and that they should be given status in reviewing manuscripts for beekeeping journals such as the *American Bee Journal*, *Journal of Apicultural Research*, and *Apidologie*. That's right, you read it correctly: let's take some of the peer review process out of the hands of scientists and share it with interested commodity groups.

My opinion on this subject was forged through meetings I participated in to allocate $300,000 in research funds that were provided by the Canadian government to our beekeeping organization, the Canadian Honey Council. The Council wisely recognized that they needed expert help to evaluate the numerous grant applications that came in, but equally wisely insisted on having strong influence in determining what got funded. They formed a joint committee made up of researchers, beekeepers, and extension personnel to evaluate grants, and I was impressed with the quality and insightfulness of industry representatives during the evaluation process.

Beekeepers have a real stake in bee research, and also can have considerable valuable input into grant and manuscript evaluation. While there may be some technical information that requires scientific training to understand, I would hesitate to fund any bee research grant that could not be clearly explained at some level to a beekeeper. You can bet that, if the grant can't be understood, the published results will be no clearer, and thus worthless to beekeepers. Is there something wrong with taxpayers having some control over how their tax dollars are spent? Why shouldn't citizens sit in on and vote in granting agencies such as the U.S. Department of Agriculture, the National Science Foundation, state organizations, etc.? Such a system would select for those who can explain and justify their research, and I don't think there's anything wrong with that.

Similarly, why shouldn't beekeepers have a role in rejecting manuscripts for publication where the research was funded by their taxes or contributions? Perhaps the scientific evaluations are best done by scientific peers, but shouldn't there be a clarity component in manuscript evaluation that screens for readability by interested commodity and public groups? Perhaps there is some validity in publishing research in language that is too technical for the layman, but shouldn't we insist on companion summaries that anyone can understand before a journal agrees to publish a manuscript?

With this in mind, I propose the following changes to our peer review system: 1) All granting agencies should have non-scientists making up 25% of the voting members on decision-making committees. Applied grants for bee research should have beekeepers on the panels, where more basic grants such as those funded by the National Science Foundation should draw from a broad range of citizens. 2) Journals publishing research with beekeeping applications should include one beekeeper in the review process for every manuscript, and insist on clear writing in addition to scientific merit as a component of manuscript review. 3) Granting agencies should hold back 10% of all grants until the end of a

"I would hesitate to fund any bee research grant that could not be clearly explained at some level to a beekeeper. You can bet that, if the grant can't be understood, the published results will be no clearer, and thus worthless to beekeepers."

project, and not release the funds until a beekeeper-friendly and easily understood report of the work has been prepared and either submitted for publication or otherwise distributed to the beekeeping community.

Peer review has served the scientific community well over the years in allowing scientists to express their styles while maintaining scientific integrity. The reviewing process can do a better job serving beekeepers, however, and I hope some of you editors and grantors out there will give the beekeepers an opportunity to participate in the process, and broaden the utility of this important aspect of the research profession. BC

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

COST EFFECTIVE INSPECTION

Different from any other inspection program, New Brunswick's approach seems to be working well.

heather clay

The apiary inspection system in New Brunswick (N.B.) is different from all other provinces in Canada. Since 1979 the New Brunswick Beekeepers' Association (NBBA) has had the responsibility of running the apiary inspection program for the N.B. Department of Agriculture. It is a unique way for the government to deal with cost cutting and it has been successful to date. Recent budget cuts have forced the association to re-examine their role in apiary inspection and to implement a reorganization of the apiculture program. Our experience could be the way of the future.

Beekeepers in N.B. had the service of a government specialist for 66 years to run the inspection program and to represent their interests in government. In 1979, as part of a cost-cutting measure, the position of provincial apiarist was dropped and the task of apiary inspecting was contracted out to the NBBA. At the time it seemed like a good idea and it was widely supported. The NBBA would have control over decision making, they could choose their own inspectors and they were given an adequate budget to operate. The N.B. Department of Agriculture also provided the use of an office within the Department as well as printing and mailing facilities. Over the years the grant allocated to the NBBA has declined in relative terms to the point where it now has 50% of the 1979 value. In 1994 the NBBA has been given $20,900C to pay for a part time Provincial Apiarist, 15 seasonal inspectors and the associated costs of operating an apiary inspection program.

Apiary inspection over the last 14 years has consisted of a part time Chief Apiary Inspector and half a dozen seasonal inspectors. The main concern in the 1980s was to inspect the majority of hives in the province and to locate and destroy American foulbrood (AFB). Hives were also inspected for strength standards before they were sent to blueberry pollination. At $55C per hive for rental fees, the growers wanted assurance that they were getting good colonies of honey bees. Last year over 2,500 colonies were inspected in a two-week period before blueberry pollination season. This type of inspection has stretched our resources to the limit. Now that *Varroa* and tracheal mites have arrived in the province the direction of the apiary inspection program has had to change. We have been forced to reassess what we are doing and how we are doing it, to making the program more cost effective.

The NBBA is set up in a similar manner to a co-op, where members meet annually to elect three new directors to a nine-member Board. Traditionally each county had a representative on the Board but in recent years, the representation has changed to areas with the most beekeepers. As in a co-op the directors elect a manager – in our case instead of a manager, the board chooses a Chief Apiary Inspector and the Minister of Agriculture then appoints that person as Provincial Apiarist. The Chief Apiary Inspector is responsible for hiring the inspectors and for running the apiary inspection program. Like a co-op, the members have one vote each no matter how many hives they own. It is a democratic system and empowers the beekeepers in decision making. Through a willing group of volunteers we are attempting to maximize the use of funding and at the same time providing a customer-oriented quality service.

If there is a concern about a problem in beekeeping, it can be brought to the attention of the directors and usually a satisfactory decision can be promptly made. This is what happened when Agriculture Canada wanted to destroy hives for *Varroa* mite in October 1992. An emergency meeting of the directors produced a unanimous decision to recommend a moratorium on the gassing of hives until spring when we expected the chemical Apistan to be registered for treatment. Agriculture Canada respected the wishes of the majority and agreed to temporarily desist from their action. It would have been very difficult to organize such a grass roots "rebellion" and change government policy without the strong co-

ordinated voice of the association.

This is a democratic way of organizing but it also means leaning heavily on volunteer administrators for work that should be done by paid experts, accountants and lawyers. Often continuity is sacrificed because board members are elected every three years and resolutions sometimes do not get acted upon after an election. Also, directors may be considered to be in a conflict of interest situation since they are all beekeepers making decisions affecting neighbors and competitors. As with busy volunteers anywhere it is often hard to get all the directors together for meetings. However as a cost-effective solution to the problems of apiary inspection it has a great deal to offer.

A questionnaire was sent to beekeepers in 1992 and based on their response the apiary inspection program was divided into three action areas: Communication, Training and Inspection.

COMMUNICATION

Communication was rated a top priority by most beekeepers so a major component of the apiculture program is now directed into this field. The emphasis is on disseminating information through publication of a newsletter, local meetings and direct phone contact.

An effort has been made to locate all beekeepers and to have them register with the N.B. Department of Agriculture. Registration is required by law and the data are kept in the NBBA's Fredericton office at the N.B. Department of Agriculture. Some beekeepers feel that confidentiality is threatened or that it is an invasion of their privacy having the NBBA involved in collecting records for the government and some refuse to register. Although there are over 500 beekeepers only about 250 are registered and less than 150 are paid up members of the association.

To encourage beekeepers to register, the newsletter *N Bee News* is offered at no charge to all registered beekeepers. Using this incentive, registrations have increased in recent years. The newsletter is translated into French, printed and mailed by the Department of Agriculture. This saves the NBBA a lot of money and provides a service for both English- and French-speaking beekeepers that we could not otherwise afford to provide. The newsletter helps all beekeepers keep in touch with the latest information and informs them of their local association meetings. Inspectors cannot get to every beekeeper and this is an excellent way to communicate.

During 1993 we have had meetings between the blueberry growers and beekeepers and this has led to an unprecedented amount of co-operation between both associations. A "bee hot line" service allowed blueberry growers to phone in and find out which beekeepers had hives for rent for pollination services.

Communication is a two way process and feedback is important. The fact that the Provincial Apiarist is not a government employee encourages beekeepers to provide direct and immediate feedback on any and every issue at all times of day and night.

TRAINING

To reduce the costs of inspection we have put more time and effort into educating beekeepers to help themselves. Training seminars were held in 1993 with guest speakers who were experts in their field. This will pay for itself in the future as knowledgeable beekeepers will become more self-sufficient.

To encourage beekeepers to register, the newsletter N Bee News *is offered at no charge to all registered beekeepers. Using this incentive, registrations have increased in recent years.*

Any new beekeeper registering for the first time receives a booklet, "Honey Bee Diseases and Pests," produced by the Canadian Association of Professional Apiculturists (CAPA). The cost is low, particularly if it assists a beekeeper to self-diagnose, instead of calling out an inspector for a routine problem.

Disease has not gone away because we do fewer inspections but we have learned that the only way to live within our budget is to have the beekeepers trained to recognize and treat disease in their own hives. This was particularly noticeable in 1993. During routine inspections, only five cases of AFB were reported by inspectors. However another 23 were reported by the beekeepers themselves who realized that they had a problem and called for help. This will be the way of the future, less government intervention and more reliance on self-help.

INSPECTION

Inspection is important, but it is one of the most expensive aspects of the apiculture program. To become cost effective and still provide a quality service we have put more money into training inspectors and into developing standards to maintain inspection quality.

Inspectors attend an annual training session to update their skills. In this way a standard level of inspection has been established. In New Brunswick the old days of "bash, burn and bury" are gone. Although under the Act the inspectors have the right to enter any apiary, we now make every attempt to notify the beekeeper in advance and to have the beekeeper present if possible. The intention is to educate beekeepers and to gain their co-operation.

If the beekeeper should refuse an inspection we have two options. The first is to negotiate a time that would be more suitable and return later. As a last resort, the police can be called in to escort the inspector. Usually, if the inspection is part of a routine area checkup then the inspector would avoid a confrontation and leave the apiary. In the past one beekeeper refused an inspection and he threatened to find a shotgun to deal with any inspector in the future. The police were called in to accompany the inspector to complete the inspection. It seems that for two years running as part of a national *Varroa* survey, federal officials arrived unannounced, opened the hives in bad weather, found *Varroa* mites and, without any explanation returned to gas his hives. He did not want to see another inspector and I don't blame him! Under the

Continued on Next Page

Inspection is important, but it is one of the most expensive aspects of the apiculture program. To become cost effective and still provide a quality service we have put more money into training inspectors and into developing standards to maintain inspection quality.

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new system, as part of the client consultation process, he would be given the latest information on the situation in his area as well as a follow-up call to ensure that he knew what was happening. At inspection time he would be there and he would be informed as to exactly what would happen and what his options might be. Our aim is that inspection time should be a positive experience and the client should be satisfied.

There used to be from five to eight seasonal inspectors, each travelling long distances. This has been changed to 15 seasonal inspectors who service a smaller zone around their home area. We can provide a trained person in every county and this cuts down on travel costs. It also gives us a higher calibre of inspector because highly-experienced beekeepers are willing to provide their assistance if they know they will not be spending long hours away from their own bees. Local beekeepers can get advice and help over the phone and visiting time to the apiary is drastically reduced.

One disadvantage to the neighborhood approach is that neighbors are inspecting friends and neighbors. The problem cannot be avoided. Should a conflict of interest situation arise the inspector will bring in another person in authority to assist in the diagnosis. This happened recently, where a serious outbreak of AFB was found in a neighbor's yard. It required burning, so the inspector took along a respected beekeeper who also works for the Department of Agriculture. There was no hesitation in diagnosing the disease and the beekeeper was satisfied that the action was necessary.

To avoid the appearance of conflict of interest among inspectors, an inspector from another area is assigned to do the local inspector's apiaries.

In the past, 70-80% of the hives in the province were inspected every year. Now we have only enough funds to inspect one quarter of the hives annually and even that is stretching the budget. Beekeepers can expect to see an inspector once every four to five years. However they will meet many knowledgeable people at their local association meetings and at the regular educational training seminars.

The budget used to pay for surveys for *Varroa* and tracheal mite. With the growing problem of parasitic mites, it has been important to do regular surveys to follow the infestation of the mites into our province. Surveys are expensive and we have relied on beekeepers assisting us in province-wide surveys. Last year the *Varroa* survey cost $8,000C. If it had not been for beekeepers volunteering their time and transportation to return sticky boards and strips to us it would have been unaffordable. In the future, a user-pay system is being considered for these more expensive tests and surveys.

The timing of inspections has also been changed. Records show that although the bulk of inspections were done before pollination season and during summer, there is a low incidence of serious disease present at that time. Bees returning from blueberry areas often have been stressed by weather, transportation and poor quality pollen sources. Diseases such as European Foulbrood and sacbrood are most common after the bees have returned from pollination. This will be the ideal time to begin inspections. Emergency inspections can be done on request if the beekeeper feels there is a serious problem.

By reorganizing and using more volunteers we have reduced inspection costs. In 1980 the inspection cost was estimated to be $4.20C per hive. The service in 1990 cost an average of $5.00C per hive but in 1993 it was reduced to $1.50C per hive. Some calls are more expensive than others. In 1990 one call cost $150 for an inspection of two hives but those days have gone.

There are some disadvantages of this type of apiary inspection system.

1. There is a heavy reliance on volunteers which is often unfair to the willing workers and some volunteers are not always highly motivated.
2. The budget is allocated annually, which produces uncertainty about providing future services.
3. There is no representation inside government for beekeepers.
4. There is a potential for conflict of interest where the directors are all beekeepers.
5. There is a loss of productivity while the Chief Apiary Inspector attempts to access extra funding.
6. There is often difficulty in getting all directors together. While this is not a criticism of the directors it is a disadvantage for operating.

But there are advantages of the NB apiary inspection system, too.

1. It is a democratic system and beekeepers are empowered in decision making.
2. There is flexibility in resolving problems.
3. Beekeepers direct the focus of apiary inspection.
4. There is direct and immediate feedback.

We have an apiary inspection service which is not only cost effective but responsive to its customers. The New Brunswick government is so pleased with the way the beekeeping program is run that they have discussed the possibility of extending the idea to apple growers.

It has many cost-saving advantages for the government in times of recession. Unfortunately it also has disadvantages for the consumer and it needs a strongly motivated volunteer organization to make it work effectively. Cooperatives work when everyone works toward a common goal. Our experience *could* be the way of the future. BC

Heather Clay is the Provincial Apiary Inspector for New Brunswick. She has been instrumental in promoting this program.

AUSTRALIA HAS 2 KINDS OF BEES

c rose leonard

A stingless bee . . .

An ingenious Australian, Tom Carter of Rockhampton, has succeeded in commercially hiving the lovable stingless bees of Australia. Mr. Carter now collects $40 dollars per kilogram for their honey.

Australia has over sixteen hundred species of stingless bees. These *Trigona* have a mild bite, but no sting. All are greyish-black and a quarter the size of an Italian honey bee.

Trigona have a highly developed social structure like Italian bees, but their hives are much smaller and they work flowers only four to five hundred meters from the nest.

Honey pots of stingless bees.

Not worth hiving, right? But Mr. Carter noticed something interesting. Daughter hives are not truly independent of the mother hive. They continue to travel to the old hive for materials and aid. They even retreat to their mother hive if attacked.

For example, in September of 1991, a hive of stingless bees moved into a flowering mallee tree in front of my Katanning, Western Australia, porch. They constantly collected nectar from the flower borders and flowering eucalyptus trees. I sometimes saw an Italian honey bee and stingless bee in the same poppy side by side.

In early October of 1992, a daughter hive set up housekeeping with about 50 bees in a garage rafter about 500 meters away. They gleaned the big rose bushes and the back porch flowers. You can sit on the porch all day watching the bees and never risk a sting.

But the important thing is the constant traffic between the daughter and mother hive carrying supplies. Mr. Carter managed to keep mother and several daughter hives in the same box.

His original hives consisted of two plywood boxes approximately 280 mm x 230 mm x 130 mm deep. The top box acted as a lid for the bottom. The queen and her brood remain in the bottom box. A 90 mm by 50 mm hole in the bottom of the top box discourages brood building in the top box keeping it free for clean honey.

Tom collects only the excess honey from the very top of the hive. No extraction equipment is necessary! *Trigona* do not make honey comb like Italian bees.

Tom simply removes the top lid

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A Tom Carter hive for stingless Australian bees. Notice the all-important wire division.

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and cuts off the "honey pots" when required. A good colony gives a layer of honey pots 40 mm thick covering the underside of the lid. The high quality honey is dark, thin, and very sweet.

An entrance hole for the bees is made in the top box. The bees need space to build air passages so this hole should not be too small.

These native beehives can be split into two hives. Mr. Carter divides the bottom box horizontally. The lower section is only 50 mm deep. A fine wire grid is fixed to the bottom of the 80 mm section remaining. The bees build their brood nest from the bottom up through this grid. After a few years, the grid acts a cutter to establish two hives. The lower bottom section then goes to an empty hive. The hive without a queen will soon develop one from the brood.

The nest consists of workers, drones, and a queen. Some cells store nectar and pollen. The queen cells are much larger than the other brood cells. A cloud of drones circles above the hives on warm days.

Wild colonies are usually hard to find. I was just lucky to have two nests appear on my property. The native bees were expanding their range in Western Australia and perhaps this is why my little friends appeared.

The best places to look for wild hives are in hollow branches or dead tree trunks. They have been found nesting in concrete slabs for *Trigona* share a certain opportunism rarely seen in European bees.

The wild brood nest is placed in the bottom box in the back corner with some of its original wax. It must be placed the same way up as in the wild.

The wild nests's honey pots and pollen must also be placed in the box. Be careful not to damage the honey pots because if leaks are caused, dripping honey will pool in the bottom and drown the bees.

The new hive must be kept at least 500 mm above the ground. They are perfect for the backyard organic gardener (in the U.S. as well as Australia) who just wants a little honey from their own flowers. But the importation of animals from Australia is sometimes too easy and sometimes just too difficult. Unpredictable.

The stingless bees of Australia are great pollinators. They like garden flowers. They are particularly attracted to Mangoes, Paw Paws, Grapes, and Passionfruit. They also like Melaleuca, Eucalpyt, Eugenia, Leptosper num, Cassia, and Calliatemon.

The stingless bees are usually considered purely tropical. But southwestern Australia cannot be considered tropical. Last winter had two snowfalls.

The stingless bees (*Melliponni*) are also very important in South America. These were domesticated by the Incas although this seems to have been lost from our pool of domestic animals. *Melliponi* are also found in Africa and Asia.

The distribution of stingless bees was greatly influenced by the break up of Gondwana. Their primary strongholds are still Australia and South America which were connected until the last days of Gondwana.

... and those Golden Italians

"Four hundred dollars was paid at a Rottnest Island auction for one queen bee!" The Western Australian radio announcement in October, 1992, led to a fascinating experiment sponsored by the ever progressive Australian government.

Rottnest Island lies 12 miles off the coast of Western Australia. The rising ocean drowned the intervening land about 7,000 years ago. But this limestone bluff remained above the waves as home to a primitive marsupial called the quokka and many dugait (poisonous) snakes. The clear blue ocean and bizarre Australian flowers draw many tourists. But one thing is lacking. No honey bees ever lived here. In fact, many Australian flowers are pollinated by birds and small marsupials rather than bees. Perfect isolation and controlled mating of the best queens of Western Australia produced a recognizable new strain within 12 years. An Argentinian customer described Australian Golds as not quite as gentle as his Italians, but twice as productive. Moreover, strict quarantine and natural desert barriers have kept Western Australian bees free of all diseases.

The light color of Australian Golds is quite distinctive. Dark color in bees inherited with increased defensiveness. Therefore, only yellow drones bred on during the program.

Are Australian Golds pure Italian? No. Carniolan and caucasian races had previously been introduced

to Western Australia. But the Italian element is dominant. The program is designed to run indefinitely without inbreeding and an annual five percent increase in honey production is the aim.

Low swarming seems to have been achieved. Any hive that swarmed was culled from the program.

Each hive was scored one to five for color, temperament, sac brood disease, and for brace comb. Overwintering was also considered.

Lee F. Allan has largely been responsible for "inventing" Australian Golds. He is the senior apiculturist for the Western Australian Department of Agriculture. He began breeding in 1980 with a system of natural matings on isolated Rottnest Island. He began artificial insemination in 1983 with homogenized semen from a very large number of drones to produce maximum genetic variability.

Western Australian beekeepers initially contributed their best queens to a colony of 100 hives of 20 lines with five daughter queens per line. Each year, the most productive queen in each line gave five queens to the program.

But new genes came into the pool each year for beekeepers contributed four queens selected from 15 to 20 breeder hives. Only the top performing daughters from these queens produced drones that contributed to next year's semen pool.

The controlled mating of queens occurs from September to November. The mating nuclei are removed to the mainland in November where queens are again produced.

Seven hundred and fifty mating nuclei with 40 cell building colonies and 40 drone mother hives produce the queens for Australian beekeepers. The first sales began in 1986. Queens are sold as tested, controlled mated, and progeny checked as well as other less expensive categories. The first sale yielded $35,000 for 3,561 queens.

The least expensive queens are from a mainland group of hives flooded with the improved drones from Rottnest. There is a high probability these queens have mated with drones from the golden lines.

Lee Allan handed the commercial side of the program over to the Western Australian beekeepers in 1990. Promotion around the world is creating a lively market since exporting from Western Australia is far easier than it once was. Services such as TNT transpot (telephone 008 011 835 or 09 353 36 40) now deliver from Australian door to American door.

An interesting 15-minute video on the bee breeding program may be bought for $15. However, Australian videotapes will not play on American TVs because they run at 550 lines per picture and ours run at 600 lines. However, there is a method to copy these onto the American system of tape.

One can contact Lee Allan for detailed information on the breeding program genetics at: Lee Allan (MDA), Senior Apiculturist, Department of Agriculture, 3 Baron-Hay Court, South Perth, Western Australia 6151; Answering Service 09 368 3619 or phone 09 368 3552.

The video and commercial information can be obtained from: Peter Ditchen, Telephone 09 341 3087.

C. Rose Leonard is a free lance writer who reports her travels.

REVIEW TIME

richard bonney

As you went through this past season, did all go well? Were you prepared, were you on top of everything? Or was it one of those seasons when swarming snuck up on you, you could never find the queen, perhaps population just wouldn't build up in a hive for no apparent reason? We do have seasons like that. But do we need to? Maybe there are things you can do, starting right now, to make next season go a little easier.

As winter moves in, we tend to put the bees out of our minds. Let's not do that this year. Usually, we prepare the hives, protect them, medicate them, ensure there is plenty of food – all of those things we have learned as proper fall management – and then sit back for several months. Perhaps there are things we could be doing now and in the coming weeks to make next season go more smoothly.

Start in by taking pencil in hand and making a few notes. Nothing fancy. What things didn't go quite right during this past season? For instance, when that swarm went out, had you noticed the bees preparing for it? Did you have some equipment ready to help deal with it? Did you know exactly what you wanted to do once you recaptured it? Or, the day you discovered disease in your hive, did you know which disease it was? Did you know how serious it was? Did you know how to deal with it? How about equipment? Back there at spring cleaning time, did you have spare woodenware that you could substitute for anything that needed to be taken from the hive to be reconditioned or painted? Were you ready with extra supers when you needed them?

Too often, the answer to questions such as these is no. Beekeeping is complex. The problems often aren't straightforward, nor are the answers and solutions simple. No one becomes a competent beekeeper in one or two seasons: it takes time and exposure. For instance, it is difficult to recognize many of the different disease conditions until you have actually seen them at least once, perhaps more than once. The amount of information passed word of mouth on prevention of swarming is rife with misunderstanding. And time passes so quickly. All of a sudden, manāna is here, and yesterday's plans are still only plans. What can we do about it?

Well, how about a little reading. Most of us read at least one or two books as we were getting started, and we subscribe to at least one magazine. Along the way we may read about some specialty area as interest develops. But do we read as much as we might considering the vast amount of worthwhile information that is out there. Perhaps a modest reading program is in order. Let me suggest a couple of things.

This is the time of year to review your records and repair or replace worn-out equipment.

Back there as we were getting started, most of us read at least one beginner's book. In fact, we probably read parts of it more than once as questions kept popping up during those early days. But now, we're past that. We know what we're doing. Or do we? How about getting out that beginner stuff. Reread it, right from the start. It's amazing how much 'new' information is in there, now that you have some experience behind you. Do the same with the back issues of your magazines. Go back a year, or two, or whatever you have, and start rereading. Again, there is a lot of 'new' information in there. You may not reread all of those magazines cover to cover, but start in and see where it leads.

Once you have reread these basics, move on to something else. Pick a topic. Look at those notes you just made. What in particular gave you problems this season. Swarming? OK, then read about it. Or mites? Did they just come on your scene this season? Or perhaps you want to tackle something new. How about comb honey, or perhaps you're ready for queen rearing? Whatever the subject, read everything you can find about it. Read critically. Don't accept everything you read as absolute gospel, and be careful about older, outdated material. The old statement that more has been written about bees than has been written about any other animal – assuming it is true – brings its drawbacks. If there is that much information, is it all valid? Without question, some of it is not, perhaps because of the age of the material, perhaps because it is not pertinent to your geography, or perhaps just from shortcomings in the author's approach or knowledge. The more you read, though, the more you will be able to pick and choose as to what is valid and what is not.

A good starting place for this expanded reading is in a recent edition of one of the old standbys – *The ABC and XYZ of Bee Culture* or *The Hive and the Honey Bee*, or something more specific such as Mark Winston's *The Biology of the Honey Bee*. Do go back and look at some of the older editions, as well. Some of the mate-

rial about old equipment and ideas is fascinating, even if it is no longer valid. And as is true with just about any subject, having a sense of the history of our craft helps us better understand the present.

A couple of cautions are in order here. As you prepare to do this reading, formalize things a little bit. Make a schedule. It does not have to be elaborate, but put a few notes on paper as to what you are going to do, and what you hope to accomplish. For instance, indicate a specific date by which you will have reread your beginner book, another date by which you have reread your magazines, another date by which you started reading about swarming, or disease control, or comb honey, or whatever else you choose. Then make a commitment to yourself and do it. Without such a plan and your own personal commitment, it will be spring and nothing will have been completed.

As you're getting started, if you have a question of what expanded reading area to get into, think seriously about making a specific study of swarming – its causes, its prevention, its control. An understanding of swarming is at the heart of understanding beekeeping. A first step in this understanding is to realize that there is no simple answer to preventing swarms. Simply giving a colony more space a week or two before swarm season is not the answer, nor does requeening in May necessarily stop a colony from swarming in June, nor does capturing a swarm and returning it to the parent colony end the problem. These measures and many more are often touted as swarm control solutions. Some of them have their place, but only in the framework of a larger understanding coupled with a total year-round hive management program. Work towards that total program.

While you are laying out your schedule of reading, fit in a little hive maintenance activity as well. Of course, you can't work in the bee yard in the winter but you can be working in the shop or cellar, getting a few things ready. Write into your plan some specifics, with dates. Acquire and assemble a new bottom board, some spare frames, another hive body, or whatever else you needed last season to do the job right. If nothing comes to mind, then consider –

Now's the perfect time to get ahead and have a new bottom board ready.

at least one spare bottom board on hand during spring inspection allows you to remove the old one from a hive, take it away from the bee yard, and give it a good cleaning and scraping. Perhaps you will even choose to give it a quick scorching with a propane torch to kill any accumulated disease organisms that may be hiding there, inactive but a potential threat in times of stress. Without a spare, you can still do these things to your bottom board, but with considerably more disruption to hive routine as the bees wait for you to finish.

At some point, other parts of your hive will need maintenance – scraping, renailing, repainting. You have flexibility to do this maintenance with minimum disruption to the bees if you have extra hive parts.

Aside from spare equipment, think about some additional items. A four or five frame nuc box is a handy thing to have around. If you don't have one, perhaps you want to build one this winter. Put it in the schedule. Or how about a solar wax melter? One of those does a fine job of recovering wax from recycled frames, or from hive scrapings. It will melt down your cappings after you finish extracting, too, or melt burr comb from a queen excluder.

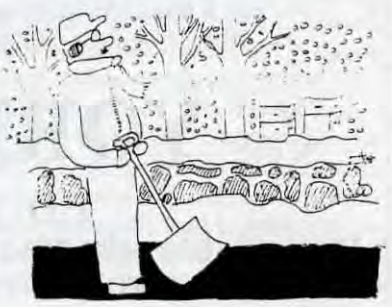
As a final step in your winter activities, how about putting together a program to present to your beekeeping club. You will be gaining some valuable information as you read and reread. Organize it all into a talk or a slide presentation and let others benefit from your accomplishments. You could take this in any of several directions. For instance, bee school can be a very confusing time for a prospective beekeeper. Perhaps you can come up with a better way to present some particular topic to a beginner class. Alternatively, clubs are looking for new speakers regularly. Organize some of your newly acquired information into a brief presentation, or put it in outline form and use it to lead an informal discussion.

If you are assembling equipment, make some pictures. A slide presentation is always welcome. If you don't take pictures, ask around. There is bound to be a beekeeper with a camera who would be pleased to record your activities, and perhaps cooperate in putting together your presentation.

Whatever you may choose to do with all this information you are acquiring, be assured that if you share it with others, it will become stronger in your mind. Any form of teaching is a wonderful way for the teacher to learn.

Do decide to do something this winter. Remember, the bees are busy out there, getting ready for you and spring. Their winter vacation is very brief. Can you do any less? BC

Dick Bonney is the Extension Apiculturist for the state of Massachusetts and the author of two books on beekeeping.



VANDALISM & VARROA

The Yard had been visited by vandals, who'd found the hive body in which I kept some tools for convenience.

charles simon

The only way we're going to get a truly mite-resistant bee is through natural selection. Organisms have to be able to confront their adversaries in order to be able to develop coping mechanisms and immunological responses. We can't do it for them. Chemicals may very well be required to save the day, but I'm afraid it's going to be at the expense of tomorrow. Our scientists can't outmaneuver Nature in the long run. Fee-dependent, industry-serving science is just not scientific enough.

I checked my hives in September, and they were looking good. I would be getting back up there to take the honey off soon.

Well...one thing always seems to get in front of another; what you can put off you pretty much have to. In the spring I chase bees. In summer and fall it's mostly yellow jackets. So I was running around doing that.

The downside to *bee*chasing is it takes away from *bee*keeping. You'd think it would be a complementary activity, only it doesn't quite work out that way. But people are most appreciative, so it's not a thankless job. Still there's this idea that beekeepers work for free, and apparently there are just enough who do to keep the pesky notion alive. Who are those beekeepers anyway? Heirs to fortunes with lots of spare time and insatiable appetites for bees? It's the case even in apiculture: The rich get richer, and the poor get...well, you know....

It's okay once the clients agree to the terms and conditions. But when they come in with the attitude, you need a canned response. I usually ask them if they work for free; because if they do, they should come right over, since I've got a whole lot for them to do. I've only had one try stiffing me at the other end, when the job was done. After three attempts to collect, I told him I was just going to have to give him back his bees. Then he couldn't pay fast enough.

Made an interesting discovery on one call: Yellow jackets and honey bees sharing the same nest. Never heard of that before, both species going in and out the same hole, with no sign of conflict.

But back to my bees; the honey was in the hives. And honey in the hives is money in the bank. So I was feeling pretty good — until the next trip to my bee yard. I knew driving up that something was wrong. The air was full of bees, but not the circular, bouncing pattern as of a swarm. These were darting feverishly in straight lines — a bad sign.

The yard had been visited by vandals, who'd found the hive body in which I kept some tools for convenience (I don't do that anymore), recognized the hive tool for what it was, opened the single stories and nucs, threw them all around, then got bored or stung (hopefully) and left. Of course the hives had been robbed out. And once the frenzy began, it didn't stop with the meager plunder of the small ones. A few of the bigs had been stripped out already and more were under attack. I did what I could, which was reduce the openings as much as possible, which had no effect. It was robbing on a scale I'd never witnessed before.

I decided the strong were taking it from the weak and, when things quieted down, I would take it from them. It could have been worse – it was going to be.

As I watched, I speculated that apparently they don't have to be starving in order to act like they are. Fielders go out to bring something back, and during a dearth of nectar wouldn't they experience difficulty getting let back in empty, maybe not even being let in at all? Taking this line of thought the next step, maybe they *have* to rob – if they can. And if this is the case, then a revised concept concerning this activity is called for.

I returned the following week, and it was a yard full of desolation. The air was empty, no glinting of wings in the beautiful sunlight. Hive after hive with piles of crumble coming out the entrance, torn and ravaged combs, not a drop of honey, not a single bee, empty. Where had it all gone? As far as I knew, there weren't any other hives or feral colonies in the area.

Of course those hives had all been robbed out. And once the frenzy had begun, it wasn't going to be satisfied with the meager plunder of the small ones.

It hit like physical pain. This was happening to me. Had happened. This was mine. I could not comprehend it. Three weeks ago, it had been a splendid yard. Two weeks ago, a disaster. But what do you call this now? A wipe out. I would have cried except I'm too old and too inured to loss. I thought I had a good yard of strong, disease- and parasite-resistant stock, developed over many

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VANDALISM ... Cont. From Pg. 637

years. What do you do when there's nothing you can do and you have to do something?

One single-story eight-framer I hadn't even noticed on my last visit, must have been intact then and was still alive. One out of 35. Ironically, this was the only one to show signs of *Varroa* early in the season. I had assumed the others were infested too but handling it better. While they had been apparently prospering, it had been suffering, with the bees crawling out and gathering in forlorn clusters on the ground. Now it was behaving quite normally, although not populous to be sure. Not heavy either. But this least of my hives had become all of my hives. It had been missed by the vandals, slipped past the robbing and seemed to have gotten a handle on the mite situation. The others had been insidiously undermined while they had been busy looking good, and this one had been too stressed to do any serious work except on itself.

The vandalism had started the robbing which had blown whatever balance had been keeping the yard together, and the mite effect had finished the job. The small, weak colony had been dealing with survival, while the others had been busy being busy. Maybe size has something to do with it. If self-consciousness is a factor in resistance, a small colony would have less self to be conscious of, more occasion for introversion.

If somebody offered me ten thousand dollars for that colony right then, I wouldn't have taken it. Now, if it would only survive the winter.

I compared notes with local beekeeper friends. Hal had lost 99 out of 100 hives. Ormond, 3 out of 5. Joan had one left out of six. Sandi had none of three. And they had all experienced their losses without any robbing. Without the vandalism component, I might very well have had a different outcome. Hal and Ormond would be using the strips from now on. I would not. I was going to practice what I preach. Natural selection had come to my yard, and I wasn't going to miss out on it, no matter how much it hurt, no matter what it cost, even if it cost all, even if I got natural-selected right out of the game. It was gut-check time.

Spring came, and the little colony more than survived. It was acting healthy, with the bees tumbling all over themselves hauling in monumental loads of pollen.

Without bees to cover the combs, there had been considerable damage from wax worms throughout the yard. I opened the hives up and exposed them to air and light while at the same time covering them from the weather. But it was too little too late.

I use my own SuperUnfoundation™ frames — which makes cleaning up and restoring for reuse easy. As I cut fouled combs and scraped wood, I was grateful to myself for having provided this frame. If I had been using foundation and wire or even plastic comb, it would have been all over at this point. I would not have been able to face this monumental mess on top of a loss of such magnitude with standard equipment.

As it was, I was very close to giving up anyway. What was I supposed to be getting ready for? There were no bees. Hal said he was going to buy packages. But I was running on empty. Besides, why bring perfectly good bees into the area? So they can get wiped out too? Purveyors claim to be offering mite-resistant stock. But if that were really true, how come they package with miticide strips? The bees on Hawaii have no mites and therefore no resistance; so I wouldn't want them either. Even if my little hive had become truly resistant, and it prospered and divided at maximum velocity, it would take years to recover.

I was going to practice what I preach. Natural selection had come to my yard, and I wasn't going to miss out on it, no matter how much it hurt, no matter what it cost, even if it cost all, even if I got naturally-selected right out of the game.

People were calling me up just to tell me there weren't any bees in their yards. There was a barren feeling to the environment, a sense of depletion as in a body after a course of antibiotics. Apparently feral colonies had been wiped out too. There was an essence of sorrow underlying every conversation. This is an ecology-minded community, and even people who don't deal with bees in their daily life were distressed.

And then – *an explosion of swarms*! More and bigger and faster than ever before! The action was outstanding. Where were they all coming from? Obviously some came from treated hives, and those can't be expected to be resistant. But could any have been emanating from strains holed up out there where man couldn't get in and mess them up? I hope so.

I feel good now, because it's spring and acting like it, because I got wiped out and my faith was not broken. I did go into despair, but the spark of hope didn't die out completely. Principles I have been believing, sometimes in direct contradiction to prior teachings of the art, are proving out.

What man*un*kind spoils and then has the audacity to grieve over is nothing but another opportunity for Nature. And the *Varroa* imbalance is man-made — coming from the hundred-plus years of so-called modern beekeeping which is based on the blind ever-compounding clevernesses of profit-motivation. Don't understand me too quickly here: I'm for profit, but it has to be an enlightened profit. You need to consider what you are giving up in order to get what you want. The process needs tuning.

I was recently informed by a local biologist that the 5% of the bee population that survives the *Varroa* infestation is not, in fact, resistant but is spared by the parasite, so it will never completely destroy its own

food source. I don't want to believe it's that way. But whatever it is, we can change the picture.

Beekeepers, awake! "Modern" beekeeping is the past. We are into the post modern phase already, which is an apiculture characterized by accommodation to the contingencies of reality. Paradox is not just a literary device, it is a fact of life. And by the way, this is the future. BC

Charles Simon chases swarms, removes bees, writes books and ponders the future in Santa Cruz, CA.

REPLY VIA E-MAIL

stan kain

In a previous article we discussed some of the opportunities available to beekeepers via computer. Space limitations and the variety of information resources allowed for a general discussion on the subject. Thanks to positive reader response we're going to explore, in detail, some of the more practical applications. Electronic mail, or email as it's known to computer buffs, is one of the more important areas. So what's email all about?

Electronic mail is a quick and efficient means of communicating with individuals, businesses and many government bodies. Sending and receiving email is not really unlike using the postal service, or "snail mail", as we call conventional letter delivery service.

BEST (NEARLY) FREE BEGINNING EMAIL ADDRESS BOOK

Prepare a self-addressed, 10" X 13" envelope. Be sure to put $2.90 in postage on the envelope when you address it to yourself. Send this, with a note requesting a free copy of NetPages, to: Aldea Communications, Inc., 7720 B El Camino Real, Box 117 Carlsbad, CA 92009. You'll receive a great address book which you can get updated for free every six months. This book will tell you how to get a free listing for your email address and is loaded with all the basic tips for sending email. You only pay the $2.90 postage for delivery. A great bargain!

When using email, we first have to write our letter. Next, we must address the letter to the person we wish to receive our correspondence. Finally, we must deliver our email to the "post office" for delivery. Sound simple? It is. Once you learn a few simple rules, you'll want all your friends to get a computer! Let's send an email message, step by step.

First, we're going to need a computer with a modem connected to the outside world by way of a telephone line. We're also going to need a commercial online access service such as Prodigy, CompuServe or America Online. We could use an Internet provider, perhaps Delphi, or a school, business, or government agency with an Internet gateway. As a third alternative, we might find a local bulletin board with something called FidoNet which can also send email to the Internet. If you need more information about the computer, modem or services, refer to "Bees & Bytes" in the July 1994 issue of *Bee Culture*.

I suggest you write your email using any word processing program which can convert the text to ASCII format. That's just about all of the programs I know. I use Word Perfect 6.0. Write your letter, just as you would any regular correspondence. Have your word processor convert the text to ASCII and "save" the letter to a disk. This will allow you to "upload" your email and keep a copy on disk for future reference.

Now, we need to find the address of the person to whom we wish to write. This is probably the most difficult task. There are hundreds of thousands of people around the world with email addresses. Unfortunately, there are many types of addresses but no complete address books. There are a few partial address books, but I find it best to start saving email addresses and create my own. Incidentally, a person may have multiple email addresses if they are connected to more than one online service. For example, my Internet address is: stankain@delphi.com. I can also receive email at my second carrier, Compuserve, at: 74134,2617 Let's look at addresses.

CompuServe and other commercial online services give you a member name or number. This becomes the "address" for you receiving email at that service from another member.

If you are sending to an Internet address, you will find a "name", a location (such as a service, school, or agency) followed by a domain suffix. The "domain suffix" may be "com" for commercial, "edu" for educational office, "gov" for government, "mil" for military, "org" for other organizations or "net" for network. If the email originates in the United States, there is no country identifier. If the email originates anywhere outside the U.S., there will be a national identifier, as well. Once we understand these simple address rules, it's possible to understand the address format.

Let's look at a couple of addresses. My address, stankain@delphi.com, tells us that I receive mail from Delphi, a commercial access and that my identifying name with that access is "stankain." What about president@whitehouse.gov? Well, we can see that this mail is directed to someone called "president" at a government facility called "whitehouse." Not too difficult to figure out who that is. Here's more of a challenge. p.nelson@unsw.edu.au. What about this address? Well, it belongs to someone named P. Nelson. They are at an educational facility. The "au" is an international code for Australia. The "unsw" is the University of New South Wales. You'll catch on with a little practice.

If you have Internet access, you can merely connect to your service provider and bring up the "send mail" command. If you are connected to Prodigy, CompuServe or another online service, you will have to follow their directions to send email "across" to another service or to the Internet. Just think of it as sending a letter from the U.S. Postal service to the postal service in another country. The "Internet Postmaster" will route the letter according to the address you use.

Your online service access will ask you to type the

Continued on Page 642

SAMPLE HEADER ON RECEIVED ELECTRONIC MAIL

A sample of what you see on incoming electronic mail. Below is the explanation of each line.

A) 15-JUL-1994 08:31:38.12
B) From: IN%"DCLAYTON@URIACC.URI.ED" "David Clayton"
C) To: IN%"STANKAIN@delphi.com" "Stan Kain"
D) CC:
E) Subj: RE: Internet Article
F) Return-path: <DCLAYTON@uriacc.uri.EDU>
G) Received: from URIACC.URI.EDU by delphi.com (PMDF V4.3-7 #6563) id <01HEQ92X01FK9EGWN8@delphi.com>; Fri, 15 Jul 1994 08:31:35 EDT
H) Received: from URIACC.URI.EDU by URIACC.URI.EDU (IBM VM SMTP V2R2) with BSMTP id 9511; Fri, 15 Jul 94 08:31:34 EDT
I) Received: from uriacc.uri.EDU (DCLAYTON) by URIACC.URI.EDU (Mailer R2.10 ptf000) with BSMTP id 0539; Fri, 15 Jul 94 08:31:32 EDT
J) Date: Fri, 15 Jul 1994 08:22:00 -0400 (EDT)
K From: David Clayton <DCLAYTON@URIACC.URI.EDU>
L) Subject: Re: Internet Article
M In-reply-to: Your message of Thu, 14 Jul 1994 22:58:38 -0400 (EDT)
N) To: Stan Kain <STANKAIN@delphi.com>
O) Message-id: <01HEQ92X4LHE9EGWN8@delphi.com>
P) Content-transfer-encoding: 7BIT

A) Date and Time email was sent.
B) Electronic address and name of sender.
C) Electronic address and name of recipient.
D) Tells me if there were multiple recipients.
E) References the subject of email.
F) The "return address" should the "postmaster" be unable to deliver.
G) Time, date and originating and final receiving stations.
H) Internal record of email by sending computers.
I) Main computer and terminal information for the university.
J) Date and time message sent.
K) References the sender.
L) References subject.
M) References my previous correspondence.
N) References recipient.
O) Transaction identification by receiving service.
P) Electronic method used to transfer message to service.

E-MAIL HINTS

Sending Electronic Mail

1. Write your message using word processor program.
2. Convert your message into ASCII format, using the word processor.
3. Save your message to disk. (Hard disk or floppy disk)
4. Access "Send Mail" command at your online service provider.
5. At "send" command, carefully type the address of the recipient.
6. At "Body of Text" command, "upload" your message from text.
7. At completion of upload, enter "send" command.

Definitions

ASCII
American Standard Code for Information Exchange. Converts human readable text into computer readable code. Allows two computers to communicate without translation.

UPLOAD
Method by which your communications software sends information from your computer to another computer.

DOWNLOAD
Method by which your communications software allows you to quickly save information sent to your computer by another computer.

INTERNATIONAL CONNECTIVITY SERVICES
Email is sent and received via BITNET, INTERNET, UUCP, FIDONET or OSI. This is dependent upon your service connection. Email may be sent "across" from one service to another.

Domain Suffixes

com - Commercial Organization (i.e. business)

edu - Educational Organization (i.e. university, secondary school)

gov - Governmental Organization (non-military)

mil - Military

org - Other Organizations

net - Network Resource

Continued on Next Page

REPLY VIA E-MAIL ... Cont. From Pg. 641

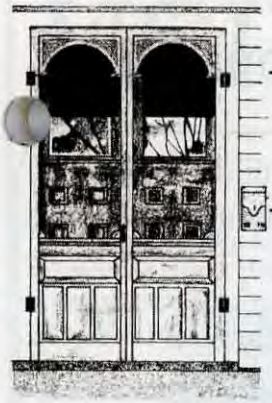
address of the recipient of your letter. Next, it will ask for the "subject." Just the topic will do. Finally, you will be asked for the text of your message. You can save a lot of "online" time by "uploading" the letter from the disk on which you wrote it. Follow your software instructions for this. After the letter is uploaded, you will be prompted to "send." Just as quickly as you do, your email is on the way. If you made an error in the address, the "Postmaster" will send you a "returned letter" notification. In this way, you will know that you must verify the address and resend your letter.

How much does it cost to send an email letter? Most service providers give you between 30 and 60 letters per month "free." Delphi, for example, permits you to send unlimited numbers at no additional cost. Delivery time? Usually only a matter of seconds, anywhere in the world. Privacy? That's a matter of discussion. I would say it is as safe as your regular "snail mail." It is most likely not read without meeting the same legal guidelines.

What about receiving email? Well, quite simple, really. When you access your online service or Internet gateway, you see a notice telling you that you have mail and how many messages await. Generally, I "download" the messages on a disk. This allows me to read them at my leisure and gives me a file copy. "Downloading" is just the opposite of "uploading" and you need only follow the instructions with your particular type of software.

Give email a try. Start building your own email address book. You'll soon find it to be as easy as sending a letter by "snail mail." If you have questions or comments, write me at my email address in this article. You may contact me by "snail mail" at: P.O. Box 1599, Atascadero, CA 93423-1599. BC

Stan Kain keeps bees, and navigates on the Information Super Highway from his base in Atascadero, CA.



HOME HARMONY

ann harman

Honey Sauces

It's a nice Sunday morning and you sit down to a special breakfast of beautiful waffles. Your favorite squeeze bear of honey is sitting, smiling, and ready to help you fill up the holes in the waffles. After all, that's what the holes are for. Now you are all set to dig in. Waffles are easy to cut with forks – so here goes the first forkful. Wait – the sticky honey has glued a slab of waffle to the back of your fork. Since that piece is too big for your mouth you pull if off the fork with your fingers. Now your fingers are sticky. In order to get a knife to make cutting easier – or so you think – you have to rinse your fingers off. The waffle is now cooling down. In just a few minutes you will have waffle, fork, and knife all stuck together and your fingers are sticky again. At this point you plan on cereal and milk for breakfast next time.

Stop for a minute. You don't have to switch from beautiful waffles and a mile-high stack of pancakes to a safe kind of breakfast. You just need to make some delicious syrups using honey, of course. Honey can be mixed with so many things that you can have a whole "library" of syrups to use. Some can be sweet, some spicy, some fruity, some tangy. You'll keep the waffle iron or pancake griddle busy just to keep up with your selections.

Honey, being rather thick, does not soak into pancakes as readily as a thinner syrup. Besides, some pancakes will benefit from a flavored syrup. Both pancakes and waffles can be made with various kinds of flour: whole wheat or cornmeal or buckwheat flour or rice flour all are tasty. Select sauce flavors to complement each. And a chocolate Belgian waffle, with the appropriate sauce, makes an excellent dessert.

Many sauces are quick to make, so that you can stir one up while you are waiting for your waffle or pancake to brown. Many of the sauces will keep quite well in the refrigerator and any spreads made with butter or cream cheese will have to be refrigerated.

All of us enjoy maple syrup. Actually it is a very thin syrup compared to honey. But it's flavor is wonderful. Maple syrup is expensive and the farther you live from maple sugar country, the more costly it is. Honey and maple syrup blend perfectly to give you a nice maple-flavored honey that fills the waffle holes quickly and leaves your fingers unsticky. Your maple syrup will go farther this way – perhaps you can enjoy it more frequently that way, too. You can experiment with the proportions of maple syrup and honey to make a syrup that suits your taste and still is easy to pour.

Honey Orange Syrup

2/3 cup honey
1/3 cup fresh orange juice (or apricot, peach, grapefruit, grape or pineapple juice)

Combine the honey and juice in a blender at high speed. Can be served over muffins, toast, pancakes or waffles.

The Book of Honey
Claude Francis & Fernande Gontier

Waffle Syrup Curaçao

This next recipe is for an extra-special breakfast with waffles.

1 cup heavy cream
1 cup honey
1/4 cup butter
2 tablespoons Curaçao, Grand Marnier or Triple Sec

In a saucepan combine the cream, honey and butter and cook over medium heat 10 minutes, or until smooth and slightly thickened. Stir in Curaçao and cook a minute longer. Serve warm over waffles.

Honey Feast
by Gene Opton & Nancie Hughes

Strawberry Sauce

2 cups strawberries
2 tablespoons honey
1 teaspoon flour
1/4 teaspoon vanilla

In a saucepan combine ingredients and heat gently, and stir several minutes until liquid thickens. Great fruity treat on pancakes, waffles or ice cream.

A Honey Cookbook
A.I. Root Company

Honey Blueberry Sauce

Blueberries are always a success with waffles and pancakes. You can enjoy this sauce year-around by using frozen berries.

2 cups blueberries
1/2 cup honey
1/4 cup butter
1 teaspoon cinnamon
1/2 teaspoon nutmeg

Mix all ingredients together; bring to a simmer and serve hot or cold. If using fresh blueberries, let mixture simmer for 5 minutes or until skins pop and juice is released. Makes 2 cups.

Honey of a Cookbook, Vol. II
Alberta Beekeepers Association

Orange-Honey Sauce

Here is an interesting variation on an orange sauce. This sauce should satisfy both the honey lovers and the marmalade lovers.

1/4 cup butter or margarine
1/2 cup honey
1/2 cup thick orange marmalade

Melt butter in a saucepan. Stir in honey and marmalade and heat through. Keep warm. You can mix and serve in a metal fondue pot which will keep the sauce

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HOME ... Cont. From Pg. 643

warm while you are waiting for the second batch of waffles or pancakes.

Nature's Golden Treasure Honey Cookbook
Joe Parkhill

Toasted Honey Almond Sauce

You can substitute other nuts for the almonds if you wish in this next recipe. Try pecans. They go very well with waffles, particularly blueberry waffles.

1/2 cup butter
3 2-7/8-oz. packets sliced almonds (or other nuts)
1-1/2 cup honey
nutmeg

Place butter in a 1-1/2 quart casserole dish and microwave on high for 2 minutes. Add almonds to butter and stir until well-coated. Microwave on high 5 to 7 minutes until bubbly and golden brown, stirring well after 3 minutes. Stir in honey until evenly mixed. Sprinkle generously with nutmeg. Serve hot.

Ontario Honey Recipe Book
Ontario Beekeepers' Association

Honey Whip

This next recipe can be flavored with cinnamon or with nutmeg if you wish. It's another recipe for a fancy waffle or pancake breakfast.

1/4 cup butter
1/2 cup honey
1/2 cup whipped cream

Cream butter thoroughly. Add honey gradually, beating well after each addition. Fold in whipped cream.

Good and Wholesome Honey Recipes
American Honey Institute

My Own Waffle Sauce

1 cup orange blossom honey
1/2 cup light cream
2 tablespoons butter
2 tablespoons Grand Marnier

Combine. Cook over a slow fire for 10 minutes. Pour into pre-heated pitcher and serve over waffles.

The Honey Cookbook
Juliette Elkon

My Own Pancake Syrup

Combine equal parts of honey, grenadine, or raspberry syrup. Slowly heat mixture and pour into warmed pitcher. May be made in quantity. Keeps indefinitely.

The Honey Cookbook
Juliette Elkon

At this point you have enough syrup recipes to keep you happy for a long time. Now you can enjoy a waffle or pancake breakfast without sticky fingers and without getting the Sunday comics all stuck together. BC

USING BEESWAX

elaine c white

Beeswax petroleum jelly is easy to make and is used in making many other products. Beeswax is sold by beekeeping suppliers, candle-making suppliers, and beekeepers. Most herb suppliers carry essential oils and beeswax.

Beeswax Petroleum Jelly Basic Formula

1 ounce (weight) beeswax
1/2 cup baby or mineral oil

Melt the beeswax in a microwave oven or a double boiler. Stir in the mineral oil.

Chapped-Lip Balm

Petroleum jelly is good for chapped lips, but this formula is even better.

1 tablespoon shredded beeswax
1 tablespoon lanolin
1 tablespoon petroleum jelly
1 teaspoon honey
3 to 4 drops essential oil

Melt the wax, lanolin and petroleum jelly in a microwave oven. Add the honey and essential oil. Stir the mixture until it cools.
Note: Essential oil of peppermint, eucalyptus, wintergreen and camphor slightly numb painful lips.

Cocoa Butter Substitute

Cocoa butter substitute is used as a lubricant to soften skin and as a massage cream. It also protects skin from sun and wind.

4 tablespoons petroleum jelly
6 tablespoons lanolin

Melt the ingredients in a microwave oven or a double boiler.

Cuticle Softener

Massage petroleum jelly into the cuticles each morning and night to soften them.

Fish Bait

Use small pieces of sponge coated with petroleum jelly to simulate fish-egg bait.

Hair Pressing Oil

This oil is a heat transfer medium and a lubricant for hot combing and straightening hair.

1 ounce (weight) beeswax
24 ounces (weight) petroleum jelly
Fragrant essential oil (optional)

Melt the beeswax in a microwave oven or double boiler. Add the petroleum jelly and melt the mixture again. Stir well. Use pressing oil after shampooing and towel drying the hair.

Instant Shoe Shine

1/4 cup petroleum jelly
1/4 cup turpentine or mineral spirits

Melt the petroleum jelly in a microwave oven. Remove from heat and stir in the turpentine. Saturate a sponge in the mixture. Tightly wring out the sponge and set it on a rack to dry for two days. Rub the sponge over shoes for an instant shine. The sponge is effective for several months. Mineral spirits and turpentine are sold with paint supplies. Never heat them over direct heat and always have adequate ventilation when mixing them.

Leather Softener

With age and exposure, leather such as work shoes, hunting boots and baseball gloves becomes hard. This formula softens leather and makes it waterproof.

2 ounces (weight) beeswax
8 ounces (weight) petroleum jelly

Melt the ingredients in a microwave or double boiler. Brush the hot mixture onto the leather and allow it to penetrate. If possible, place the item in hot sun to help the mixture penetrate the leather. Polish the leather with a cloth to remove excess oil and wax.

Lip Gloss

Simple petroleum jelly is a good clear lip gloss. Lipstick colors this formula. This is a good way to use lipstick that is too dark because the gloss will be a lighter color.

1 teaspoon shredded beeswax
1/2 teaspoon lipstick
1/2 teaspoon petroleum jelly

Melt the ingredients in a small can placed in boiling water. Stir well and pour into a small container.

Continued on Next Page

USING BEESWAX ... Cont. From Pg. 645

Lubricant

Petroleum jelly is a waterproof lubricant that is long lasting.

Mosquito Repellent

Almost any oil preparation on the skin repels mosquitoes.

5 tablespoons petroleum jelly
2 tablespoons mineral oil
1 tablespoon citronella essential oil

Stir the ingredients together.

Paint Mask

Before painting around window panes or hardware, apply a thin film of petroleum jelly to protect them from paint. After the paint has dried, the petroleum jelly and any paint over it are easily wiped away.

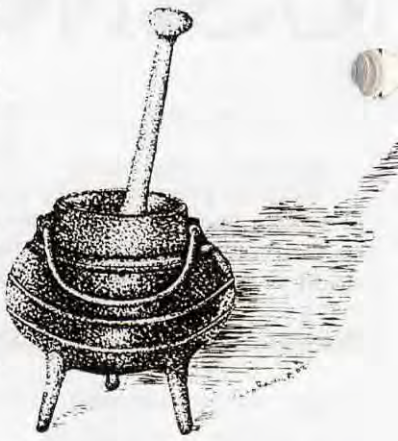
Sore Muscle Rub

1/4 cup petroleum jelly
1/4 cup lanolin
1 tablespoon wintergreen essential oil

Stir the ingredients together. Apply the formula generously to painful joints and muscles before and after exercise. Massage gently and repeat as needed.

Stuck Caps

Put a thin layer of petroleum jelly over the threads of tubes and jars. This keeps caps from sticking on such things as glue or oil paint.



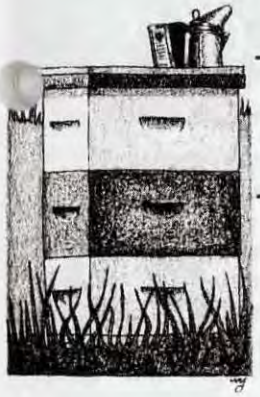
Vapor Rub

The penetrating vapors of this ointment relieves a stuffy nose and chest congestion. It is also a natural moisturizer that protects lips and skin from chapping.

1/2 cup petroleum jelly
2 tablespoons wintergreen, camphor or eucalyptus essential oil
2 teaspoons beeswax

Melt the beeswax and petroleum jelly in a microwave oven or double boiler. Remove from heat and stir in the essential oil. The oils can be used singularly or in combination. Liberally rub the ointment on the chest, throat and back. Cover the areas with a warm cloth. A little ointment may be applied under the nose if desired. BC

These recipes are from the author's book Super Formulas, Arts & Crafts, *published by Valley Hills Press in Starkville, MS.*



BEE TALK

richard taylor & connie bright

"We keep bees, not just to get and sell honey, but to get a step or two closer to that elusive condition known as happiness and joy."

This is the time (mid-September) when the scent of goldenrod fills the air around my apiaries. New Englanders will be surprised at the word "scent," because there the odor of goldenrod can be awful, even though the honey, after the bees have ripened it, is delicious. But that's a different kind of goldenrod – there are many species, not all of which are honey plants. Here it is a lovely scent, and very strong. One driver, passing my house, was so overwhelmed that he stopped and got out to buy some honey, though I explained to him that what he was getting was not the goldenrod he was smelling.

Well anyway, this brings up the general subject of honey plants. I have never said much on this, because the nectar flows upon which we all depend have little to do with the plants that are within our direct control. The dandelions, sumacs, tulip poplars, sourwoods, clovers and all – these come and go, from season to season, and about all we can do is hope that the weather, about which we can do nothing at all, will favor nectar flows. We can, to be sure, cultivate honey plants – planting fields of alfalfa or buckwheat or whatever. But it never pays to do this just for the honey we can get from them. And the plantings we make around the house and yard, even if loved by the bees, will make little difference to our honey crops. With respect to the plants that produce the main nectar flows, year in and year out, we have to take what we get. Some areas are good for beekeeping and others not so good, and there is not much you can do about it, other than to move to one of those places that is good.

Another reason I have written little about honey plants is that I really do not know much about them, beyond what any reasonably observant beekeeper picks up just in the pursuit of his craft. But now it is my good luck to have the help of someone who knows an awful lot about plants, as well as bees, so with her help I shall try to contribute something to that subject.

Sunflowers are only one honey plant you can grow in your yard.

And of course there is a reason for talking about honey plants, quite apart from their connection with honey crops. We keep bees, not *just* to get and sell honey, but to get a step or two closer to that elusive condition known as happiness and joy. I have certainly tasted this, and the cultivation of a few honey plants, over the years, has surely in some small way contributed to it.

Seventeen years ago I sent off for a couple of vitex plants (*Vitex negundo incisa*). My record book says that I paid five dollars for them, shipping included, and if I remember correctly, they were only a few inches high, their roots wrapped tightly for shipping. This plant is native to China, and I had no idea whether it would thrive here or not. I had seen it in Texas where, I was told, it was a primary nectar source. Well, those little plants are now enormous, maybe 30 feet high, very full and beautiful, and they are covered with bloom, and with bees, in late summer, for two or three weeks. I was going to get a picture of them this summer, but I kept forgetting. Next summer perhaps I'll remember. My home apiary is only a few yards from them. Do they make a difference to the honey crop there? I don't know. I have never noticed any difference in the honey I get from those hives. But they do make quite a difference to my own spirits. To step out there and hear, and see, the bees gathering nec-

Continued on Next Page

BEE TALK ... Cont. From Pg. 647

tar, in such apparent abundance, boosts my feelings like the sound of music or the sight of a rainbow. And surely, the bees are making honey from these plants, whether I can actually detect the difference or not. The bees rejoice in the blooms, and I rejoice with them. My five dollars was very well invested indeed.

Around my barn I planted some globe thistle. That was many years ago, I don't remember when. And of course the bees love this, too. This cannot make much of a nectar source, all told. There is too little of it – maybe a dozen plants, which just keep coming up and blooming, year after year. But again, I have with little effort converted this small portion of my yard to a source of small joys, for me and the bees.

I stuck little plugs of thyme in between the rocks on my patio, the kind that produces tiny white blossoms, as well as the kind that makes lavender ones. That, too, happened years ago. Now the thyme has spread over most of this fairly large patio, cascading over the edge like a frozen waterfall. The leaves are as tiny as the blossoms, smaller than sand grains, but dense, creating a carpet of lavender and white – and covered with bees. I cannot believe that more than a couple of spoonfuls of honey can come from these blossoms, not even enough for a morning's cereal, but what of the satisfaction of sitting in the sun in contemplation of this? That cannot be measured in spoonfuls. It cannot be measured at all.

The Pellett family, out in Iowa, famous for beekeeping, used to have a nursery that specialized in honey plants. That's where I got my Vitex. Mr. Frank Chapman Pellett, who died about 40 years ago, wrote a comprehensive book on honey plants. It is the kind of business that ought to continue, and anyone having a nursery, who is also an avid beekeeper, should consider this specialty. I have been told that Mr. Dewey Jones, down in Charleston, North Carolina, is such a nurseryman, but I do not know him.

Meanwhile, if you're interested in starting some honey plants the following may be useful.

There is a garden plant, Sedum, sometimes called Autumn Joy, much loved by the bees. It is a deep red, blooms automatically late in summer, and, it can be propagated by cuttings. It is the plant on the cover of this magazine this month.

Other good ideas are boxwood, a common and handsome hedge that bees go for, and borage. The latter, once started, keeps coming up year after year. Sunflowers are known to everyone, and the joy of these can be doubled by drying the seeds for wild bird food. I once had an apiary in the midst of fields of sunflowers, and got not a drop of honey from them – illustrating how fickle a common nectar source can be.

Across much of the country grows several varieties of knapweed, much detested by farmers and loved by beekeepers. I was once roundly scolded by agronomists for getting some of the seed and scattering it around here, but I discovered large tracts of it already growing, including some, not planted by me, in my own back yard. I believe it is called star thistle in the midwest.

And then there is perhaps the most interesting bee plant of all – the Chinese evodia tree. I've got a big one in my back yard – but I'll wait until next month to talk about that. BC

Questions? Answers!

Storing Supers

Q **I have three shallow supers with only small amounts of capped honey in them. Can I leave them on the hive all winter, or should they be stored inside?**

Rich Weiford
Moorestown, NJ

A There is nothing wrong with leaving them on the hive.

How's Business?

Q **I am thinking of expanding my beekeeping hobby to a significant source of income. Are the present turbulent times in the beekeeping business a deterrent or a grand opportunity? Where can one find plans for an apiary house? Can an industrious person make money with bees on a part-time basis? And how many colonies can you have in the same apiary?**

Michael Strope
Horseheads, NY

A I think this is a very good time to take up beekeeping on a small commercial scale. Honey prices are good and demand for pollination is strong. Beekeepers everywhere seem to be getting good crops. By "apiary house" I assume you mean honey house. Go visit a couple of established beekeepers and get their advice. As for apiary size, I would think that about 25-30 colonies might be about right where you live.

Cleaning Frames

Q **The lye can says not to heat lye water, so I use hot tap water, add lye and soak old frames for about 10 minutes. I still have to do a lot of scraping. Is there a better way?**

Andy Moore
Sweetwater, TX

A The reason the can carrys that warning is that some fool might dump lye into an aluminum pan of boiling water on the kitchen stove and end up blind. Drano, sold to get sink pipes unplugged, contains particles of aluminum mixed with lye. And if you carelessly pour lye into boiling water, in whatever kind of vessel, you can get a violent, explosive reaction. But if you use a large tub, add lye to water before heating it, then heat it slowly and carefully, you'll be all right, and the wax will pretty much dissolve off the frames. My own system of cleaning frames, however, is to melt the old wax off as best I can in my solar wax melter, then scrape them while the sun is still up and the frames are still hot. This is much safer, simple, and good enough.

More Room?

Q **One of my hives is two full hive bodies plus three supers, which seem to be full of honey and needing to be harvested. But the hive is so full of bees that they cover the whole front. If I harvest those supers will that make the hive so crowded with bees that they are apt to swarm?**

Tim Grove
Searsburg, NY

A No. Autumn swarming, although it sometimes occurs, and some years more than others, is still not common. If you go ahead and harvest those supers then the bees, come cool weather, will find room down below and make a fine, big winter cluster.

Feed, or Not?

Q **We live up near the Canadian border where fall frost comes early. We harvest the crop in early August. The hives go into winter as two full brood chambers, but we find that the top one is full of brood then and the bottom one nearly empty. How can we get the bees to store more honey for wintering?**

Erwin McMahon
Brushton, NY

A I assume the early frost kills off the normal sources for fall honey flow, such as goldenrod and aster. Obviously there is not much point in having a two-story hive if the bottom one is nearly empty. I think you have only three choices: (1) Kill the bees in the fall and start with packages in the spring – which would, in my opinion, be an abominable thing to do, although it used to be common practice in Canada; (2) feed the bees five or ten gallons of sugar syrup in the fall, which would be a lot of trouble and expense, or (3) harvest less honey, that is, harvest earlier, letting the bees keep all they get after that. The best choice is the one that fits your operation – feeding adds labor costs but honey income. Harvesting early reduces income, but reduces labor and materials costs.

Please send questions to Dr. Richard Taylor, Box 352, Interlaken, NY 14847, enclosing a stamped envelope for response.

Richard Taylor

?Do You Know? Answers

1. **True** In the last four years the number of producing honey bee colonies in the United States has declined due to heavy colony losses as a result of unfavorable weather and the parasitic mites, increased production costs and declining honey prices. In addition, the migration of Africanized honey bees into the southern United States may have contributed to a decline in beekeepers. Canada has also seen a rather dramatic reduction in number of colonies during the past five years.
2. **True** China has become the world's largest honey exporter followed by Argentina, and Mexico with Canada a distant fourth in recent years These rankings may change annually depending on the number of colonies in production and honey yields.
3. **False** Germany ranks as the world's leading importer of honey, followed by the United States and Japan.
4. **False** The U. S. government's new nutrition labeling law requires honey businesses with gross sales over $500,000 to include a nutrition label on the honey container.
5. **True** U. S. federal law requires "Country of Origin" labeling if imported honey is packed or blended with domestic honey in the packing process.
6. **True** H M F (hydroxymethylfurfural) is a degradation product of honey sugars and a weakening of honey enzymes. This decomposition reaction may begin even during the ripening of nectar in the hive when concentrations of fructose and acid become appropriate. The reaction in extracted honey is accelerated by heat. Many foreign packers measure the levels of HMF in honey as an indicator of the amount of heating the honey has been exposed to and length of time it has been in storage.
7. **False** The Lovibond honey grader is used to determine the color grade of honey. This color comparator operates similar to a Viewmaster. The honey sample is placed in a cylinder and compared to a permanent glass color standard.
8. **False** Approximately one-quarter to one-third of the honey produced in the United States is used by the food service industry, however, the baking industry is the largest volume user of honey at the present time.
9. **False** In recent years the United States per capita honey consumption has remained at about 1.1 pounds per person.
10. California, Florida, North Dakota, South Dakota, Minnesota
11. Section Comb Honey, Liquid Extracted Honey, Cut Comb Honey, Chunk Honey, Finely Crystallized, Creamed or Whipped Honey
12. Non-floral honeys are derived from extra-floral nectaries and honeydew.
13. B) Filtered Honey
14. H) Blended Honey
15. E) Pasteurized Honey
16. F) Raw Honey
17. I) Creamed Honey
18. G) Honey Spread

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

D STATES
L SERVICE

Statement of Ownership, Management, and Circulation

(Required by 39 U.S.C. 3685)

1. Publication Title	2. Publication No.	3. Filing Date
BEE CULTURE MAGAZINE	9 4 2 3 - 8 0	10-01-94
4. Issue Frequency	5. No. of Issues Published Annually	6. Annual Subscription Price
Monthly	12	$16.50

7. Complete Mailing Address of Known Office of Publication (Street, City, County, State, and ZIP+4) (Not Printer)

P O BOX 706, 623 West Liberty Street, Medina, OH 44256

8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not Printer)

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do Not Leave Blank)

Publisher (Name and Complete Mailing Address)

John Root P. O. Box 588, Medina, OH 44258-0588

Editor (Name and Complete Mailing Address)

Kim Flottum, P O Box 706, Medina, OH 44258-0706

Managing Editor (Name and Complete Mailing Address)

10. Owner (If owned by a corporation, its name and address must be stated and also immediately thereafter the names and addresses of stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.) (Do Not Leave Blank.)

Full Name	Complete Mailing Address
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Elizabeth Judkins, Silver Bay, MN; Katherine Warner, Kent, OH; Donlad Oemuth, Trust; Robert	
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NONE	

12. For completion by nonprofit organizations authorized to mail at special rates. The purpose, function, and nonprofit status of this organization and the exempt status for income tax purposes: (Check one)
☐ Has Not Changed During Preceding 12 Months
☐ Has Changed During Preceding 12 Months (If changed, publisher must submit explanation of change with this statement)

PS Form 3526, October 1994 (See instructions on Reverse)

13. Publication Name	14. Issue Date for Circulation Data Below
BEE CULTURE	October 1994

15. Extent and Nature of Circulation	Average No. Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
a. Total No. Copies (Net Press Run)	11,765	11,550
b. Paid and/or Requested Circulation (1) Sales Through Dealers and Carriers, Street Vendors, and Counter Sales (Not Mailed)	165	71
(2) Paid or Requested Mail Subscriptions (Include Advertisers' Proof Copies/Exchange Copies)	10,506	9,942
c. Total Paid and/or Requested Circulation (Sum of 15b(1) and 15b(2))	10,671	10,013
d. Free Distribution by Mail (Samples, Complimentary, and Other Free)	157	157
e. Free Distribution Outside the Mail (Carriers or Other Means)	-0-	-0-
f. Total Free Distribution (Sum of 15d and 15e)	157	157
g. Total Distribution (Sum of 15c and 15f)	10,828	10,170
h. Copies Not Distributed (1) Office Use, Leftovers, Spoiled	937	1,380
(2) Return from News Agents	-0-	-0-
i. Total (Sum of 15g, 15h(1), and 15h(2))	11,765	11,550
Percent Paid and/or Requested Circulation (15c / 15g x 100)	99%	98%

16. This Statement of Ownership will be printed in the November 1994 issue of this publication. ☐ Check box if not required to publish.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner — Date: 10-01-94

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including multiple damages and civil penalties).

INNER ... Cont. From Pg. 608

And, though some may end up being tough enough to withstand that onslaught, are they up to tracheal mites? That makes it all the more difficult – but not impossible. Keep trying.

•

There were also lots of calls this last spring and summer from people who aren't beekeepers wondering where all the bees were. The most concerned, of course, were those in need of bees for pollination. No bees, no crop (or a reduced crop, or .). But even less than avid gardeners noticed the void, enough to question why. Lots of good press was generated because of this. Local newspapers carried lots of stories with quotes from local, and sometimes not so local experts.

And many who were interviewed made good use of the opportunity to get in messages other than just fewer bees due to parasitic mites. The bigger picture got mentioned by many – fewer beekeepers were around, too, due to the mites certainly, but competition from imported honey and the death of the honey subsidy.

Enough of these were heard that the message was carried out of local farm columns and onto the pages of *Business Week*, *The New York Times*, and even *Science*. We reached *lots* of people this year with good, straightforward information.

Interestingly, more of the above made use of the obvious headline grabbing attention killer bees often generate – it was mites and prices and competition.

If you'd like copies of the *Business Week* and *Science* articles drop me a note and I'll send you a copy. They're great when talking to reporters as background info – lots of facts in prestigious publications impress even the most unobjective reporter – even me.

•

We tried to get our nostalgia piece together this month – didn't work for a variety of reasons – mostly time and other responsibilities. Next month it'll come together. After all, it's been around a long time. It'll wait.

•

I first met Pat and Brian Sherriff about nine years ago at an EAS meeting. They were behind their vendor's booth, surrounded by all manner of odd looking beesuits, t-shirts, tea towels and other assorted bee things.

Being the consummate opportunist I went up and introduced myself and in his absolutely delightful very-British accent, Brian said "Oh, hello. I've been wanting to talk with you. Do you have a minute?"

So we took a moment, or two, and talked a bit. And then Pat came over. And the room brightened somehow.

Probably thousands of beekeepers in this country, and certainly many, many other countries, have stood across that table simply enchanted by those two people. They have become an institution at beekeepers' meetings, anywhere there are beekeepers.

And, there is no doubt they have changed the way beekeepers look. Their beesuit has proven once again the old adage about better mousetraps. They have made working with bees a safe and easy task.

No small part of that was Pat's skill at making things work well with cloth. A seamstress by trade, she brought her skills to husband Brian's business of working bees. Together they made a beesuit that the world wanted.

Over the years I got to know Pat and Brian pretty well. It became a tradition that the three or four times a year when we were together at a meeting we took the time to share at least one quite meal together, to talk of business, and family and friends. They were fun times – those quiet meals. There is no doubt that when beekeepers get together they share a mutual bond and almost secret language. The same holds true for those in the business of bees. They were special, those meals and times.

And always, whether alone or in a group, there was Pat's dry and offhand wit using the subtle differences in the English and American language and that smile that was absolutely infectious. Through all the light and serious talk, the humor and fun and the catching up since we saw you last, Pat remained a friend, a confidant and a lady. She never lost that special charm, no matter how long at the booth, the hours lost by jet lag or even, (probably worst of all) running out of tea.

Pat passed away about a month ago, suddenly and, I'm told, very unexpectedly. Brian, his family and the rest of the world's beekeeping community have lost a friend, a resource and an eminently elegant lady.

To Brian and his family we extend our deepest sympathy.

Someone special is gone, and will be missed by everyone who knew her.

Kim Flottum

"Does anybody sell stale honey?"

Gleanings

NOVEMBER, 1994 • ALL THE NEWS THAT FITS

AHPA IN RENO, NV

The 1995 convention of the AHPA, will be January 9-13 in Reno, Nevada. The program will be held at the Eldorado Hotel Casino, P.O. Box 3399, Reno, NV 89505. The toll free reservation number is 800-648-5966. Participation at the convention is open to all beekeepers, supply dealers and other parties interested in beekeeping, pollination and honey production. For further information, write or phone for registration kit at: AHPA 1995 Convention, P.O. Box 584, Cheshire, CT 06410-0584; phone/FAX 203-250-7271.

The week's schedule will be arranged as follows:

Monday, January 9

Meetings of executive committee (a.m.) and 1994 directors (p.m.). Exhibit set up. Possible ski or sightseeing tour of Reno/Tahoe areas. Committee meetings in the evening.

Tuesday, January 10

Call to order, exhibits open (a.m.), reports of officers and committees and general sessions (remainder of day). Welcome reception (evening).

Wednesday, January 11

General sessions and exhibits open.

Thursday, January 12

General sessions and exhibits open (a.m.), annual general membership meeting and 1995 directors meeting (p.m.), annual banquet (evening).

Friday, January 13

Executive committee meeting (a.m.) Exhibit removal. Possible workshop sessions (a.m.).

Decision Due Nov. 17

ANTI-DUMPING SUIT FILED

The American Honey Producers Association (AHPA) and the American Beekeeping Federation (ABF) filed an antidumping petition on October 3, 1995 against the People's Republic of China (PRC), charging that Chinese honey is being sold in the United States at prices 170% lower than the cost of production in the PRC.

"What the Chinese are doing to us is outrageous," said Richard Adee, President of AHPA. "First, China maintains an import duty of 55% on honey imports, which blocks all non-Chinese honey out of their market. The U.S. duty on honey imports is only about two percent, and is the smallest of any significant market in the world. Second, it is well-known that the Chinese honey industry is extremely inefficient and suffers huge losses each year, and could not flood the export market without the high Chinese import duty and significant subsidies from the Chinese Government. Third, Chinese honey imports are being sent here at below cost prices for the sole purpose of capturing market share and earning hard currency. Our industry is very painfully being destroyed as a result."

This will be the second ITC investigation of honey imports from China this year. Last January, the ITC advised President Clinton under Section 406 of the Trade Act of 1974 that the rising volume of low-priced Chinese honey imports was disrupting the U.S. honey market, threatening the U.S. honey industry. Five of the six commissioners recommended the President impose a combination of higher duties and quotas on Chinese honey imports to protect the U.S. honey industry. In April, however, the President declined this recommendation, and determined not to impose any restraints on Chinese honey imports.

Continued on Next Page

EAS Awards

TRACHEAL MITE RESEARCH FUNDED

The Eastern Apicultural Society Foundation for Honey Bee Research awarded two research grants during the Annual Conference in Lancaster, PA. The EAS research committee includes Dr. H. Shimanuki, USDA, Beltsville, MD; Dr. Clarence Collison, MS State University; and Tony Jadczak, ME State Apiculturist, committee chairman. Both of the research proposals pertain to the honey bee tracheal mite which has caused considerable damage to N. American beekeepers.

Dr. Cynthia Scott-Dupree, Associate Professor, Department of Environmental Biology, University of Guelph, Ontario will investigate the potential transmission of viruses by *Acarapis woodi* Rennie to honey bees, *Apis mellifera*. Dr. Scott's objectives are: 1) To determine whether the presence of *Acarapis woodi* in Canadian lines of honey bees can be associated with viral infections and if an association exists; 2)To identify whether previously determined resistance of various Canadian and imported lines of bees to *A. woodi* is actually associated with resistance to specific viruses introduced during feeding by this mite pest.

Another grant was awarded to Diana Sammataro, Dept. of Entomology, OH State Univ. Sammataro, a doctoral candidate at OSU will investigate the behavior of questing *Acarapis woodi* and the effects of vegetable oil on the mite's movements. She will study how mites transfer to bees and determine the stimulus(i) needed for mite migration, including a video record of a mite entering a bee spiracle. Ms. Sammataro will also observe how vegetable oil interferes with mite/bee transfer and observe what bees do to a vegetable oil patty placed in the hive. Vegetable oil patties also known as "extender patties" are of great interest to beekeepers looking for a nontoxic product that could protect bees from tracheal mites without contaminating honey, pollen or wax.

The EAS membership is honored to provide funds to both of these dedicated scientists. Individuals who wish to make a tax deductible contribution to the EAS Foundation for Honey Bee Research may do so by sending a check, made payable to "EAS", to: Don Churnside, Treasurer, EAS, 201 Briarbrook Drive, North Kingston, RI 02852.

U.C. Berkeley Hosts

BIODIVERSITY LIST SERVER

The Smithsonian Institution, in cooperation with Univ. of CA at Berkeley, announces the creation of a new listserver to discuss information management for the proposed U.S. National Biodiversity Information Center. The listserver, Biodicen-L, may be of interest to those desiring biodiversity information sources and tools. New subscribers from any sector are welcome. Readers can find a short description of the Center concept in the Smithsonian national museum of Natural History's gopher (nmnhgoph.si.edu) under Biodiversity Programs.

The draft mission for the Center is to function as a clearinghouse to provide awareness of available biodiversity data and information; enable access to such data and information; and facilitate the use and exchange of, and collaborative discussions about, the information in order to meet the needs of public and private customers for conservation, sustainable use, education, and scientific inquiry.

To subscribe, send the message: "subscribe biodicen-L <firstname> <lastname>" to: "listserv@ucjeps.berkeley.edu".

Thanksgiving Safe, But Pollination Needs Up

1994 U.S. CRANBERRY PRODUCTION

The Massachusetts forecast rose to 1.93 million barrels, 3% more than last year's crop and 2% more than the 1992 crop. Growers sanded a large amount of acreage last winter to rejuvenate vines. Bloom was average to heavy and set was average. Hot, humid weather during the last two months accelerated vine growth and promoted disease and insect damage. Dry conditions during the hot temperatures restricted crop development and kept berry size average. Water supplies are adequate.

New Jersey expects a crop of 440,000 barrels, 14% more than last year but 8% less than 1992. There was little winter or frost damage. Bloom was average to heavy and fruit set was average. Pollination was very good in some areas. Berry size is average at this time. No unusual disease problems were reported.

In Oregon, the crop is forecast at 255,000 barrels, 63% more than last year's crop but 11% less than the 1992 record crop. Black vine weevil and cranberry girdler pressure is higher than normal. Water concerns are common. High winds after bloom may reduce berry size in beds near the coastline.

A crop of 158,000 barrels is forecast for Washington, 15% more than last year and virtually the same as 1992. An extremely mild winter was followed by little or no frost damage. Weather has been favorable promoting a good bloom and fruit set. If the warm, dry, summer weather continues, berry size should be good, but is not expected to be exceptional. Black vine weevil continues to plague, particularly in the Grayland area. Fireworm and girdler are also a problem.

Production in Wisconsin is expected at 1.53 million barrels, 13% more than 1993 and 1992. Some winter damage was noted but in general, the crop is good. Growers reported good to very good set, good pollination, adequate water supply, and a slightly early season. Wisconsin seems to have the best growing conditions in several years.

ANTI-DUMPING ... Cont. From Pg. 653

"The President's decision was a severe blow to the industry," said David Sunberg, President of the ABF. "As 1994 has progressed, the industry's overall condition has worsened as extremely low-priced imports from China have continued to flood the U.S. market. Our only recourse was to file an antidumping petition against honey imports from China." The President does not have the discretion to override findings of dumping and resulting material injury made by the Commerce Department and ITC, respectively, in the course of an antidumping investigation.

Imports of honey from China rose from 45 million pounds in 1991 to 77 million pounds in 1993, an increase of more than 71%; and the Chinese share of the U.S. market rose from 14.8% to 25.2%. The value of Chinese honey imports rose from $19 million to $29 million during the same period. The petition alleges that, while honey costs about $.83 per pound to produce and pack in China, it is being sold here at prices as low as $.30 per pound (exclusive of freight, insurance, duties and assessments), or about 170% lower than the cost of production.

The U.S. International Trade Commission will render its preliminary determination of whether there is reasonable indication that the U.S. honey producers are materially injured, or are threatened with material injury, by reason of honey imports from China by Thursday, November 17. If the ITC's determination is affirmative, the Commerce Department will determine the extent to which the Chinese imports are being dumped in this country.

The ABF and AHPA jointly have more than 2,000 members who are responsible for more than 75% of all commercial honey production in the United States.

Assessments 'Serious' Stuff: USDA

ALMOND GROWERS SUED

The U.S. Department of Justice has filed petitions with federal courts in Sacramento and Fresno asking that injunctions be issued against six almond handlers for nonpayment of assessments in violation of the federal marketing order.

The petitions, filed with the U.S. District Court in Fresno and Sacramento, ask that the court issue "both temporary and permanent injunctions commanding the defendants to comply fully with the Agricultural Marketing Act and the Almond Marketing Order, and to pay the Almond Board of California all obligations now due, with interest, from the date due."

The Justice Department also asked the court to order the defendants to "pay all future obligations promptly when due, including those which accrue during the pendency of this action."

The Justice Department told the court "Defendant's failure to pay its assessments has caused and will cause injury and irreparable harm to the operation of the Marketing Order and is detrimental to the public interest. Defendant's violations threaten the entire scheme of the Marketing Order by causing unfairness to those handlers who are in compliance with the Order and by encouraging wider noncompliance with that Order."

Stuart Woolf, independent grower and Chairman of the Almond Board, noted the current crop is forecast at 640 million pounds, a near record. "There is a real need to have the industry promoting this crop. Handlers concerned with the court ruling may act to protect their rights while continuing to support the Board's promotion with their growers' funds – the two are not mutually exclusive," explained Woolf. "These promotional programs serve to benefit all members of the industry, handlers and growers."

The defendants are: Cal-Almond Inc., Hughson; Dole Dried Fruit and Nut and Company, Inc., Fresno; Gold Hills Nut Company, Snelling; Del Rio Nut Company, Livingston; Monte Vista Farming Company, Denair; and Rotteveel Orchards, Dixon.

The delinquent assessments are for the 1993-94 crop year.

Conserving Bees

SYMPOSSIUM TO BE HELD IN LONDON

Conservation of bee diversity is a topic being increasingly discussed by biologists. The many thousands of bee species have an important role in conserving native flora, and a number are currently or potentially important as crop pollinators.

A forthcoming two-day scientific meeting will concentrate on bee conservation in Europe and the Mediterranean basin, but will also consider the Americas and other areas – especially where the honey bee is an introduced species.

'Conserving Europe's bees' will comprise four sessions of invited papers, plus contributed posters, with opportunities for discussions and displays of equipment.

This symposium will be held in London, UK, on 6 and 7 April 1995, and is being organized by the International Bee Research Association and the Linnean Society of London.

For information contact: Conserving Europe's Bees, The Linnean Society of London, Burlington House, Piccadilly, London, WIV 0LQ, U.K.

BROWN VS. YELLOW

A fierce 14-year battle over a colony of bees on the little northern Danish island of Laeso, the last habitat of the Danish brown bee, has moved to the courts.

The trouble started when summer residents brought the common yellow bees to the island and they threatened the survival of the native brown bees.

The Danish government passed legislation last year that banned the yellow bees from the island.

All but one of the island's beekeepers switched to brown bees and the Ministry of Agriculture laid a complaint with the only policeman on Laeo.

School teacher Ditlev Bluhme was charged with harboring illegal bees and has gone to court vigorously defending his case.

Bluhme claims his yellow bees have escaped into the bush and anyway, the law is illegal because it breaches a European Union directive ordering the free movement of livestock within the EU.

The government argues that it can impose the bee restriction under exemptions allowed by the EU, but the ministry said it could take a decision by the European Court of Justice to decide the case.

HONEY GOLD EXEC SERVES ABROAD

E. Randall Johnson and his wife, Betty, of Nampa, Idahohave returned from Bladivostok where they served as volunteers with the International Executive Service Corps (IESC).

Mr. Johnson, Honey Gold president and owner of Honeycold Corp., was recruited by IESC to assist Primorskii Honey Association. He recommended processes and equipment to decrease production costs and improve product quality and quantity. IESC's Eastern European offices are helping companies there adjust to privatization, democratization, and the establishment of free-market economies.

IESC is a not-for-profit organization of American business men and women devoted to providing managerial and technical assistance to private enterprises in developing countries. Since 1965, IESC has completed more than 15,500 projects in 126 countries. Funding for IESC projects is shared by the client receiving assistance and the United States Agency for International Development (USAID).

For information on serving as an IESC executive volunteer, write James O. Leet, Vice-Pres. Recruiting, IESC, P.O. 10005, Stamford, CT 06904-2005, (203) 967-6000.

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THE SCOTTISH BEEKEEPER. Magazine of Scottish Beekeepers' Assoc. Rates from D.B.N. Blair, 44 Dalhousie Rd., Kilbarchan, Renfrewshire, PA 10 2AT Scotland, U.K. Sample on request. $1.

DIE NEUE BIENENZUCHT Monthly magazine for beekeepers interested in German beekeeping. Hamburger Str. 109, D-2360 Bad Segeberg, West Germ.

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SCOTTISH BEE JOURNAL. Monthly magazine. Sample copy from Robert NH Skilling, FRSA, 34 Rennie St., Kilmarnock, Scotland. $4. per annum.

BEE CRAFT – Month. journal of British Beekeepers Assn. Subs., including postage is £12.96 surface mail to L. Connor, P.O. 817, Cheshire, CT 06410.

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THE GIBSON LETTER. A monthly newsletter that takes another look at beekeeping news. Edited by Glenn Gibson. Subscription $48/year. The Gibson Letter, P.O. Box 368, Minco, OK 73059.

THE NEW ZEALAND BEEKEEPER. Quarterly magazine by the National Beekeeper's Association of NZ. Write for rates & indicate whether airmail or surface mail. NZ BEEKEEPER, P.O. Box 4048, Wellington, NZ.

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BOTTOM ... Cont. From Pg. 662

The Bee Catcher

by Steve Burt

High adventure, this courageous and slow stalk,
Wading past tall stands of clover and dandelion,
To capture in a jelly jar these amber flying tigers,
As they alight in the timeless essence of their being.
Out on the floral tapestry of the lush front lawn.

I was a little lad, tasting the vital, raw power
Of capturing such a wild and dangerous thing,
And then another and another and still another.
The jar was a penitentiary full of sullen inmates,
Whimpering at the wall of their peculiar prison.

The thrill in bee catching is certainly the chase,
For bees if not free have no value to the keeper.
They require the liberty to simply be themselves.
Freedom to me was baggy jeans and sunny days.
So I loosened the cap, kicked over the jar, and ran!

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In these inactive winter months, our thoughts turn to bee poetry! Why not. Poetry is a fine vehicle for exploring our emotions. We beekeepers are eccentric enough to dig into our souls and find our cores. We've learned to be careful observers, as well as appreciators of nature. Certainly we have the spare time. Cowboys do it. Beatniks do it. With Haiku, the Japanese have invented the short form. Plus 'bee' is easy to rhyme.

How does one write poetry, you ask? Just dredge up your feelings, emotions, thoughts, and observations, and put them down on paper. Then, take a break – go look at the backyard hives, for instance – and return refreshed; reread what you wrote, and smooth it out. Remember modern poetry has no rules; if you want to rhyme, then rhyme; if you don't, then don't. Meter or no meter. Form or no form. Line counting or no line counting.

Let's do an exercise:

Roses are red/Violets are blue

Complete the couplet by creating a two line ending that works. Why rhymes with blue? Glue, flue, rue, stew, flew, mew, too, pew, due, crew. How can you use one of these words to say something about beekeeping? How about:

Honey is yellow/ And there's some gold too.

or, Honey is sweet/Not like glue.

or, Beekeeping is in my blood/I'm part of the crew.

or, I stand alongside the hive/Like a penitent in his pew.

Okay, not the best Wadsworthian effort, but I'm – we're – just beginners – right? A good part of poetry is that it's there to give you personal pleasure. Pleasure in fussing over words. Pleasure in turning over a neat phrase. Pleasure in vividly describing something.

Compare writing poetry to bees building a hive. They start from the bottom up, and they construct a beautiful edifice whose top is perfectly imperfect walls of encased honey. The person holding the frame instantly recognizes high art. So start with short sentences, and make a structure out of them. Make it simple, yet powerful. Intricate, yet elemental. Majestic, yet earthly. Like a beehive.

Let's try some free verse:

"yo, person high / you know me / you are my master / hahabuzzbuzz/

i fool you / work is my love / you take my gains / but never my passion"

Of course, this poem is from the point of view of the bee. It expresses my opinion on what might be going on in the bees' heads as they realize their excess honey has been stolen. I might title it, 'To the Beekeeper.' Notice I chose to have no capitals, no punctuation, and even incorrect form (yo, person high). Again, this is permitted, because anything is permitted.

Okay, you say poetry is too unstructured. You want some rules. You want some guidelines. I give you this incomparable line of poetry: "I caught this morning morning's minion, kingdom of daylight's dauphin, dapple-dawn-drawn Falcon, in his riding." Isn't that beautiful. It's the first line of Gerard Manley Hopkin's, 'The Windhover, written in 1918. That's your one rule – make it sing; make the words describe something so profound that the thought is beyond words, but is somehow felt in the flow of sounds. Okay, now it's your turn. Make me sign and shudder. Turn me on to beekeeping.

Let me try again. I think of some aspect of our hobby, and let the words tumble out:

"I enter this buzzing, bursting, bestial sanctity uninvited but not un-alive."

Here's another:

"Oh, golden nectar that fruited o'er time into honey – a miracle, sweet bread."

You ask – what should I focus on? Here are a few potential subjects:

* The ironic justice of the drones being thrown out of the hive.
* The fear bees must feel when they are left suddenly queenless.
* The remarkable beauty of a perfectly-capped honey frame.
* The intimate relationship of a beekeeper to his bees.
* The fury of angry bees.
* The handiness of the all-purpose hive tool.

No one says poetry is easy. But you who gaze directly into the molten core of existence should be able to take something out and make some sense of it. Who knows. Maybe next year, *Bee Culture* will have a poetry page for us practitioners.

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