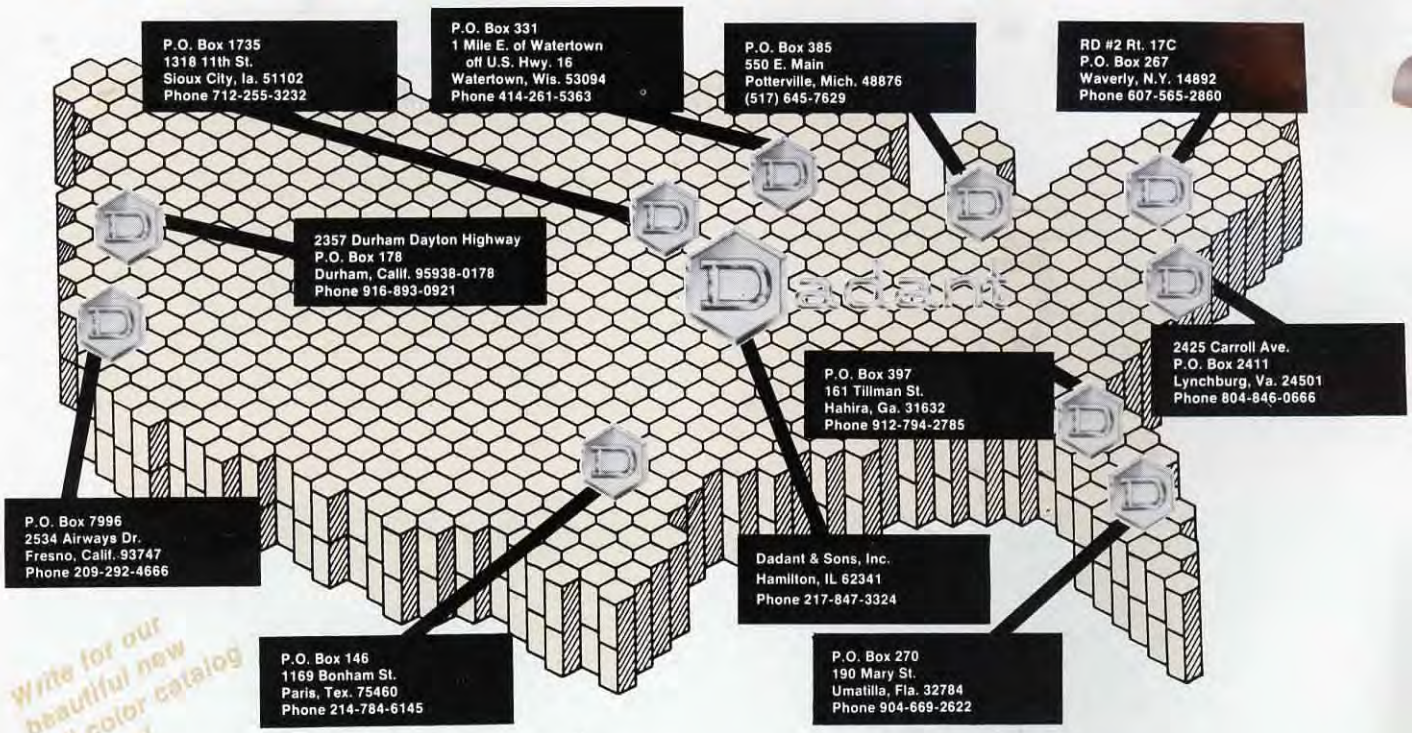
GLEANINGS IN *JAN. '87*

BEE CULTURE

BUILD YOUR BEEKEEPING ON A SOLID FOUNDATION



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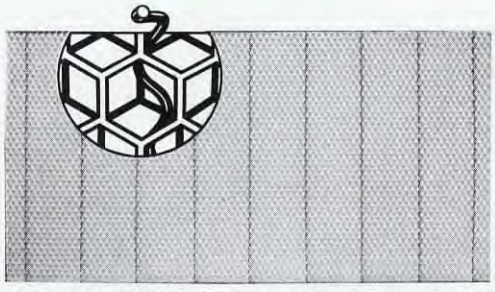
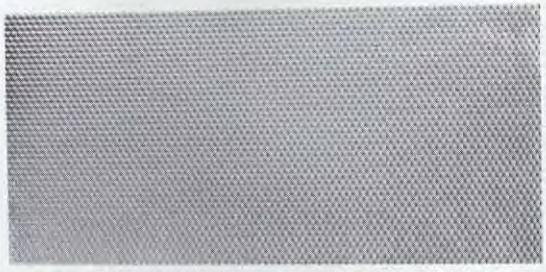
CRIMP-WIRED



Introduced in 1921, Crimp-wired Foundation was the first reinforced foundation to ever be offered to beekeepers. The steel wire is crimped to make shoulders that radiate strength in all directions through the foundation. Sturdy steel hooks at the top of each crimp wired anchor foundation securely into the wedge top bar frame.

DURACOMB



Duracomb Foundation introduced a new concept in the art of foundation making. An inner core of tough plastic is coated with pure beeswax on both sides and then milled with perfect cells of worker size. Duracomb completely eliminates the need for cross-wiring and embedding.

DURAGILT

Duragilt is the third addition to the Dadant line of reinforced foundations. It has the same tough inner core of plastic as Duracomb, but is further reinforced with metal edges that extend up into the top bar of the frame as well as down into the slot of the bottom bar. Communication holes are provided along the lower edge of the foundation.

PLASTICELL

Plasticell is the newest member of the Dadant Quality foundations. It's an all plastic foundation made with extended sidewalls to give your bees a headstart on the season. We think it's the best all-plastic foundation on the market today! Please try some. We know you will agree. (Available with or without beeswax coating.)

ROOT PUBLISHING

GLEANINGS IN BEE CULTURE

JAN. '87

114 Years Continuous Publication by the Same Organization

(ISSN 0017-114X) Vol. 115, No. 1

CONTENTS

COVER . . . Like this hive inhabitant, life begins anew this month. This remarkable photo is by Stephen McDanial, Baltimore, MD.

THE A.I. ROOT CO., PUBLISHERS
P.O. BOX 706
MEDINA, OHIO 44258-0706

Subscription Rates: United States, one year, $11.20; two years, $21.70. **Newstand Price: $1.95.** Other countries including Canada, Pan American countries and Spain (U.S. Currency only), $5.75 per year additional for postage. Remittance should be sent by post office money order, bank draft, express money order or check. Published monthly. Discontinuance: Subscription stopped on expiration. Change of Address: Fill out and return form contained inside issue.

Articles are solicited. Stamps should be enclosed to insure return of manuscript to author if not printed.

Opinions expressed by the writers in these columns are not necessarily those of the editors.

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Microfilm copies available at: University Microfilms, Inc., 300 North Zeeb Road, Ann Arbor, Michigan 48103.

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

POSTMASTER: Send Form 3579 to:
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Inside in January

The bees may be resting this month but *Bee Culture* has lots for you to look at in January. Starting with the business of beekeeping we offer two articles that are must reading for every business — small or large. First, 'Negotiating Sales' gives tips on keeping the upperhand when making a business deal, and then 'Handling Customer Complaints' shows how to turn a potential problem into a potential sale.

'Fine Tuning Your Advertising' offers good, sound advice for your advertising problems. Efficiency is the key here to get the most for your advertising dollar. Especially good for the sideline or parttime business.

Next, please fasten your seatbelt as we take a tour through 8 countries, looking at beekeeping and beekeepers. You can learn much about beekeeping and people when reading about other countries, and other methods.

Starting this month we have the first of the series, 'Starting Right With Bees'. Written ***especially*** for the beginner, we offer the very basics needed to start in beekeeping. Written by a variety of authors, we will cover most aspects of beekeeping with a more or less seasonal approach. Certainly a must for the rookies and a good review for the more advanced!

As always, we have our line-up of expert and entertaining columnists, a couple of book reviews and a surprise or two, waiting for you — Inside In January!

Coming in February . . .

You better be thinking of spring starting in February because it's never too early to 'Be Prepared'. So, we'll be looking at moving hives; some swarm biology; beekeeping equipment for Bees, not people; Nosema control in shipping queens and other early spring management tips.

Promotion is on the minds of everyone so we'll also have 'Low Cost Advertising' and 'Tooting Your Own Horn' — great advice for the sideline or small business.

A survey on plastic equipment that YOU can participate in, a look at the Snelgrove Board, the Honey Guide Bird, and what's currently happening in U.S. Apicultural Research at some of our leading research labs.

These, our regular columnists and those few extras will be —

. . . . coming in February

ADDRESS CHANGE

If you are moving, please fill in the form below so we can process the change without undue delay. ***Also,*** if you have 2 addresses during the year (i.e., winters in Florida and summers in Connecticut) let us know which months you spend where and we can pre-program your address change so you will find ***us waiting*** when ***you move*** — No Delays, No Fuss!

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OLD ADDRESS: Street

City State Zip

NEW ADDRESS: Street

City State Zip

FOR TEMPORARY CHANGE:

NAME

ADDRESS NO. 1: Street

City State Zip

Circle Appropriate Months: J F M A M J J A S O N D

ADDRESS NO. 2: Street

City State Zip

Circle Appropriate Months: J F M A M J J A S O N D

Send Form To: Subscription Department, P.O. Box 706, Medina, Ohio 44258

THE INNER COVER

Mr. A. I. Root
P.O. Box B
Upper, Apiary

Dear A. I.,

It's been awhile since I've had a chance to write, so I thought I'd drop a note to let you know how things are going.

I've certainly got some mixed reports on the honey crop this year. My friends in North Carolina tell me the weather was dry, dry, dry. And all the hot you'd want to go with it. My friends in Connecticut tell me though, it was moist and cool. While others tell me its been a pretty good season. It seems that the powers that be regarding weather don't have their act together, so if you get the chance, could you check up on that end?

I still hear from Glenn Gibson occasionally, and he keeps me up-to-date on the goings on in the political scene. From what he tells me, I'm amazed that politicians haven't become extinct by now. They certainly engage in some counter-productive activities. I'm not sure if I'd compare that whole mess to the dinosaurs or to a parasite that destroys it's host. Either way they can make life miserable. On the other hand, I had the chance to talk to a few of them this past summer, and they're not all bad. In fact, some are actually beneficial. I guess they are like a lot of things in life — you can't live with them, but you can't live without them either. Certainly a mixed blessing.

Dwight Stoller keeps me informed on the self-help program that's been started this year. The workload seems incredible, and the folks involved with getting this off the ground could certainly use a good word from your end. In fact, I guess everybody who will contribute to this effort could use a boost if you ever get the bosses ear. Keep them in mind.

The import problem doesn't seem to be getting any better. I suppose this is all part of a grander plan, as everybody needs to eat. If you've got some inside information on what's going to happen in the long-run though, I'd sure appreciate it. I certainly won't leak any confidential news if you have any — trust me.

The Africanized bee thing still gives us headaches, too. I guess this story has been heard before though. After all, the world was going to end when the gypsy moth, Japanese beetle, elm beetle and other notorious creatures came — but we survived, and even managed to grow a little. I'm sure we'll figure this out too.

Well, I've got to run. Time, tide and magazine deadlines wait for no one. Keep in touch and give our regards to all the beekeepers in Upper, Apiary.

Sincerely,
Kim Flottum

•

The Adventures of Lance Ashemore, Apiary Inspector

In our last episode, Lance was rushing to answer the call of a distressed beekeeper whose bees were dying from an unknown cause. In his haste, Lance failed to notice the loose connecting rod on his government issue pick-up, causing him to lose control just as he was rounding 'Dead Man's Curve' on Gully Mountain.

"The paperwork for this is going to be a nightmare," thought Lance as his truck careened down the embankment. Barely missing a large boulder, two trees and a fence post, his truck came to an abrupt halt directly in front of a camouflaged beehive.

"A hive, here in the middle of nowhere?" thought Lance, brushing twigs and dust from his beesuit. As he got out to examine his truck, miraculously unscathed after the trip down the embankment, a voice from the nearby woods called out, "You sure took your time getting here, Mister".

Still a bit shaky from his descent, Lance had trouble locating the source of the voice, but did notice that he was in the middle of an apiary of about 20 colonies.

Emerging from the woods came Merle Hazard, the very caller Lance was rushing to help. Merle had one squinty eye, chewed tobacco and always wore a black hat. He was easy to spot.

He was the counties most notorious beekeeper — known far and wide for his refusal to register his colonies, attend meetings or filter his honey. But now Merle was in trouble and had to call Lance for help.

"What's wrong them them bees," Merle demanded, ignoring Lances shaken condition and unorthodox entry. "They were just fine when I was here a couple months ago", Merle went on. "Today I found them like this."

"I've got to make this good," thought Lance, "Maybe I can make an honest fellow out of Merle yet."

"Well, lets take a look, shall we?" said Lance, in the most professional voice he could muster.

There, in front of nearly every colony were thousands of dead bees, some still squirming, but mostly just dead. It was probably a pesticide poisoning, and a lab analysis would be needed to be certain. But Lance needed to make a dramatic display to teach this fellow a lesson once and for all. So he said, "This looks serious Merle, it's too bad you weren't at the meeting last month, you might have been able to avoid this."

"How could I have saved my bees by listening to a bunch of know-it-alls spout off?" Merle asked. "Most of them folks don't know nothin' about bees," he went on.

Before he could go further, Lance interrupted, "At the last meeting we went over with the County Agent how to avoid pesticide loss by having your

Continued on Page 56

Monthly Honey Report

January 1, 1987

The following figures represent current prices reported by our contributors. They are based on reports from many states averaged out for each region. Where insufficient information is received no price is shown. The retail prices represent the price of each size jar.

Wholesale Extracted	Reporting Regions									
Sales of extracted, unprocessed honey to Packers, F.O.B. Producer. Containers Exchanged	1	2	3	4	5	6	7	8	R	A
60 lbs. (per can) White	43.00	37.47	47.50	32.40	--	36.00	39.00	42.00	32.40-47.50	40.00
60 lbs. (per can) Amber	42.00	36.18	34.50	25.80	--	31.20	37.00	40.00	24.00-45.00	35.56
55 gal. drum/lb. White	.52	.55	--	.54	--	.60	.58	.52	.44-.60	.55
55 gal. drum/lb. Amber	.47	.50	.41	.43	--	.52	.53	.46	.38-.55	.48
Case lots -- Wholesale										
1 lb. jar (case of 24)	28.97	26.86	26.00	23.95	--	26.00	25.25	30.12	22.75-38.40	27.14
2 lb. jar (case of 12)	28.77	25.41	24.00	22.75	--	24.00	28.10	27.70	21.00-34.80	26.29
5 lb. jar (case of 6)	30.60	26.17	26.25	23.95	--	24.00	25.40	25.88	23.95-34.00	26.68
Retail Honey Prices										
1/2 lb.	1.00	.95	.87	.70	--	.90	.79	.92	.69-1.10	.89
12 oz. Squeeze Bottle	1.35	1.26	1.19	1.41	--	1.25	1.22	1.32	.95-1.60	1.28
1 lb.	1.61	1.55	1.47	1.45	--	1.50	1.58	1.54	1.25-1.89	1.54
2 lb.	2.72	2.79	2.40	2.82	--	3.00	2.77	2.72	2.12-3.55	2.72
2-1/2 lb.	3.67	3.69	3.19	3.97	--	3.50	3.41	3.21	2.80-4.60	3.52
3 lb.	4.20	4.23	3.70	3.15	--	4.00	3.75	3.43	3.15-4.98	3.86
4 lb.	5.10	4.90	4.23	5.89	--	4.50	4.85	--	4.20-5.89	4.85
5 lb.	6.75	5.68	5.43	5.88	--	5.00	5.67	5.75	5.10-7.00	5.78
1 lb. Creamed	2.25	1.37	1.77	1.61	--	--	1.50	1.56	1.25-2.25	1.63
1 lb. Comb	2.00	1.70	2.00	2.39	--	2.00	--	2.25	1.50-2.52	2.01
Round Plastic Comb	1.85	1.50	2.00	1.85	--	2.00	1.63	1.65	1.50-2.00	1.79
Beeswax (Light)	.93	.88	1.17	.60	--	1.00	.73	1.10	.55-1.25	.90
Beeswax (Dark)	.78	.78	.83	.50	--	.95	.65	.95	.50-1.10	.77
Pollination (Avg/Colony)	30.00	17.50	19.50	27.50	--	--	--	25.00	17.50-27.50	23.17

Honey Report Graph Features

On the far right hand side you will see two different columns. The first, labeled "R", is the price range of prices reported from all contributors -- lowest to highest. The second column, labeled "A", is the average price of a particular commodity across all regions. Example: the range in price of a 1 pound jar of honey sold retail is $1.25 - 1.89 and the average price across the country is $1.54.

In the comments section you will see a figure called the "Price Index". This figure is only a descriptive statistic that compares ALL regions to the highest region of the month.

Example: Region 7 has a price index of 1.00 this month and remaining regions are compared to that index.

If you believe the numbers here are not indicative of your area please contact us. We are actively seeking reporters in Regions 3 and 5. If interested, please contact the Editor. We provide compensation for your efforts.

•Region 1.

Price Index .99. Sales mixed, poor (5-50% less) in some areas to slightly stronger in others. Prices reflect sales. Colony conditions generally good, but both fall and spring feeding required. Generally, harvest down 10-50% below last year, with some areas having no surplus. Shortage of beekeepers(!) will probably have effect next spring during pollination, driving prices up. Isolated bear damage reported in CT.

•Region 2.

Price Index .99. Prices steady, but sales mixed. Seasonal demand has helped but lower sugar costs have hurt — government giveaways haven't helped either. Less than ideal fall has led to storing barely enough winter food. Spring feeding will be required in most areas — watch those early users. Moisture going into winter low to adequate, spring growth should be sufficient for build-up.

•Region 3.

Price Index .82. Prices steady to increasing, mostly due to seasonal demand, but shortage of local crop helping. Demand steady. Most colonies requiring feeding, with minimal stores in most of region. Spring feeding will be necessary in many areas.

•Region 4.

Price Index .67. Prices steady to declining. Sales strong, probably due to short crop. Harvest 1/4 to 1/3 normal. Some areas had no crop at all. Feeding required because of no surplus stored, plus dry conditions decreased fall flow. Generally, colonies in average to poor condition going into winter. Spring feeding outlook bleak as many colonies will need additional food.

•Region 6.

Price Index .89. Sales strong in some areas due to seasonal demand, but dismal in others because of extreme shortage of harvested crop. If you don't have it, you can't sell it. Most colonies in fair to good shape for winter, some feeding required, but fall flow improved enough to store winter supplies. Watch light colonies though.

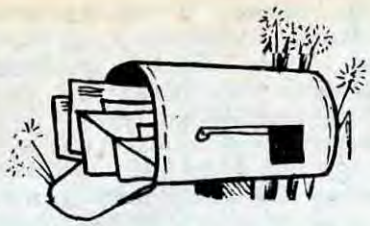
•Region 7.

Price index 1.00. Sales normal to excellent due to seasonal demand and shortage of local honey. Moisture generally average to heavy, with rain and snow. Colony conditions average, but some areas had light fall flow so spring feeding will be necessary.

•Region 8.

Price Index .93. Sales normal to slow. Government giveaways a major problem in some areas. Colony conditions average to fair, some fall and spring feeding will be required.

Mailbox



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A NOTICE TO OUR READERS About Mail-Order Purchases

1. ***Never send cash.*** Always use a check, money order or credit card.

2. ***Keep a copy of all transactions,*** especially cancelled checks, money order receipts and correspondence. For phone orders, make a note of the order - including merchandise ordered, price, seller's name, address and telephone number, salesperson's name, order date and expected delivery date.

3. ***Understand the seller's return and refund policy,*** including the allowable return period and who pays the postage for returned merchandise.

4. ***If you should have a problem with your order or merchandise, write a letter to the seller*** with all of the pertinent information. Telephone complaints should be followed up with a letter of confirmation. Keep copies of all correspondence.

5. ***If you have thoroughly followed up in writing*** with the seller on your problem and still are not satisfied, contact the consumer protection agency in the seller's state or your local U.S. Postal Service.

Dear Editor:

I enjoy beekeeping in many ways, from the practice itself to reading, promoting, pollinating or just plain sitting around and talking about it, especially with kids.

I, too, believe that the future of beekeeping is not only what we accomplish now, but just as important, what coming generations will achieve.

It's very important that we promote beekeeping to younger people, which brings me to the main point. I'm continually reading about, teaching and sharing with people the wonders of beekeeping and "Buzzing the Schools" as I for one take part in this whenever I can. But I feel obliged to say how dissatisfied and disappointed I am when I look through the various bee supply catalogs and find little or nothing available for the younger folks. There seems to be no child sized bee suits, helmets, veils, hive tools, smokers . . . etc, manufactured. Getting a childs interest in honey bees is easy to do, but getting equipment for kids is not so easy. I like to get the kids right out to the bee yards for some hands-on experience, which is often difficult without first convincing parents that their children won't be attacked by killer bees, and secondly, not having protective equipment down-sized for these future beekeepers. People nowadays don't seem to have time for their children let alone time to sew bee suits, if they even know how to sew.

I can understand a manufacturer not wanting to get involved with down-sized bee equipment for kids because there is probably little profit in it. But someday there will be, and more so if everything is done to inspire and nurture the love of honey bees and nature in today's young minds.

If someone out there is manufacturing children size bee suits, veils, etc, my hats off to you. Please send me your catalog so that I can purchase some things to keep on hand for those 'God Loving Little People'.

R. P. Rosenlund
10 Lowell St.
Worch., MA 01603

Dear Editor:

Yes — Africanized bees pose a threat to our beekeeping industry in the U.S. Of course the major fear, a child stung to death, is the possible legal outlawing of beekeeping by a city, county or state, or indeed even by the Congress.

When one says "bee', 99% of our population relates that to one word — STING. That fact includes our multitude of local, state and federal lawmakers.

Two points occur to this Senior Citizen:

1. Our industry has little PR except financial gain of honey production. The PR emphasis should be directed to the general public regarding the necessity and benefits to the human role in food supply due to honey bee pollination of crops.

2. Rather than a defeatist, defensive, negative attitude by most of our top entomologists and beekeepers, pray tell when will they (as Gen. George S. Patton did) adopt a positive attitude and progress forward?

For example, in Reverend Langstroth's day we had skeps and *nasty* bees. The efforts of many (I will not name any for fear of leaving out a name) brought in, then cultured and bred and brought forth high production "domesticated" European bees, notably the Italian, followed by Carniolans, Caucasians and then hybrids. These 100+ years of research and breeding selection have provided us with the highest productive and gentlest bees on earth.

Our great county is an established 'melting pot' of all human nationalities, races and religions. Of no importance, I happen to be a Scot whose family settled in Maryland over 250 years ago.

Now in 1986, why can't we make a 'melting pot' of bees in the US by intensively inbreeding our gentle European strains to the Africanized bee and 'absorb' their ferocity by constant outbreeding with our gentle 'American' bees.

This great county was formulated by people with *positive* attitudes. Why don't beekeepers do the same? Stop being frightened by the Africanized bee and unite in constructive steps to deprogram these ferocious critters by 'cross breeding' them to join the 'melting pot'.

George W. Imirie, Jr.
Circle Four Acres
12705 Circle Drive
Rockville, MD 20850

Dear Editor:

In my October "Bee Talk" I summarized the results of some tests

Continued on Next Page

MAILBOX... Cont. from Page 5

and experiments performed in Saskatchewan, Canada, with colonies having low levels of tracheal mite infestation. These tests indicated that very low mite levels seemed to have no significant effect on honey production, overwintering capacity, etc. Mr. John Gruszka, the Provincial apiculturist of Saskatchewan, has correctly noted that this conclusion cannot be extended to colonies that are heavily infested with mites. Not surprisingly, it has been found that colonies begun with heavily infested package bees perform very badly indeed. This suggests to me that, while tracheal mites are not a significant threat to a strong established colony, the opposite is true for a colony that is weak and heavily infested.

Richard Taylor
R.D. 3
Trumansburgh, NY 14886

Dear Editor:

I have been reading *Gleanings* since 1931, and find it informative. I am a hobbyist, and have eight colonies. I love the bees and am not interested in honey production, although I gauge my ability on the amount produced.

I don't believe that the commercial queen producers are doing a good job. Lately the queens I purchased have been almost invariably superseded even though they were initially accepted and laying a good pattern. There is something else wrong, and I am well aware of diseases. The queens resulting from supersedure or swarming are large, vigorous and live two or three years. The bees apparently detect some defect in the commercially produced queens.

I live in a harsh part of the nation weatherwise, but suffer almost no winter losses.

Charles B. Mulally
144 Amherst St.
St. Paul, MN 55105

Dear Editor:

Is the 1913 edition of the *ABC & XYZ of Bee Culture* (in very good condition) worth very much?

Harold Cory
2315 19th S.W.
Mason City, IA 50401

EDITORS NOTE: We receive many letters similar to the above. The value of this book is difficult to determine. Sales are usually settled by good negotiations by both seller and buyer. A quick survey here determined that a range of prices would be offered. They went from a flat $10.00 to about $50.00. However, none of the survey participants was currently in the market for this book.

It is always a good idea to make a few calls to beekeepers, libraries and used bookstores before selling a book as old as this.

Dear Editor:

I refer to your September issue in which Charles Koover states 'The joy of subscribing to British Bee Magazines is that they don't have commercial producers over there. The Amateur is king". This is completely wrong. The commercial men in the British Isles are represented by the Bee Farmers Association and consists of some 400 members. According to official records taken from the EEC grant applications, our membership has one third of all hives held in the British Isles; the other two thirds are owned by some 20,000 amateur beekeepers. Mainly in ones and twos.

The Bee Farmers Association's members take part in the National Pollination Service and carry out 95% of all the pollination contracts

Continued on Next Page

MAILBOX... Cont. from Page 6

throughout the United Kingdom. As Secretary of the National Pollination Service it is my duty to obtain Pollination Contracts and allocate these to our various members. I also act in an advisory capacity to the Fruit Growers and Farmers with regard to their needs for pollination.

The Bee Farmers Association guarantees payment to our members as I also arrange all accounting work involved. Our representative at the EEC Money Working Party informs me that our Pollination Service is the envy of Beekeepers throughout Europe.

As for the Amateur beekeeper being King, this also is far from the truth. According to Mr. Hoborough, a Government spokesman at the Ministry of Agriculture, "You do not think I get a £2. million pound budget for the honey produced in this country, it's because we realize just how important the honey bee is for Pollination". The only importance of the amateur from a National point of view, is not his beekeeping but the fact that they are some 20,000 votes.

I would point out also that the British Bee Magazines are after subscribers, so as their are amateurs in quantity to read these books that is the reader they cater to. Also the British Bee Journal, edited and run by Cecil Tonsley, was before his retirement a commercial producer.

Please don't let the tail wag the dog; allow the amateur to air his views but don't cut down good commercial views to give them space. We commercial men in the British Isles do read the USA magazines because it is the US nature to strive and do things bigger and better than anybody else, and from this we obtain many of our progressive ideas.

W. C. Flynn
Flynns Bee Farms Ltd.
Woorings, Main Road,
Dartford, Kent. England
DA3 7PN

Dear Editor:

I am trying to find out which states have adopted the honey bee as their official state insect.

I plan to use this information in my plans of having a national insect movement started. By contacting the members of Congress in the States which have adopted the honey bee and through their endorsements and support, this would go a long way toward other members of Congress, when and if the Bill is presented to them.

Brady W. Mullinax, Sr.
330 Joyce Ln.
Kernersville, NC 27284

EDITORS NOTE: I publish this request because I don't have access to the information here. I do, however, applaud this effort and strongly urge readers to drop a post card to the writer and let him know what your state does. Then, take the reins and push for this in YOUR state if not already in place. The honey bee SHOULD be recognized as the Nations #1 insect!

Dear Editor:

I need some information. Does anyone know the names and addresses of companies who can supply machines to make or manufacture foundation sheets using beeswax? I have a good deal of beeswax and would like to make my own foundation sheets.

C. George Hartman
Route 2, Box 4
Waterloo, IL 62298

American Beekeeping Federation Convention to Mix Business with Fun

Meeting in New Orleans, Jan. 18-21, the American Beekeeping Federation's annual convention will provide a mixture of business and fun.

On the serious side there will be discussions of all aspects of the business of beekeeping — from African bees and the mites to the possibilities of honey promotion through the National Honey Board — all centered around the central theme of "Opportunities in Changing Times."

A good bit less serious will be the fun things to do in New Orleans. Planned outings include an evening riverboat cruise on the Mississippi, a "Twilight and Champagne" tour of the city by bus, and a visit to the "Pete Fountain Show".

Business and fun will be mixed into one day after the convention ends, when a bus tour to the Baton Rouge Bee Lab will be offered. In addition to the bee lab, the tour will stop along the way at the Louisiana State University's Rural Museum and the Louisiana State Capitol in Baton Rouge.

The convention will be headquartered in the Hyatt Regency Hotel adjacent to the Superdome on the edge of downtown New Orleans. It is just a short taxi ride from Jackson Square and Bourbon Street, where opportunities abound for self-directed outings. For reservations at the Hyatt, call (504) 561-1234.

A feature of the Federation convention again this year will be a day of the program devoted to the Tri-Country Committee on Parasitic Bee Mites and Africanized Bees.

Delta Air Lines is the official convention carrier. For reservations, call 1-800-241-6760, refer to file number PO367.

For general convention information, contact Frank Robinson, ABF Secretary, 13637 NW 39th Ave., Gainesville, FL, ph. (904) 332-0012.

Tentative Program
AMERICAN BEEKEEPING FEDERATION, INC.
ANNUAL CONVENTION
Hyatt Regency, New Orleans
January 17-22, 1987

Saturday, January 17, 1987

10:00 Registration (Ballroom Foyer)
3:00 Exhibit Set-up Begins (French Market)
Honey Show Set-up Begins (French Market)
1:00 ABF Executive Committee (Rosedown)
3:30 ABF Board of Directors (Burgundy A)

Sunday, January 18, 1987

8:00 Exhibit and Honey Show Set-up Continues
9:00 Registration
9:00 Tri-Country Committee (Rosedown)
2:00 Opening of General Session (Ballroom E)
Call to Order, Pres. E. Randall Johnson, Nampa, ID, Presentation of Colors, Invocation, Welcome, Response - Reg Wilbanks, V.Pres., Claxton, GA.
President's Address - E. Randall Johnson
Keynote Address (Noted Wash. authority)
3:00 Exhibits and Honey Show
3:30 "Beekeeping Around the World" B.J. Sherriff, Cornwall, England
4:15 Presentation of 1986 American Honey Queen and Princess, 1987 Contestants
7:30 Honey Queen Reception (Ballroom A)

Monday, January 19, 1987

7:00 ABF Membership Chr. Breakfast (Burgundy A&B)
8:00 Registration
Exhibits and Honey Show
8:30 General Sessions (Blrm. E)
JOINT SYMPOSIUM: ABF and Tri-Country Comm. on Parasitic Bee Mites and the Africanized Bees (see separate program)
Morning: Africanized Bees
Afternoon: Varroa and Tracheal Mites
7:00 "Steamboating on the Mighty Mississippi"

Tuesday, January 20, 1987

7:00 Honey Industry Council Comm. (Dauphine)
8:30 Registration - Exhibits
8:30 Honey Show Open
8:30 Panel on "Marketing and Promotion". Moderator - Mitch Head, Sr. V.P. Ketchum Public Relation, NY; Jim Trezise, Pres. NY State Wine and Grape Fdn; Randy Griggs, Dir. Peanut Advisory Bd.; Tom McDermot, Dir. Beef Ind. Council
9:00 Tri-Country Committee (Rosedown)
9:30 Ladies Aux. Brunch (F,G,H Ballroom)
10:30 Panel on "Creative Farm Financing". Moderator - Dr. Malcolm T. Sanford, IFAS/ Univ. of FL, Gainesville, FL; James Bennett, Chief Opr. Officer, First South Prod. Credit Assn., Jackson, MS; John Hefner, Pres. First South Prod. Credit Assoc., Louisiana Div., Baton Rouge, LA
11:15 First Reading of Resolutions Reg Wilbanks, V.P. Am. Beek'ping Fed., Claxton, GA
12:00 Marketing and Promotion Luncheon (Elmwood)
1:30 National Honey Packers and Dealers Dir. (Royale)
1:30 Panel on "Innovative Purchasing Procedures" Moderator to be announced; Sugar and Chemicals - Jack Thomas, Mann Lake Supply, Hackensack, MN; Wooden and Metal Equip. - Dadant & Sons, Hamilton, IL Queens and Packages - Bob Koehnen, Glenn, CA Trucks and Other Motor Equipment - Lee Bowen, Mgr. Heavy Truck Lsg., Div. Ford Mtr. Co., Det. MI
2:30 Announcements
2:30 American Assoc. of Prof. Apiculture
3:00 Honey Show Auction
3:30 National Honey Packers & Dealers General Membership Mtg. (Royale)
4:30 Twilight/Champagne Tour
9:00 Pete Fountain Show Tour

Wednesday, January 21, 1987

7:00 Nat'l. Honey Packers & Dealers Breakfast (Royale)
8:30 Registration and Exhibits
8:45 "The Honey Production and Price Reports are Born

Continued on Next Page

AM. BEE FED.... Cont. from Page 8

Again" - Paul Hurt, Head Dairy, Poultry and Cold Storage Section, NASS/USDA, Wash., D.C.

9:15 "The Honey Price Support Program in Action" Earle Bedenbaugh, Dep. Admin. State and County Oper., ASC/USDA, Wash, D.C.

9:45 "Managing for Success: Moderator - E. Randall Johnson, Pres. Honey Gold Honey Co., Inc., Nampa, ID; "Data and Records" - John Milam, Milam Honey Co., Moore, TX

11:15 "A New Era Begins" Harry Rodenberg, Chr. Nat. Honey Board

12:00 Exhibits Close

1:30 Annual Business Meeting

6:00 Social Hour

7:00 Annual Banquet (Ballroom F, G, H)

9:30 Queen Coronation and Ball (Ballroom F, G, H)

Thursday, January 22, 1987

8:30 Baton Rouge Tour

9:00 1987 American Beekeeping Fed. Bd. of Dir. (Burgundy D)

1:30 American Beekeeping Fed. Exec. Com. Mtg. (Ashland)

1987 American Honey Show Jan. 17-20, 1987

The Honey Show for the 1987 American Beekeeping Federation Convention is scheduled for January 17-20, 1987, at the Hyatt-Regency Hotel, in New Orleans, LA. **For a copy of the rules write to the Chm. Honey Show Committee, Charles B. Fisher, 4001 Old Springfield Rd., Vandalia, OH 45377; Frank Robinson, Sec./Treas., American Beekeeping Federation, 13637 N.W. 39th Avenue, Gainesville, FL 32606; or to Steve Johnson, 1530 Edinburgh St., Metaire, LA, 70001. (504) 835-7827.**

Tentative Program for Tri-Country Symposium on Parasitic Bee Mites and Africanized Bees
January 19, 1987
New Orleans, Louisiana

8:30 Welcome, Darrell Wenner, Chm. Tri-Country Comm.

8:40 Tracheal Mite Section: Mod. - Dr. H. Shimanuki "The Impact of *Acarapis woodi* on Beekeeping in North America", Panel: "... on beekeeping in Mexico", Dr. E. Guzman; "... on pollination and honey production in the Rio Grande Valley", E. L. Walker; "... on migratory beekeeping", N. Halback; "... on the development of package bee colonies", Dr. D. Peer

9:40 "Research on the Control of *Acarapis woodi*, Panel: "ARS research on the development of chemicals to control *A. woodi*", Dr. W. T. Wilson; "Research in Florida to control *A. woodi*", Dr. H. Cromroy; "Research in Mexico to control *A. woodi*", Dr. F. Eischen

11:00 Recent Advances on the Biology of *A. woodi*, Dr. N. Gary

11:30 Cooperative Research on *Varroa jacobsoni* in Yugoslavia and Isreal, Drs. T. Rinderer and H. Shimanuki

12:00 Lunch

1:30 Africanized Bees Section: Mod. - Dr. T. E. Rinderer "Survival of Africanized Bees in High Altitudes", Panel: "The Africanized Bees in Costa Rica", Marla Spivak; "The Africanized Bees in Colombia & Venezuela", Jose Villa; "The Africanized Bees in Argentina", Dr. A. Dietz

2?15 "The Impact of Drones on the Africanization Process", Panel: "A new method to detect drone congregation areas", Dr. G. Loper; "Recent advances on the study of drones", Dr. O. Taylor; "Influencing drone mating of European bees", Dr. R. Hellmich

3:30 "Recent Advances in the Identification of Africanized Bees", Panel: "FABIS", Dr. A. Sylvester; "Nuclear DNA probes for the identification of Africanized Bees", Dr. G. Hall

4:00 Report of American Farm Bureau Africanized Honey Bee Symposium held in Atlanta, Don Rawlins

4:15 Action Plans for Mexico: SARH, Dr. G. A. Rodriguez, APHIS, Fernando Rodriguez

ENTRY FORM

Name _____

Address _____

City _____ State _____ Zip _____

Please check class you are entering:

A ___ Water White Honey
B ___ Extra White Honey
C ___ White Honey
D ___ Extra Light Amber Honey
E ___ Light Amber Honey
F ___ Amber Honey
G ___ Dark Honey
H ___ Chunk Honey
I ___ Comb Honey (Sq./Rec.)
J ___ Comb Honey (Round)
K ___ Creamed Honey
L ___ Beeswax natural, unblch.
M ___ Beeswax molded or art

Number of entries _____ at $3.00 each.

TOTAL ENCLOSED: _____

All entries will be judged and then sold at auction, with the proceeds going to the American Honey Queen Program. Please mark each entry with **correct class** and **indicate whether you will bring them to the convention or ship them in advance.**

BOOK REVIEW

By Diana Sammataro

Profitable Beekeeping

by Dr. Laurie Croft
Elmwood Books,
England, 1986.

This small book, only 104 pages, is well written and contains some good information. Although it is directed to British readers, it contains a chapter on selling honey, which is something everyone needs to learn. This is definitely the strongest part of the book, since some of the other topics covered (noteable *Sources of Honey*, and *Bee Diseases*) are woefully sketchy. However, essential information is there.

The book is divided into ten chapters, has nine black and white photos and contains a one page appendix of British Bee addresses and a one page reading reference. Dr. Croft teaches beekeeping and "he has led the campaign against the misrepresentation of British honey". This is strongly evident throughout the book.

Chapter Seven, *Honey* which includes topics on how to extract, chemical composition, and marketing, is full of good information. He has some good ideas for selling honey to tea rooms and guest houses by bottling small 1-1/2 oz. pots "each with a nicely printed label" as giveaways to guests.

Chapter Eight gives good information on beeswax composition and uses, and even includes some recipes for furniture cream and hand cream. He also talks about the chemical properties of propolis in careful detail, as well as a short piece on preparing mead and honey vinegar. Pollen and bee venom are also discussed. Although he has a photo of royal jelly on the back cover, he fails to discuss this as a marketable product in the book.

A well written book which contains some helpful information although not much of it is new information.§

BOOK REVIEW

By Louise M. Zwaenepoel

A Honey of A Cookbook, Vol. II

by The Alberta Beekeepers Association

The Alberta Beekeepers Association proudly presents *A HONEY OF A COOKBOOK Vol. II* tantalizing honey recipes, from appetizers and beverages through entrees to desserts. Honey facts plus substitution, storage and handling suggestions enhance your appreciation of the delights of cooking with honey. Several of the recipes are beautifully recreated in original watercolour illustrations. A special bonus in this book is a fabulous skin care section which proves that honey can also help you look great.

The recipes are all originals, developed for the Alberta Beekeepers Association by Edmonton Home Economics Consultant Sara Bishop for demonstration on television, and by Joan Tuckey, herself from a beekeeping family, for publication in the Association's magazine , *SKEPtic*. The skin care section was contributed by Connie Krochmal of Asheville, North Carolina.

Sara Bishop was instrumental in testing the recipes for the best seller Volume I, which was her initiation into the delights of cooking with honey. Of her contribution to Volume II, Sara said, "The development and testing of these recipes has been both a revelation and a source of satisfaction to me. An ingredient which enhances and preserves is of infinite value to a cook. I have been delighted to discover how honey enhances the natural flavor of food." This unique book is a wonderful addition to any cooking library, and makes an excellent gift selection for birthdays and other special occasions. Honey lovers will want to own and enjoy both Volume I and Volume II.§

BEEKEEPERS LINE-UP

A BRIEF REPORT OF A . . .

Beekeepers Tour of NICARAGUA

Members of the beekeepers tour of Nicaragua.

During early December 1985, a group of five Canadians and five U.S. beekeepers toured Nicaragua. The tour was organized by Bardwell Montgomery, former state apiculturist of West Virginia with travel arrangements made by Tropical Tours, New York. Within Nicaragua, transportation and accommodation arrangements were made by TURNICA, the national tourist organization. Bardwell provided an excellent translation service and Miguel Bonilla, (see interview) extension apiculturist with the Ministry of Agriculture and Agrarian Reform, accompanied us throughout the tour.

While in Nicaragua we travelled extensively, covering over 1200 miles in the 8 day tour. From the capital, Managua, we visited Masaya, Boaco, Esteli and Mtagalpa. Our hosts included meetings with representatives of grass roots organizations such as the farm worker's union, the Small Farmers and Ranchers Association and the Nicaraguan Women's Association. We also met with officials from the Ministry of Agriculture and Agrarian Reform, the National Development Bank, the newspaper "Barricada" and an opposition member in the Nicaraguan government. We visited agricultural cooperatives, state farms and an agricultural college all of which practiced beekeeping; we also visited a number of privately-owned apiaries. Between visits we had time for sightseeing and had ample opportunity to talk to various people.

The Africanized bees are presently colonizing Nicaragua, giving a mixture of Africanized hives and Italian hives. In working the Africanized bees we learned that depending on the conditions, the gentleness of the beekeeper and the use of smoke, the bees may react violently or not all all. With copious amounts of smoke on a cool afternoon, the bees were worked without gloves; however, the next

Continued on Next Page

AN INTERVIEW WITH:

The Nicaraguan National Director of Apiculture — Miguel Bonilla

By George H. Meyer, Jr.

In 1979 Nicaragua experienced a popular revolution that overthrew the dictator, Anastacio Somoza. The revolutionary front, the FSLN, is now leading the country.

Miguel Bonilla has directed the nation's beekeeping industry for most of the time since 1979. He is currently the Responsible Departamento Apicultura, Direccion General De Ganadario, MINDRA.

This interview took place in Dario, Nicaragua in August 1986. I would like to thank Cristina Perez for her kind help in translating this interview.

Q. Could you describe your work with the agriculture ministry (MINDRA)?

MIGUEL: I have been working here for 5 or 6 years as the director of the National Apiculture Industry. My work includes participation and elaboration of various programs and development projects, relations with the three bee companies, establishing new apiaries and teaching beekeepers. I also coordinate national and international participation and events. Presently we have a solid group of ten experienced fulltime technicians who are responsible for extension work.

Q. What was Nicaraguan beekeeping like before the revolution?

MIGUEL: In the period before the revolution, before 1980, the country had 3,500 to 4,000 hives. Honey production levels were not recorded, not even on a national level. There were, however, several beekeeping programs. The Ministry of Agriculture had a project of assistance, but they only wanted to establish large apiaries. The National Bank and the Ministry of Agriculture formed the Nicaraguan Institute of Technical Assistance. They established 50 apiaries in the region of Matagalpa and Carezo. An earlier project called the Institute of Nicaraguan Development set up some apiaries in Granada. There were many beekeepers who began at this time. The largest apiaries were owned by Somoza (the former dictator).

A major problem for beekeepers in Nicaragua at this time was that there was no commercialization or distribution program. Except on a very small scale, people really didn't

Continued on Page 13

BEEKEEPERS TOUR... Cont. from 11

day, under flying conditions and the normal methods of North American handling of frames, the bees became very defensive and required us to be properly protected, including gloves and the strategic use of duct tape to seal cracks from crawling bees. Proper swarm control methods and ample room in the brood chamber for the queen, without the use of excluders, will promote population build-up and result in favorable honey crops. However, Africanized bees are no fun to work with and must be kept well away from people and animals. It is necessary to suit-up before entering the vicinity of the bee yard and we experienced the bees following us for about one-half mile before we could remove our veils

An Africanized hive after having been worked. This was a strong hive with between 60 to 80 pounds of honey.

after working the apiary. It was obvious that Africanized bees have the potential to cause serious social problems in populated areas. So far Nicaragua has avoided any serious accidents due to a massive public awareness program. By contrast, the Italian hives examined were very gentle and could be worked with a minimum of protection.

Of great interest were the native stingless bees of Central America, belonging to the family Meliponidae. These bees have been kept since before the Spanish conquest hundreds of years ago. The small amount of honey produced by these tiny bees is in high demand and until recently it was thought that honey from *Apis mellifera* was actually adulterated as it is somewhat different from stingless bee honey. Miguel Bonilla treated us to a look at a number of different colonies of stingless bees which he keeps in the traditional manner as a curiosity.

Beekeeping is highly supported by the Nicaraguan government. Prior to 1979, there were approximately 3,000 hives in the country, 1,000 of which were controlled by Somoza the former dictator. There are now approximately 15,000 hives with over 600 families supplementing their incomes from honey production. Most of these families are small farmers producing a variety of crops and owning but a few hives. However, we met one beekeeper with a few hundred hives and visited the San Benito apiary complex of the Modesta Duarte State farms located near Boaco that controlled a considerable number of hives for honey production. All the hives we saw were the standard Langstroth 10 frame type, although there are a number of traditional "rustic" or box hives in the country. There has also been some experimentation with the Kenya top bar hive. The government, through the National Development Bank, provides agricultural low interest loans to co-ops and individuals in all sectors of agriculture including beekeeping. This has enabled the fledgling industry to become established although it is still far from being able to supply the honey required by Nicaragua's 3 million inhabitants. In addition, the beekeeping program in Nicaragua is receiving support from many countries including Canada, France, Switzerland, Italy, Mexico and other Latin American countries. At the end of our tour, bee veils, coveralls and other beekeeping equipment were left behind. The trade embargo imposed on Nicaragua has made it difficult to obtain many necessary staples such as honey jars, beekeeping clothing, light bulbs, toothpaste to name but a few items. Anything imported is prohibitively expensive.

Neil Vanderput of Carman, Manitoba beside a strong gentle Italian hive.

Nicaragua is primarily an agricultural country producing beef, sugar, coffee, cocoa and cotton for export. Before 1979, these crops took precedent over grains such as rice, sorghum, beans and corn, the basic food stuffs of the people. Since that time the government has embarked on an agrarian reform policy which has given much of the former Somoza-owned land to the hitherto landless peasants, many of which have formed agricultural co-ops. Some of the former Somoza land was made into government-owned state farms while 70% of agricultural land is in private ownership.

We enjoyed our beekeeping tour of Nicaragua and are grateful for the hospitality shown us by our many hosts. We would encourage other North American beekeepers to visit Nicaragua and observe the beekeeping and development situation first hand. While the country is going through hard times, one is impressed by the spirit of the people in their determination to succeed in the development of their country.§

INTERVIEW... Cont. from Page 11
eat honey. Some used honey from stingless bees as medicine, but this limited the potential for Italian bees. The large beekeepers had to sell their honey abroad. Therefore, there was not enough honey to meet the meager local demand. They had to import honey at higher prices. There was also always a shortage of material and equipment, as well as technical assistance.

Q. What has changed since the revolution?

MIGUEL; One major difference after 1980, after the revolution, is that beekeepers sought international support. CARE of Canada came to their aid. CARE made an agreement with the Nicaraguan Bank of Development and the Nicaraguan Ministry of Development of Agronomy. This agreement has made the beekeepers secure about their future in Nicaragua. We received material and technical assistance. A program was developed to create a honey commercialization and distribution program.

CARE established 100 apiaries at first. This experience was very important for them. They decided to expand the program and make it yearly. They established 200 apiaries in 1981 and 350 in 1983.

We had many problems at this time, primarily a lack of transportation and some difficulties with the skills of the technicians. We had experienced beekeepers, but many of us were teaching ourselves. Some people traveled abroad, just to see how other beekeepers operated. In 1984, the financial needs of the beekeepers were included in the agricultural budget.

But in that year, we had to stop creating new apiaries because of the presence of the Africanized bee. We decided to wait and see what reaction the beekeepers would have to the Africanized bees. We have been very pleased with their adaptability.

We try to think in terms of human and natural resources in forming good development policy. We are developing a laboratory of apiculture. Our beekeeping organization is becoming secure. In the last two years foreign experts have come to teach us about the Africanized bee. Many peasants are working with them.

Q. What is the level of honey production this year?

MIGUEL: We do not control honey production on a national level, so we don't know the exact level. It is around 150 tons. Some beekeepers do not report their production, however, so this figure is an estimate.

Q. How many hives are there in Nicaragua?

MIGUEL: In 1984 there were about 12,000 hives. However, this will have increased to over 15,000 soon. The number is constantly growing.

Q. What are your plans for the future of Nicaraguan beekeeping?

MIGUEL: Our aim is to meet the needs of the beekeepers. We are trying to fully utilize human resources. We are developing a center of beekeeping in Boaco and a national association of beekeepers. We are getting equipment and financial protection on the national level. We will try to modernize our old apiaries and establish new apiaries where people are interested and apiaries in war zones and along the Atlantic coast.

Q. Would you please describe the Center of Beekeeping in Boaco?

MIGUEL: It is a state company owned by the people. There are about three others like it in the country. The project began without experience or examples. When we started the company in 1983, there were no records or support. But there was a group of committed individuals who wanted to see the project grow. We arranged for national financial and technical assistance. We established over 1000 hives of Africanized bees, but we had material for over 2000. Our idea is to create a national program to meet the needs of private beekeepers by providing technical and financial assistance, including queen production. We also hope to develop a research center. There is a committed group of experienced beekeepers and I think the project will succeed.

Q. How has the Africanized bee changed your plans for the future of beekeeping?

MIGUEL: The Africanized bee came to Nicaragua naturally by interbreeding with the local populations of every nation they passed through. We knew they would come someday. The Africanized bee was here by 1984. By 1986 they had covered the whole country. We now have 50% to 70% Africanization. There is still a lot of room for their expansion, because Nicaragua has great untapped floral sources and nesting sites. As I mentioned, their arrival caused us to stop development of new apiaries in 1984 to see what type of experience the beekeepers were having.

Perhaps the major change was that prior to the arrival of the Africanized bees, we didn't need equipment like smokers and veils. Beekeepers didn't use much protective equipment and kept the hives in their backyards, near chickens and pigs. Traditionally, this was no problem. Of course, the Africanized bee changed this behavior. We had to move our hives and learn new management techniques. People used to work individually, but now they must work collectively. One person manipulates the colony while the other, lightly but continually, smokes it. It is important to mention that the U.S. economic boycott is causing problems for the industry. We are short of many materials. For example, we don't have the factories to produce wax products and we can't get soft materials for gloves. The cloth we produce is too light.§

George Meyer is a 1986 graduate of the Agricultural Technical Institute of Ohio State University, located in Wooster, Ohio, with a certificate in Apiculture.

QUESTIONS & ANSWERS

By RICHARD TAYLOR

Q. On warm days in January I found bees gathering around my garbage cans and on the scratch feed I throw out for my chickens. What were they doing?

Scott Crawford
Jackson, TN

A. Bees become desperate for protein in early spring after brood rearing has begun but before pollen sources become available. They are especially attracted to cracked corn, which they often find on bird feeders. Sometimes, too, they seek the moisture from garbage and compost heaps because it is warm. This behavior ceases with the advent of warm weather and pollen sources.

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Q. Can raw maple sap be fed to bees?

Robert Kreitzer
Bangor, Maine

A. I have never heard of it, and I wouldn't try it. I think it would be so thin as to be worthless to them, and it could possibly be injurious. I have never seen bees at the spiles of my maple taps, even on warm days.

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Q. As a beginning beekeeper I thought I had to open up my hives once a week to check them. For us, working with Africanized bees, that is hard work. How much can you learn about a colony just by watching the entrance?

Enrique Marquez
Caracus, Venezuela

A. Beginning beekeepers sometimes suppose that tending their bees means frequently taking the hives apart and examining the combs, which is a serious error. I have known very successful commercial beekeepers who hardly ever looked inside a hive. There is never any need to remove combs from a hive except for some definite purpose. This means, at a minimum, checking a couple of combs in the spring to ascertain that they are healthy, and taking steps against swarming during the swarm season. If colonies are requeened, then that, too, will require manipulating combs. Otherwise, let them alone, and the bees will show their appreciation by storing up lots of honey for you.

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Q. How do you make creamed honey?

Lois E. Staub
New Oxford, PA

A. Creamed honey is nothing but honey that is finely granulated. The simplest way to get it is to set containers of fast-granulating honey, such as goldenrod, in a cool, dry room. It should turn completely solid in ten days or less. The faster it granulates, the finer the crystals will be. The process can be improved by mixing in about 10% of already creamed honey before drawing the honey off into containers. This hastens, and thus improves, granulation. Use opaque jars or tubs rather than glass containers to improve appearance. The best temperature for crystallization is in the sixties.

•

Q. Is it a good idea to provide upper entrances in a hive, by staggering the supers slightly, so the bees can have access to the supers without having to go up through the entire hive from the bottom?

Lloyd Tyler
Coudersport, PA

A. It is a good idea for the purpose of providing ventilation in the summer, but it does not save walking for the field bees. These bees transfer their nectar loads to bees in the hive, who in turn reduce the water content and deliver it to the supers.

•

Q. Where could I get an internship or on-the-job training in commercial beekeeping?

Jim Engle
Warsaw, IND

A. Many commercial beekeepers are always glad for help. Put a notice in your state beekeepers' newsletter or bulletin, or insert a classified ad in the bee journals. Formal training in commercial beekeeping is also available through the Agricultural Technical Institute, Wooster, Ohio 44691.

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Q. Is the black walnut a source of nectar?

Lloyd Wehr
Calder, ID

A. No. These trees are sometimes an early source of pollen, and sometimes the bees gather a strong honey dew from the leaves, but there is no such thing as black walnut honey.

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NOTE: Readers who have expressed interest in establishing basswood trees as nectar sources are invited to get in touch with Dr. David N. Griffith, P.O. Box 95, Dadeville, Alabama 36853, for expert advice. Enclose a stamped, self-addressed envelope.§

Testing Your Beekeeping Knowledge

By CLARENCE H. COLLISON
Extension Entomologist
The Pennsylvania State University
University Park, PA 16802

Honey bees are susceptible to a wide range of microorganisms, pests and predators. Several of these pathogens can retard or interrupt the development of colonies while others often go unrecognized. Most of these diseases will not kill a colony outright but are still a major concern for the beekeeper.

Please take a few minutes and answer the following questions to find out how well you understand this important topic. The first eleven questions are true and false. Place a T in front of the statement if entirely true and an F if any part of the statement is incorrect.

(Each question is worth 1 point.)

1. ____ Ethylene oxide (ETO) is effective in fumigating beekeeping equipment contaminated with pathogens that cause chalkbrood, American foulbrood, European foulbrood and nosema.
2. ____ Pathogens associated with American foulbrood, Sacbrood, Nosema and Chalkbrood all produce spores.
3. ____ Combs containing dead brood from American foulbrood are best destroyed by burning.
4. ____ Terramycin is used in the treatment of American foulbrood, European foulbrood and Sacbrood.
5. ____ Larvae with European foulbrood usually die when they are 4-5 days old.
6. ____ Powdery scale disease is caused by a spore-forming virus.
7. ____ Eggs of the bee louse *(Braula coeca)* are laid just below the cappings of brood cells.
8. ____ American foulbrood attacks the larvae of workers, queens and drones.
9. ____ Two closely related species of the honey bee tracheal mite, *(Acarapis dorsalis* and *Acarapis externus)* are also internal parasites of adult honey bees.
10. ____ The primary function of apiary inspectors in the United States is the detection and control of European foulbrood.
11. ____ Terramycin is relatively unstable in honey and syrup solutions, therefore, should be fed as a dust mixed with powdered sugar.

Multiple Choice Questions
(1 point each)

12. ____ Severe outbreaks of ____ often occur after bees have been in blueberry plantations for pollination.
A) Sacbrood, B) Nosema
C) Chalkbrood,
D) American foulbrood,
E) European foulbrood

13. ____ The bee louse *(Braula coeca)* is actually a:
A) Fly, B) Beetle, C) Moth,
D) Bee, E) Mite

14. ____ The primary location of nosema infection in the adult honey bee is the:
A) Rectum, B) Honey Stomach,
C) Intestine,
D) Ventriculus or Mid-Gut,
E) Esophagus

15. ____ The honey bee disease that is most likely to kill a colony is:
A) Sacbrood, B) Nosema,
C) American foulbrood,
D) Chalkbrood,
E) European foulbrood

16. What are the two stages in the life cycle of the pathogen that causes American Foulbrood and which stage is the infective stage? (3 points)

17. Fumagillin (Fumidil-B, Nosem-X) treatments are normally made in the fall. In what situation would fumagillin treatments be recommended in the spring and why? (2 points)

Answers on Page 54.

Beekeeping Along The Sognefjord In Norway

By Harold Liberman
2701 Oxford Cr.
Upper Marlboro, MD 20772

Fjords are an awesome sight and even though they are found in various places of the world, they are usually too remote to be seen. The fjords of Norway, however, are easy to get to and have a special reward for the inquisitive beekeeper because in certain areas, beekeeping has an important place in the local economy.

Because of a curious combination of factors, beekeeping is possible in this area. First of all, the climate along the western coast of Norway is surprisingly mild and humid, especially around the Sognefjord; the longest and deepest fjord in the world. With its network of secondary fjords it cuts far into the interior of Norway, up to 130 miles.

As you enter the Sognefjord from the Atlantic, one first encounters the harsh reality of this area. Barren rock and wind swept hills greet the eye, but deeper into the fjord an interesting change takes place. The strip of land between the water's edge and the mountain wall becomes broader and greener. Here moisture laden clouds are warmed by the moderating influence of the deep protected valleys and the climate is noticeably milder and temperate. Here the rim of the fjords are green with well-kept fields and orchards. In this protected environment, farming and fruit production is a major source of livelihood. The nearby massive outcropping of rock that towers above deep waters of the fjord produce a greenhouse effect. The rock walls absorb the heat from the sun and radiate it after sundown, and the waters of the fjord help maintain mild temperatures.

The conditions described are most typical of the area around the town of Sogndal. Located on the northern shore of the Sognefjord, deep in the interior portion of the fjord, this town produces the finest fruits in all of Norway. Although only minutes from the largest glacier in Europe, Sognday boasts 60,000 fruit trees.

Where there are apples, there must be bees. So I started my search for a local beekeeper. The local tourist information office gave me the name of Kai Lille Homb, a local elementary school teacher and beekeeper. After a bit of a search I located him at the local bookstore where he provided me with details about beekeeping along the Sognefjord. A beekeeper for about four years he manages nine colonies.

The first snows in Sogndal usually arrive between October and December, but usually the bees are confined from November until April. In the spring the fruit blossoms are abundant, and the bees are extremely important in this area for pollination. With the arrival of warm weather the bees at sea level get about a two week headstart over the bees at higher elevations. After the fruit bloom is concluded the bees work raspberry. In August Mr. Lille Homb moves

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NORWAY... Cont. from Page 16

Harold Liberman (L) and Mr. Kai Lille Homb (R).

some colonies into the mountains to work ling or heather blossom. Around the time of the first frost in October the bees are taken once again to the beeyard at sea level and all the honey is removed. The bees are fed a 60% sugar water solution and are dependent on this food for winter survival. It is not uncommon to start bees on their fall feed with a clean drawn foundation. The notion of wintering bees on 60 to 90 pounds of honey is not practiced in Norway. The Norwegian beekeeper does not like old drawn comb, and prefers to provide them with new comb, usually yearly. He believes this insures a productive and disease free colony throughout the year.

The local beekeepers club, Sogn Biroktarlag, has about 20 members. They cooperate in honey extraction, queen rearing, purchase of equipment and exchange of information. All queens are raised locally and because of their isolated location they remain remarkably free of parasites and diseases.

The Norwegian beekeeping community follows well established national standards, set up around the turn of the century. At this time they sent a representative to the U.S. to study American Beekeeping practices. Some of our techniques were adapted for Norwegian use. In fact, samples of beekeeping ware collected during this visit may be seen at the Norwegian beekeepers museum located near Oslo and directed by Mr. Odd Rosenberg. Also located in Oslo is the Honey Central, the headquarters and processing plant of the Norwegian beekeeping cooperative. Most of the honey produced here, and for that matter in all of Scandinavia is crystallized honey. Bottled liquid honey is extremely rare; in fact, I would say an unknown item to honey lovers in this part of the world.

The creamed honey of Sweden is almost pure white thanks to the rape nectar, but beekeepers like Mr. Lille Homb produce a more golden colored creamed honey because of the heavy heather flow. Beekeepers near Oslo make extensive use of the beekeepers' cooperative for the processing, bottling, and sale of honey. Oslo, however, is far from the Sognefjord, and the cost of transportation to Oslo is expensive, so beekeepers in this area process and sell their own honey.§

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BEEKEEPING IN HONDURAS

By WALTER KROCHMAL

On a recent return trip to Honduras where I was raised, I made it a point to visit one small beekeeper, knowing of my father's deep interest in the subsistence farmers of Central America using beekeeping as a source of income and dietary supplement. When my father was Chairman of the Department of Horticulture at the Escuela Agricola Panamericana in Honduras he emphasized beekeeping training as part of the departmental program.

I found a small scale beekeeper and farmer, Santos Martinez, in the southeastern part of Honduras, about 30 miles from the Nicaraguan border, near a village named Sartenejas in the province of El Paraiso.

Santos has been working with bees since childhood and is a good example of a small, independent Honduran farm producer working very much on his own, a small group indeed.

Presently he has 13 active hives, as five were lost to disease and what he calls in Spanish "desertation" — swarming. His hives are located in the backyard of his small farm, under some giant coconut trees.

He enjoys his bees greatly and says they are "clean, intelligent and sensitive animals". The main enemies they face are ants and moths. Nearby are large commercial apiaries, but the large producers have no interest in helping the small farmer with advice or the loan of equipment, is Santos'

comment.

He opened the hives for me as his wife smoked them, using charcoal and dried leaves in the smoker.

When the hives become infested with the white moths, the frames have to be burned to get rid of the invaders. No chemicals are available, such as the Certan my father used when moths attacked his hives in North Carolina. To help control the ants, Santos has taken to sprinkling chlordane and malathion around the bases of the hives and it seems to help he says.

When we lived in Honduras my father stopped the ants in his hives by putting the legs of the hives into cans with motor oil in them and it worked very well.

The word used to describe robbing the hives is oddly enough, in Spanish "to castrate them". Santos is able to harvest honey about once a month and if he takes them all at once can wind up with as many as 400 to 500 1/3 liter bottles, which he sells for about $1.50 (US) a bottle. Most of his honey is sold to pharmacies, but he has customers who drive from as far away as Tegucigalpa, the capitol.

If feeding is done, unrefined brown sugar is used as Santos has found that the refined white sugar results in honey which tends to crystalize and is of lower quality.

The two children in the family, 9 and 12 years old, work with the bees. Santos remarked, "In the beginning I was out here every day talking to the bees, feeding them and in 15 days the

combs were dripping with honey. Nowadays, since I get no help from the government in managing the bees, I can't spend as much time with them. I keep some pigs, grow some vegetables and my wife has a small store to sell groceries."

Although only 30 miles from the heated Nicaraguan border, life goes on on the tiny farm of the Martinez family. The store is stacked with gallon jars of honey and the family gave me one as a souvenir, and urged that I buy a piece of available land next to theirs and join them in expanding beekeeping.

It was heart-warming to see, in the midst of poverty, lack of education and deficiency of economic resources, deep struggles and disappointment over land uses, that someone had found a way to keep the family fed and clothed on their own scrap of land. The family moved in, saved enough money to buy a bit of land in an area pretty well owned by large coffee plantations and lumber industries. On their few acres they are saving money to send the kids to school, and the bees are a major source of this earning.

This small-scale bee project is the sort of thing my father has recommended over and over, not requiring great cash investments, high technology or herds of experts. The Martinez family is a bright light and testimonial to the soundness of small scale beekeeping in Central America.§

RESEARCH REVIEW

By DR. ROGER A. MORSE
Cornell University
Ithaca, NY 14853

"Africanized bees, Varroa Mites, Chalkbrood and toads . . . "

Africanized Bees More Resistant to Varroa Mites

Studies conducted in Brazil show that Africanized honey bees are more resistant to the dreaded *Varroa jacobsoni* mites than are European honey bees. The mites, which were introduced into Paraguay in 1971 and are now found in six of the seven southernmost South American countries, pose a serious threat to beekeeping with European honey bees. In central Argentina, which has a temperate climate, it is not possible to keep bees without chemical treatment to protect against the mites. A few years ago we realized that in areas where the bees were Africanized this was not the case. For some time we thought temperature was the dominant factor but more recent data shows the resistance has to do with the race of honey bees involved.

In the paper cited here, it was found that female varroa mites entered cells of Africanized and European brood about equally. However, there was a significant difference in the number of these mites that successfully reproduced: many fewer mites developed on the brood of Africanized bees.

One of the possibilities to explain this difference is that Africanized bees have a shorter development time. Africanized bees develop in about 20 days versus 21 for European honey bees. the mites require immature bees to develop on. Mites that do not reach maturity before the adult bee emerges from its brood cell die. Therefore, fewer mites mature on Africanized brood. Another factor seems to be that fewer immature mites are produced by the varroa females that enter Africanized brood cells.

There is not much question that someday *Varroa jacobsoni* mites will sometime invade the U.S. At present we do not have a good system of coping with them. However, this new knowledge suggests that we might breed bees that are naturally resistant to the mites and thereby eliminate part of the problem.

Camazine, S.
Differential reproduction of the mite, Varroa jacobsoni, on Africanized and European honey bees.. Annals of the Entomological Society of America 801-803. 1986.

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They Dance for the Compass

By HELEN K. BRANSON

Do bees know trigonometry? Or do they plot their compass points in relation to the sun by some method of polarization? Neither one of these, according to Samuel Rossel and Reudiger Wehner of the University of Zurich. They have completed research which shows that bees' eyes contain specialized receptor cells that react most when the polarization is parallel to the axis of the receptor.

The receptors are actually positioned within the eyes at different angles. Their pattern corresponds to the polarized pattern of sunlight. This explains why bees can find a place to draw nectar even when the sky is cloudy. However, the scientists found that if a small blue patch is showing anywhere in the sky range of specific bees, they can then fly directly to the nectar source without search behavior.

To discover where the cloud-hidden sun is, the bees simply fly in a circle until the polarization receptors find the brightest light. This results in the bees flying away from the sun, the scientists observed.

About 40 years ago, a German scientist discovered that bees do a "waggle dance" when returning from a nectar source. This dance gives a compass bearing in relation to the sun that is learned by other bees who have not yet been to the nectar source.

Karl Von Frisch proved that bees guide their flight from the colony to a distant nectar source by following a path that diverges by a given angle from the sun's bearing. Then he showed that the orientation dancing of returning bees definitely taught the bees how to go in search of the nectar pathway. He, too, found that bees could still do this on cloudy days if a patch of blue shows anywhere in their sphere. What he did not understand was how the bees accomplished this task.

Rossel and Wehner, who reported their findings in a recent issue of *NATURE*, a British publication, covered the receptors on the bees with polarized glasses and observed the waggle dances. They also studied bees in the wild and found the same phenomenon occurred.

Another item discovered was that bees will make navigational errors more often in bright sunlight than at dusk or daybreak.

Thus, the Swiss scientists are credited with solving Von Frisch's forty year old mystery of how bees determine their compass points during nectar gathering.§

LOCAL BEE MEETINGS: The Heart of Beekeeping

By DR. JAMES TEW
The Agricultural Technical Institute, Wooster, Ohio 44691

What does it take to develop a productive association? I've sat through many — some were enjoyable and some were torture. With that background I offer the following . . ."

In a few hours, our local bee meeting will hold its monthly session here at ATI's bee laboratory. It's a rainy night and tomorrow is a holiday — in general, it's not a good night for a meeting of any kind, beekeeping included. Our local Tri-County Beekeepers have a good organization and any comments that may follow are not necessarily taken from my association with the Tri-County group, but rather from years of going to meetings all over.

What does it take to develop a productive local organization? I absolutely don't know. But don't you just know I'm going to guess. Like so many others, I've had a great opportunity to sit through many sessions. Most were enjoyable; some were torture. With that background, I offer the following comments.

CLUB OFFICERS. These people are mandatory. You know the type. Someone who can be on-time and dedicated, but not pompous. Personalities differ and that must be taken into consideration. Officers should have the basic knowledge of Robert's Rules of Order (only the very basics) and adhere to those rules. Officers should be polite, but "in charge". The meeting should move along "pertly" as my Granddad would have said. Officers will probably belong to the "Core" group. I've referred to these people in previous issues. They're the ones who will still keep bees regardless of killer bees, mites, honey imports or anything else that comes along. That group is vital to the success of the group. At the same time all members of this sub-group should realize that many of the members are not yet in this inner group and may not want to be in that group anyway. They just want information on beekeeping without feeling guilty for not being involved in the Spring Field Day or whatever. Obviously, some individuals will make the transition to the core group, but don't rush them. Cater to them instead.

PROGRAM FORMAT. To be successful, the local group must have participants. I think a good way to encourage their participation is to have the program session before the business session. I recall a meeting that I was asked to participate in many years ago. I had to drive an appreciable distance on Sunday afternoon to a session that was conducted in one of the beekeeper's homes. The business session was first and it seemed to go on for several days. Already some members of the small group were obviously bored with the process. Finally after all types of distractions, including how to spend the $32.00 in the treasury, the time came for my little effort. I realized then (and now) that nothing that I had to say would vibrate the world. As I moved to the dining table that had become the position of authority, the president whispered in my ear to keep it short. They wanted to be out by 5:00 p.m. After just having survived a 1-1/2 hour business meeting, that left just about 17 minutes. There's nothing that someone can say to a group of bored people in a few minutes that's going to have them leave feeling good about beekeeping. People, that's the whole purpose of a beekeeping meeting — to have people leave feeling good about beekeeping. I'm no longer in a position to keep up with the progress of that group, but I suspect, unless there's been significant changes, that the group is still small. The sessions that seemed to work the best have the program first, a break and then the business meeting. The whole process should probably not take longer than two hours. I'm reminded of a church choir leader that once said to leave the congregation wanting "one more verse" rather than saying, "I thought they would never shut up". Have the group leave wanting more.

PROGRAM SUBJECTS OR SPEAKERS. This is probably the most critical point and probably the most difficult. A small group simply can't afford to pay the expenses of an "official" speaker often (if ever). And yet, one of the members, when asked to speak, will probably have difficulty in being a "prophet in his own village". There is no easy solution to this issue. Sometime during a year's program a Round Table discussion is always good. It gives all members a chance to contribute to the discussion and is also a good source of information concerning yearly honey crop successes, wintering techniques, equipment that's for sale — just good local beekeeping information. There's usually a local beekeeper that has the expertise to conduct a meeting on an appropriate topic. Impose on bee inspectors, teachers (biology, zoology), extension personnel, grocers (marketing honey), or naturalists. Some of these people may not know that they can help, and it will take the leadership of the officers to establish the nexus between the comments of a non-beekeeping grocer and the beekeepers to have both parties better informed after the session. Video tapes, slide sets or movies are always a favorite, but frequently hard to get. Such material, especially videos, are becoming more available. Visiting speakers are a special occasion. It is understood that these people are giving their time and, more than likely, had plenty of other things to do with their afternoon (or evening). If at all possible, at least pay their expenses. A local group doesn't want to get the reputation of being too tight. Again that depends on the

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RESEARCH... Cont. from Page 21

Preparing for Chalkbrood

Since chalkbrood was a serious problem in many parts of New York State this past year, I was especially interested in this new paper on the subject. In this research a suspension of homogenized black chalkbrood mummies (black, dead larvae killed by the fungus) was sprayed on brood frames and the bees around the brood. This was done three times a week for four months. Twelve colonies were used in these tests. Observations of the colonies were continued over a period of nine months.

It was observed that some colonies were very susceptible to the disease and others showed no symptoms. Even though the colonies were treated continuously "only two periods of major infection occurred". The author concludes that chalkbrood becomes a problem only when colonies are somehow stressed. It is also clear that often the organism that causes the disease is present in colonies but they show no disease symptoms.

The author concludes that it would be best to breed queens from colonies that have been exposed to the disease but do not carry it. She also states it may be hard to find such colonies. I presume that an acceptable alternative would be to use as breeder colonies those that do not show disease symptoms in apiaries where some diseased colonies were found. If chalkbrood continues to be a problem in the North, beekeepers might be advised to grow their own queens under conditions where they can make their own selections.

A final note in the paper below is that what causes stress on colonies in one part of the country may have little effect in another. It is often thought that high humidity and cold are stresses that bring on chalkbrood. However, in a warm, dry climate it may be heat and a lack of rain that stress colonies.

Gilliam, M.
Infectivity and survival of the chalkbrood pathogen, Ascosphaera apis, in colonies of honey bees, Apis mellifera. Apidologie 17: 93-100. 1986.

Toads and Bees

Sometimes as I read the various bee journals I realize we in this country should be grateful that there are some problems we don't have. An Australian beekeeper reported recently on toads that were eating his bees. His colonies were on hive stands. He observed that some toads would jump up and hit the hives to aggravate the bees inside. The angry bees came out of their hives and dove at the toads "who just calmly went on swallowing the bees". Three toads were blind in one eye "and had obviously been stung at some time."

One large toad that was dissected had 152 bees in its stomach; the number of bees the toads ate depended on their size. In two nights, the beekeeper killed 130 toads in an apiary of 36 colonies. It was calculated that the number of toads present in this 36-colony apiary could consume over 30,000 bees a week. Toads feeding in number, night after night, can have a bad effect on colonies.§

Hilse, B.
Survey of cane toads and their effect on the bee population. The Australasian Beekeeper 87:261-2. 1986.

HOME HARMONY

By ANN HARMAN • 6511 Griffith Rd. • Laytonsville, MD 20879

January weather reports are really quite amusing. One part of the country is digging out from a foot of snow, another part has tiresome rain and 40°, and just to be annoying, I am sure — another part is enjoying sun and temperatures in the 70's. There is absolutely no single recipe that will satisfy everyone. So here are four beverage recipes for north, south, east and west. I shall leave it up to you to match the beverage to your climate.

HOT COCOA

3 tablespoons cocoa
1/2 cup water
3 tablespoons honey
3 cups milk
1/4 teaspoon cinnamon

In the top of a double boiler, put the cocoa. Gradually add water to the cocoa, stirring until well blended. Cook over low, *direct* heat, stirring constantly for 2 minutes. Then place over hot water. Add honey, milk and cinnamon. Heat, stirring constantly. Serves 4.

EAT HEARTY WITH HONEY
Alberta Beekeepers Association

ORANGE MILK EGGNOG

2 cups chilled milk
1/4 cup orange juice
2 eggs
2 tablespoons honey
1/2 tsp. vanilla OR gr. orange rind

Combine these ingredients in a blender. Add 1/4 cup cracked ice after honey is blended. If desired, add a jigger of whiskey, cognac or rum.

JOY OF COOKING
Irma Rombauer

HONEYED COFFEE

4 ounces unsweetened chocolate
1 teaspoon cinnamon
1/4 cup honey
4 cups strong coffee
4 cups milk
Cracked ice
Whipped Cream
Dash cinnamon

Melt chocolate over hot water or in microwave. Add cinnamon, honey (more if desired) and coffee. Blend. Add milk; pour over cracked ice and serve with a dollop of whipped cream and a dash of cinnamon. Serves 8.

HONEY OF A COOKBOOK
Texas Department of Agriculture

FRUITY HONEY PUNCH

1/4 cup honey
2 cups warm water
2-1/2 cups orange juice
2 cups apple juice
1 cup pineapple juice
orange slices (optional)

Dissolve honey in water, add juices. Stir until well blended. Chill. Stir again before serving and garnish with orange slices if desired. Makes 2 quarts.

HONEY RECIPES FROM CAROLINE COMPORT, 1986 AMERICAN HONEY PRINCESS, ed.
American Beekeeping Federation

If you take a few minutes to make this next recipe before you make your beverage, then you will have a nice snack for a mid-winter afternoon.

POPCORN CRUNCH

1/2 cup melted butter
1/2 cup honey
3 quarts popped popcorn
1 cup nuts

Blend butter and honey. Heat until well blended. Pour over popcorn and nut mixture. Mix well. Spread over cookie sheet in thin layer. Bake in preheated 350° oven for 10 to 15 minutes until crisp.

MY FAVORITE HONEY RECIPES
compiled by
Mrs. Walter T. (Ida) Kelley

If your honey has granulated or crystallized, measuring by spoonfulls is very easy since you can pack the honey into the measuring spoon with a knife, then scoop it out. Honey known as "whipped honey" has air beaten into it and must be heated gently to liquify in order to get an accurate measurement.

If you have a favorite recipe or a honey cookery hint that you would like to share, please send it to me at 6511 Griffith Road, Laytonsville, MD 20879. I also welcome questions about cooking with honey.§

BEE TALK

By RICHARD TAYLOR
R. D. 3
Trumansburg, NY 14886

"We can, if we adopt (and maintain) proper standards of quality, make the claim that honey is unrivaled with respect to goodness."

Much of the energy I devote to the promotion of beekeeping is going to be directed, from now on, towards improving the quality of honey. The uniqueness of honey among sweets and the exquisite flavors of most honeys are our strongest assets as beekeepers. We can make the justified claim that our product is, among sweets, the only one that is natural and unprocessed. And we can, if we adopt proper standards of quality, make the further claim that *honey is unrivaled with respect to its goodness.*. But then we have got to make good on that claim, and this means that we must be sure that the honey that appears on the consumers' table really is the very best.

More specifically, we should make sure that honey never gets mingled with melting beeswax, as happens in brand melters; that it never becomes heated above 130°F; and that it is not extracted from combs containing brood. We should also be fastidious in keeping honey separate from honey dew; keeping the early light honeys separate from the fall honeys; and keeping honey derived from inferior nectar sources off the market unless it is *specifically* designated as baking-grade honey. The methods of some commercial beekeepers whose operations I have observed would fail on all these counts. There is, perhaps, not much that can be done about that, but sideline or backlot beekeepers who are trying to make some extra money and who sell much of their harvest directly to consumers can certainly be expected to aim at the highest standards of quality. Indeed, such beekeepers must do this if they want to stay in business, for their customers know *exactly* where the honey comes from, where they can get more if they want it, and where not to go in case they do not like it. And here is a rule that is about as dependable as the law of gravity; If someone purchases a food and likes it, they will go back for more. But if they don't like it, they won't. Sell your most promising customer one jar of off-grade honey and chances are you will never see them again. Indeed, it is worse than that, for chances are they will never buy honey again. I do think those simple truths have got to sink in. It is not enough to sell this year's crop. You've got to have buyers who will want to buy next year's crop too.

In keeping with this I want to bring up a question that has been discussed by various writers before but has, I think, still not been resolved. That is the question of whether honey is darkened by being extracted from old, darkened combs in which many generations of brood have been reared. I used to think it made no difference, that honey stored in old and darkened combs would be indistinguishable from honey stored in freshly drawn light combs, provided it came from the same floral source and was stored at the same time. Roger Morse concurred in this opinion when In asked him what he thought. But then a student in one of my beekeeping courses brought me two jars of honey from the same super. The honey in one jar was decidedly darker than the other, and had come from dark combs. The lighter honey had come from fresh new combs. This looked to me like proof, except for one thing: The beekeeper in question had no extractor, so had gotten the two honeys by crushing the combs and straining out the honey. Possibly, it was pointed out to me, the two honeys would have been the same had they been extracted in the normal way.

I was not able to find the answer in beekeeping literature. Opinions on the matter appeared to be nothing but unsubstantiated opinions, or to rest upon anecdotal evidence, or upon tests that did not prove anything one way or the other. Some of the writers, for example, had put chunks of old dark comb in jars of honey and then heated them, with the result that the honey was seriously darkened. But that did not prove that honey spun from combs in a normal way would be darkened. If you put pieces of dark comb in clear water, then the water soon becomes darkened too, but that also proves nothing. Dr. John Iannuzzi, in a recent issue of *GLEANINGS*, (October, p. 497) asserts that dark comb makes dark honey, but he offers no proof beyond saying that this has been his "experience".

Some time ago I decided that this question needed to be put to a proper test, so I exhorted beekeepers to do the following: Arrange a super with alternating dark combs and light combs (or foundation). When the super is filled, extract the honey from the light combs first and then, when the extractor has drained quite dry, extract the honey from the dark combs, and compare the two in identical jars.

Two beekeepers responded by doing exactly as requested. (I could

Continued on Next Page

BEE TALK... Cont. from page 25

not do it myself, as I produce only comb honey and have no extractor.) One was Mr. John D. Bacon, Michigan, and the other Mr. Al Dixon, a friend of mine here in New York. Both reported ***no difference*** in color. I myself examined Mr. Dixon's two sample jars, and could indeed detect no difference in color.

That seemed to me to settle it, but now I am still not sure. Mr. Dixon's was an amber honey, and I believe Mr. Bacon's was too. So it certainly appears that amber honey is not degraded in color when stored in dark combs. But what about light honey?

It is quite obvious to me that the honey that drizzles from my basswood comb honey is lighter than any basswood honey I have ever seen in jars. That does not really prove anything, though, because the honey in the jars might be mingled with honey from other sources. But year after year my "experience," for whatever it is worth, coincides with Dr. Iannuzzi's. This does not prove anything, but it surely raises some doubts.

I very much hope that some reader will win immortal fame by performing the experiment described above with honey from a nectar source known to yield a light honey, and let the world know the results. Then, perhaps, we can consider this important question settled, one way or the other, without having to depend on expert opinion or mere "experiences" vaguely alluded to.§

Comments and questions are welcomed. Enclose stamped envelope, be brief and to the point, and use Trumansburg address given above.

TEW... Cont. from Page 22
speaker and the resources of the group.

THE BREAK — ABSOLUTELY CRITICAL. People need a chance to interact. New people may be reluctant to show their inexperience to the group in general, but would approach another on a one-to-one basis. It gives friends a chance to talk and develops the feeling of comradeship. It's probably inconvenient, but have refreshments. It leaves new beekeepers with the impression that the session was well organized and that the group is solvent. It seems that approximately 20 minutes is long enough. I would suggest 15 minutes with an additional 5 minutes to get the participants to get conversations ended and re-seated.

THE MEETING SITE. This really depends on local facilities. Church basements, grange halls, extension meeting rooms, bank conference rooms, high school class rooms, nature centers, community recreation centers, and city buildings all come to mind as having been good meeting locations. Since it's quite an imposition on the owner, an individual's home is probably not the best selection. If possible, develop continuity and meet in the same place every time.

THE COOPERATIVE EXTENSION SERVICE. The extension service can frequently be a great help — especially at the county level. In recent years, funding has been cut and services may not be as available as one would like, but if one goes in with a well-developed program and offers to direct the effort, I'll bet help will be forthcoming. It may take some time to develop this relationship, but it will be worth the effort in the long run.

TOURS / FIELD DAYS / WORKSHOPS / PROJECTS. I would really be remiss if I didn't compliment my local group on this topic. Each year the Tri-County beekeepers here in Ohio hold a field day in the Fall, a workshop in the spring, and have a nice exhibit at the Wayne County Fair. The workshop has historically drawn more than 100 participants and has served to get people started in beekeeping. We at ATI have been honored to have frequent tours from various beekeeping groups from around Ohio. I'm sure most local organizations have somewhere they could go on a Saturday to have a nice day out together. These are significant projects that entice new people to beekeeping. I really hope more local clubs consider taking on such projects.

DUES — A NECESSARY EVIL. No matter how frugal a group may be, there will have to be some operating capital. One has to pay their dues. This money will be needed to pay for the meeting room, the refreshments, the occasional speaker and other things unimagined. The position of treasurer is important in that they keep up with the financial health of the organization. If one is creative, various fund-raising events may be employed to get the needed operating cash. Someone has to do this.

IT'S A LABOR OF LOVE. I've no doubt left a lot of things out. There is no way to write a piece on how to operate a successful local organization. That strictly depends on the devotion to beekeeping that key people have. I don't know how to foster that devotion. I can say that those who prepare the refreshments, those who open the building and then close it up, those who plan the program, those who organize the social events — all those people are giving themselves. It has to be a labor of love.

ADDENDUM. Incidentally, our local group had an excellent meeting after all. Twenty-five people attended the meeting last night. I was impressed (and thankful) for their dedication to our cause.§

Games Gallery

By CARSTEN AHRENS

1. ___ Bee
2. ___ Brood
3. ___ Comb
4. ___ Extractor
5. ___ Drone
6. ___ Frame
7. ___ Honey
8. ___ Hive
9. ___ Nectar
10. ___ Queen
11. ___ Skep
12. ___ Social Insects
13. ___ Super
14. ___ Swarm
15. ___ Wax
16. ___ Worker

A. Allergic skin condition, places of great activity.

B. Term of endearment, sweetness: to flatter.

C. A meeting of friends, neighbors or others to husk corn, sew, spell, raise a barn, etc: to be not quite sane.

D. A rooster's topknot, a tool for currying horses, crest of a wave; to search thoroughly.

E. A liquid favored by the Greek gods, a drink that assured immortality.

F. Consort of a king, chess piece, playing card; to domineer (over) in an arrogant way.

G. A pilotless airplane controlled by radio, idler, a bagpipe; to speak in a monotonous voice.

H. A dentist, a gunpart that withdraws the cartridge case.

I. To sit on and hatch, to think deeply with anxiety, to hover over.

J. A type of bean; to grow gradually larger, to age.

K. Ants, bumblebees, hornets, termites, wasps.

L. Skeleton, support for a painting, structure used to strengthen glass, glass used by gardeners when it's cold; to implicate.

M. A kind of round wicker basket, the amount held by such a basket, a beehive made of straw.

N. Book-binding material, an extra person, especially an actor; superior to.

O. One who labors for a living, an electrotype in printing, sterile caste among social insects.

P. A mass of moving objects; to climb a pole with much arm and leg movement; to be crowded.

SCORE

15 or 16 correct — Superior
13 or 14 correct — Good
11 or 12 correct — Fair
9 or 10 correct — Poor
Less than 8 — Goodness!

Answers on Page 54

THE BEE SPECIALIST

By ELBERT R. JAYCOX
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"Are British Bees Better? . . . Australian EFB, and Dirty Tricks . . ."

This month I'd like to look at ideas and information gleaned mostly from countries other than the United States. I greatly enjoy reading beekeeping books, newsletters and journals from many different places. I hope the stories are new and of interest to you. At least, they may be a change from the "overworked" themes of this country.

Honey Bees Of The British Isles

A new book, by Beowulf A. Cooper, published in 1986 by the British Isles Bee Breeders' Association gives a good look at beekeeping with bees selected for their conservative nature. Cooper and many others in the British Isles feel that they do best by keeping bees that are dark color, and show characteristics such as the ability to forage at low temperatures, early cessation of brood rearing, thriftiness, minimal drifting, and early expulsion of drones. The bees also keep a compact brood pattern and can be wintered successfully in a single brood chamber.

Bees and other insects tend to be darker color in areas of cool climates and higher elevations. We always assume that the dark color allows greater absorption of heat from the sun, thus allowing activity on cool, sunny days. In his book, Cooper tells about some tests in which he participated testing this idea and comparing the activity of black and yellow bees at cool temperatures. The bees compared were a yellow, unpigmented bee of Brother Adam's and some "Boston" bees from Lincolnshire with all-black body color. In May, the yellow-bodied bees were "sitting around in the sun, chilled" while the black bees were working turnipseed actively at an air temperature of 45°F (7.2°C).

They took bees from the feedhole of each hive when the morning temperature was 40°F (4.4°C), on a dull, damp day. Six bees from each colony were doused with cold water and then tethered with cotton thread to a board near the window of an unheated laboratory. An infrared heater was pointed toward the bees from eight feet away, and records were made of the elapsed time until the bees became active and tried to fly. On the average, the black bees flew in 19 minutes (range 12 to 29 min.). The yellow bees took 55 minutes (33 to 78 min. range).

Black drones in a Lincolnshire apiary flew on a sunny day with air temperature of 52°F (11°C) while yellow drones returned to their hives in spite of the bright sun. The

advocates for the black bees of Britain believe that drones should begin to fly in bright sun when the air temperature reaches 46°F (8°C), and black, native queens should fly at temperatures as low as 48°F (9°C).

Since we in the United States usually prefer bees that maintain large colonies year around, it seems odd to read about selecting bees for "non-prolificacy". However, Cooper speaks of bees wintering well, gathering honey well, and swarming little, when confined to 10 or 11 combs by a queen excluder. He points out the advantage of such bees when you are moving to pollination or for honey, with less heavy lifting. Also, prolific bees consume more food in poor weather and require more management attention. Think about these possibilities if you keep a few colonies and would like to enjoy them with less work.

A characteristic of the dark British bees could be of benefit in efforts to resist Africanization in this country and Mexico. The black drones tend not to drift, according to author Cooper, but "migratory drones" from non-native colonies may drift into the native ones. These migrators generally do not survive long because the dark colonies in a single brood box may expel drones several times during a poor summer, any time there is a dearth of nectar. This rejection restores the dominance of native drones in their own colonies and could be an isolating factor, at least when nectar flows are short.

You may wonder how the English can talk about a native, dark bee that was supposed to have been wiped out by "Isle of Wight" disease in the early 1900's. According to Beowulf Cooper, beekeepers in the British Isles did not all lose their bees. He estimates, from talking with many old-time beekeepers, that over half of them did not suffer any serious problems. Greatest losses were suffered during and after World War I when many bees from other countries were brought in, according to Cooper.

Cooper's book, *The Honey bees of the British Isles*, is interesting reading although somewhat repetitive. It is available for about $20.00

European Foulbrood In Australia

European Foulbrood (EFB), the bacterial disease of honey bee brood, has been present in the United States since the late 1800's. At that time there was confusion about its causal

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BEE SPECIALIST... Cont. from Page 29
organism, now known as *Melissococcus pluton*, and with other diseases, especially American foulbrood. G. F. White, of the U.S. Department of Agriculture clarified the situation in 1906, and noted that European foulbrood caused the most rapid loss to beekeepers of the diseases then known.

The disease has spread to most beekeeping areas of the world in the past 80 years, but did not reach Australia until 1977. It has caused some serious losses to beekeepers there, and has been studied by bee pathologist Michael Hornitzky at the Glenfield Veterinary Research Station in New South Wales.

Within 12 months of its discovery, EFB had spread to all of the eastern states of Australia. The rapid movement has been attributed to migratory beekeeping; the spread of the disease to drifting bees and perhaps through water sources. A serious attempt was made to confine the disease to Victoria by establishing a 30 km-wide (18 mile) quarantine corridor between the states of Victoria and New South Wales. It was not respected by the beekeepers and did not stop the movement of European foulbrood into New South Wales. Quarantines also were not effective in stopping the spread into Queensland and eventually into Tasmania in 1984. EFB has not yet been found in Western Australia. The attempts to limit the spread of European resemble our own attempts in the U.S. to corral the tracheal mite, with similar results.

The importance of European foulbrood in the United States presently lies not so much in the losses it causes directly, but by the difficulty of distinguishing some forms of the disease from American foulbrood. It can slow routine inspection and result in misdiagnosis. Many years ago, a bee inspector in California mistakenly burned about 400 hives before we could get him straightened out. However, if you read most descriptions of the disease, you will learn that EFB always attacks young, coiled larvae. If this were true, there would be no problem. Instead, many larvae do not die of the disease until the prepupal stage, the same as in cases of American foulbrood! This form of the disease was very common in central California when I was inspecting there. I have seen it many times since.

Michael Hornitzky gives good outline of what happens to honey bee larvae infected with European foulbrood. Four things may occur, depending on the bacterial organisms that take part: 1) The young larva dies and is removed from the cell leaving it empty. 2) The dead young larva stays; the causal organism. *M. pluton*, and a secondary invader, *Bacillus alvei*, multiply and a loose scale eventually forms in the cell. 3) The larva dies *after capping*, at the prepupal stage. It either dries to form a loose scale beneath a perforated capping, or, if *B. alvei* is present, the remains resemble infection with American foulbrood. 4) The infected bee develops to the adult stage. Such adults are smaller than normal. It is not known if they carry *M. plutonat* that time.

The operating expenses of Australian beekeepers have been increased because of EFB. It means extra sugar feeding and use of the antibiotic, oxytetracycline. The misidentification of European foulbrood as well as some misuse of the antibiotic appear to be the cause of an increase in the amount of American foulbrood infection in Australia and some serious losses to beekeepers.

This information was taken from the report of a study tour of New South Wales by New Zealand Apiculture Advisory Officers in March, 1986. The report was edited by Andrew Matheson.

Dirty Tricks

Beekeepers are some of the greatest people in the world. Most of them are law-abiding and will do anything and everything they can to help you out. As in all groups, however, there are a few who don't fit the pattern, and they range from those who just want to tip the scales in their favor to downright outlaws. They can be comical in their ingenuity and scheming. Let's look at a few examples.

When honey has to be sampled, all kinds of ideas surface to gain a little advantage. In New Zealand, the Ministry of Agriculture and Fisheries used to sample all the honey, which was in drums. Samples were drawn from the hole in the lid at a fairly shallow depth. To get the best reading, a few beekeepers put dark honey in the bottom of the drums and topped it off, after granulation, with a lighter honey. As the sampling official learned about this, he probed deeper and got a truer sample. Not to be outdone, the beekeeper then partially filled the drum with dark honey and allowed it to granulate while the drum lay on its side with the empty space in line with the hole used for sampling. He then righted the drum and filled the sampling side with light honey.

Although the example comes from New Zealand, it could be from any country, including the United States. I'm sure that the people who sample honey for the honey price support program in this country can probably tell you some equally wild stories.

Alan Campion wrote a good story in *The 1986 Beekeepers Annual* about some strange finagling at "The Annual Sale". I have drawn on it liberally because it was so well written.

The sale is an annual event to which beekeepers bring their bees and equipment for sale at a county get-together in England. Included in the sale, behind a hedge from the main sale ground, were about 20 hives of bees in a rough semicircle, brought in after dark the night before.

On the day of the sale, the bees were making orientation flights from the multicolored hives in the apiary and everything was going well. At noon, the County Bee Officer made a quick inspection of each hive, shouting out the details to prospective buyers about the size and condition of the colony. The inspection went smoothly, much better than at an earlier sale when one colony was insepected ten times in an hour and got even by stinging everyone in sight.

The auction of empty equipment was proceeding when the sale secretary learned there was a problem involving the colonies. A beekeeper was behind the hedge methodically kicking certain hives. This was a man well known to local beekeepers. He refused to join the Association, and priced his honey below that of the others. He "stole" customers from other beekeepers as well as their bee pasture, and, when he clipped his queens' wings, often seemed to leave the pieces in his honey jars.

It was clear that the beekeeper hoped to buy selected hives more cheaply by stirring them up and then commenting on their temper at the time of the auction, due to start momentarily. But he did not succeed with his scheme. A guard was posted at the apiary and the auctioning of the colonies was delayed. A half hour later, all the bees had quieted down and were sold without incident.

The Beekeepers Annual and *The Beekeepers Quarterly* are edited by John Phipps and published by Ruth and Jeremy Burbidge, Northern Bee Books, Scout Bottom Farm, Mytholmroyd, W. Yorks., HX7 5JS, UK. The price of the 1987 *Annual* is about $6.50. The *Quarterly* is about $5.75/year. Both are good reading.§

SIFTINGS

By CHARLES MRAZ
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". . . the very idea of trying to stop the advance of the Africanized bees anywhere in Mexico seems utterly ridiculous."

An interesting comment was made by Gerard Guth regarding a suggestion I made in an earlier issue. He says that bees cannot learn to defend themselves because varroa kills them so fast they do not have time to learn defensive behavior. It is obvious Mr. Guth is not aware of the "mechanics" involved for insects to develop resistance to pathogens and pests. It takes at least 20 generations of intensive natural selection, in the environment of the agent, for resistant strains to develop. It should be obvious bees cannot learn to defend themselves against the varroa in one generation as it takes several years.

Asian researchers have actually observed bees attacking the varroa mite. After all, *Apis Cerana* has lived with varroa for many years and learned to survive. Actually, Varroa does not rapidly wipe out a colony. It usually takes a year or more before the slow developing Varroa becomes numerous enough to destroy a hive.

A beekeeper friend of mine in Germany is doing research on the control of the Varroa mite and keeps me up to date on his progress. Mr. Guth, don't be sorry you do not know the solution to this problem, as no one does — only God and Mother Nature. When we learn to communicate with Mother Nature we will learn the answer.

Mr. Guth's solution for Chalkbrood is interesting. How would you like the job of moving our thousand hives back and forth? I assure you this is not a control for Chalkbrood, however, there are strains of bees resistant to Chalkbrood if you can find them. Kill the queen that is susceptible and requeen with one resistant to it. That is the end of Chalkbrood. You waste time and money with Benomyl or any other chemical control.

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I am amazed to hear there is actually an effort being discussed to stop the advance of the Africanized bees at the Isthmus of Tehuantepec, also known as the Isthmus of Mexico, where an Atlantic-Pacific Canal was once proposed.

Over the past 25 years, I have spent a lot of time working with bees in all parts of Mexico. I spent time working in the State of Verzcruz, just north of the Isthmus and in Yucatan, just east of it. While I never did get to the Isthmus itself, it is similar to the southern area of Veracruz and the states of Campeche and Chiapas where I have worked with bees.

I must confess, the very idea of trying to stop the advance of the Africanized bees anywhere in Mexico seems utterly ridiculous. 8 *billion* dollars could not stop the advance of these bees, let alone 8 *million*. That is rough jungle country with few roads and sparse population. When Africanized bees reach the Isthmus they will go through it so fast all the barriers in the world will hardly slow them a particle. Before anyone goes down there to spend a lot of money, take a look and see how much of that jungle you could cover with 8 million dollars. Don't just sit in the comfort of your car on the roadside. Get out into the jungle where the bees will be going. The bees can go through that jungle at almost 30 miles per hour. On foot you would be lucky to make one mile per hour with a machete, while you get covered with "Garapatas and Pinalias" (ticks and chiggers). I doubt the project will ever get off the ground. The bees will be through there before the bureaucracy even gets started on such a ridiculous project.

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We continue to make progress with our BV Therapy program. The medical profession is becoming interested as they see more of the excellent results it produces. I have already spoken to two groups of Rheumatologists on the subject, and hope this interest will continue.

One of the most serious diseases we've encountered is Multiple Sclerosis. It commonly strikes young women, but men are not immune. As it progresses, they gradually lose control of all body functions until they become completely helpless. The mylan sheath, a nerve "insulation" deteriorates so the nerves "short circuit" and lose control, just as in any electrical circuit. I have always felt BV Therapy might have a favorable therapeutic effect on this condition. So far, there is nothing in the "medicine chest" that has any effect on this terrible disease. I recently started treating such a case, but it is still too early to know if it will help. At least BV Therapy can do no harm and it is certainly worth trying.§

BEES & FLOWERS

By STEVE TABER of Honey Bee Genetics
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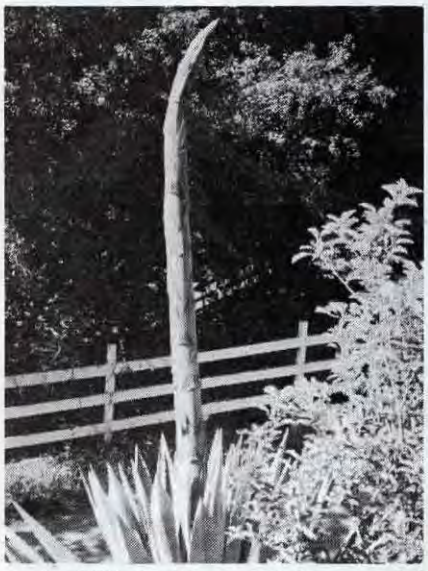
"I am going to state that the Century Plant . . . has the most outstanding bloom of any plant — Anywhere."

Beekeepers are interested in flowers, whether they admit it or not, because bees go to flowers and collect most of what they need from them. So it's not unusual to be driving with a beekeeper some place where the scenery is pretty, and the beekeeper either stops or slows the truck and points out, not the scenery, but certain bee plants in bloom — flowers.

Flowering plants have been studied for years, and there are many classics written on the subject. When bees visit flowers they usually affect the pollination of the flower, so beekeepers are interested not only in a plant's flowers but in pollination as well. In fact, some of my beekeeper friends make a good part of their income from pollination.

As you look at flowers, flower types and sizes, you see all kinds — small and inconspicuous, large and showy, and medium size too. Some flowers are quite small, like clover blossoms, but the combined head of florets is of good size and many blooms of clover varieties are really pretty. Sunflowers native to North America probably have the largest number of florets, but species of *Protea* of South Africa are also very large and truly fantastic in size, shape and color. Various people are always trying to prove that I am either wrong or tend to exaggerate and it may happen again, but I am going to state that the century plant, native to the Great Sonoran Desert, has the most outstanding and fantastic bloom of any plant anywhere.

April 23, 1986.



April 28, the bloom stalk has exceeded the height of my living room window where many photographs were taken. Does it look like an asparagus? Well, it should, the plants are closely related.

The century plant gets it's name from the myth that after you plant it, it takes a hundred years to bloom. That ain't so, but I don't know how long it does take to bloom either. The century plant is in the amaryllis family and its genera is *agave*, from the Greek, meaning noble. This particular species is *amaracana*. It's native to the deserts around Tucson and Phoenix, Arizona, which are included in the Sonoran Desert and extending many miles south into Mexico. This family includes many interesting plants, such as the giant Saguaro cactus and others. The century plant has been used in ornamental plantings all over the southern tier of states. I have seen it growing in South Carolina, my native home, and I expect that it can grow in coastal areas of North Carolina and Virginia, and it grows here in my yard in Northern California. It seems to tolerate many different soil types and climates. Where it grows in and around Tucson, minimum temperatures rarely exceed 15°F, but the plant may be able to tolerate lower temperatures than that.

End of May, the buds on the bloom stalk are emerging and the stalk is still growing.

The century plant is cultivated in Mexico for another purpose. It's

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grown not for its ornamental qualities but to make an alcoholic drink called tequila. To do this, the large sharp leaves are cut off and the hearts of the plant are fermented to obtain alcohol, followed by distillation to produce tequila.

First of July and the century plant is finally in full bloom. No bees were attracted to the first blossoms that opened but at this stage several bees were visiting the flowers.

I had two of these plants at either side of the entrance to my driveway here in Vacaville, and last year one of them began its bloom stalk on April 18. Strangely enough, other century plants in the neighborhood began sending up their bloom stalks at precisely the same time, enabling this wonderful plant to bloom at the same time as others of the same species.

When I was living and working bees in Arizona, I had noticed that bees visited its blooms, but it was also very attractive to hummingbirds. It would be interesting to know who or what is the primary pollinator of this magnificent plant. As the flowering part of the plant matures and blooms, the leaves at the base become more and more wilted and finally turn brown, indicating the plant is dead. Bloom stalks sometimes remain standing for many years after

A close-up look at the lily -like flowers on the bloom stalk. Some of the anthers have dehisced (released their pollen) others have not.

The mature finished plant, leaves are wilted and faded. The time is now August 10, 1986.

August, 1986, everything is long dead. Seed pods toward the middle of the blooming area and above indicate that seeds were produced. The estimated height of the stalk is 35 feet.

A book published about 20 years ago, *Floral Biology* by Mary S. Percival, would interest many beekeepers. This book is written by a botanist for bee interested people and if you can get a copy I expect you will enjoy it as much as I did.

Another book beekeepers need on their shelves is a publication of the US Department of Agriculture, Agricultural Research Service. It is *Insect Pollination of Cultivated Crop Plants* written by S. E. McGregor in 1976. Agriculture Handbook No. 496 is available from the Superintendent of Documents, US Govt. Print. Office Washington, D.C. 20402 for $5.90 or it may be available from one of the USDA Bee Labs. You might write to the Director, Bee Research Lab, 2000 E. Allen Rd., Tucson, AZ 85719 and get a free copy.

FINE TUNE YOUR ADVERTISING

By R. T. EDWARDS
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As a beekeeper and business person, if you want to make your advertising dollars work harder for you and acquire the most business, you have to know something about advertising and the way it works.

Of all the possible outlets for advertising available, there are less than five that will really work the hardest to help you sell all of the products those bees are going to generate.

All advertising is known as a medium. That's where the single aggregate known as "media" generated, the reason why it is called that.

To the untrained, it certainly looks like a jungle out there. The idea, then, is to help you clear a path to those media outlets which will work best for your kind of small business.

For the most part, radio and television advertising spots won't give you as much satisfaction or control over what is known as your consumer base. People are more apt to look you up in the yellow pages than to respond to a radio or television spot.

The reason for this, while it may sound rather complex, is a simple one. Those wanting honey are going to buy your honey and other products when they want to — not when it is offered through a radio or television commercial.

Besides, you want to keep your products competitive against those large food chains and health food stores. Both radio and television commercials are costly. And, in the case of radio, you really don't have control on when the spot comes on the air. Buying block time is like buying a shotgun and shells and trying to hit something blindfolded.

Furthermore, while a yellow pages advertisement is certainly a worthy way of advertising, from the small business person's perspective, it may not be a very economical way to advertise.

A yellow pages advertisement assumes a certain amount of stability. Can you count on this? Unless you reserve a good supply of honey, year to year fluctuations in production can certainly effect your selling power regarding supply and demand.

Consequently, what you are really faced with is an advertising medium which is flexible enough to be there when needed and off when not.

Surprisingly, at least for those new to selling honey and other products from their beekeeping efforts, the best way to advertise is by *word of mouth.*

It is amazing just how many people arriving at the beekeeper's place of business have heard about the sale of honey and other products through word of mouth. Something like well over 50 percent of the business can be attributed to this kind of advertising technique.

Another 25 percent of the products are sold via the local phone. Either you have a listing of consumers that have become, over time, steady customers and just good friends, or you have people calling you up voicing their interest in your honey and other products because they saw an advertisement somewhere.

But where are those somewheres? Well, I'm not a betting man by trade, but I am willing to bet that you can do most of your advertisement for free and sell all of your honey and products. How?

By going to your local small and large food chain stores and asking to be allowed to place a note on their bulletin boards. You'll find one at almost every food store you come across.

What you will want to do is use a large piece of white 9 x 12 inch paper. Make certain those HONEY FOR SALE words can be seen from as far away as 10 feet. This will capture the attention of those interested in buying honey and other products. You can use your professional calling card at the bottom of the announcement and that's all you are going to need.

Another way to selectively advertise is to find out whether or not you have local health spas or health clubs in your area. You can not only sell honey *through* these people but you can sell your honey *to* these people as well.

Try this as well on your local small chain or business operated health food stores in your area. Again, it is either a sell-to or sell-through situation and you'll want to see, first, whether you have enough supplies to meet the local consumers demands. More than likely, at this point, you'll want to consider expanding you hives and having more honey available to sell.

Notice, too, that you are marketing here while you are advertising. This gives you a dual purpose selling/advertising campaign rolled into one.

Another area which helps you target your market is whether you sell your product more to the general public or to a specific audience.

This information is generally determined by polling your consumer base or by assessing the variety of newspapers and publications in your local area. If you have more than a general interest newspaper available in your area, chances are good that the specialized publications either cover sports or involve themselves with outdoor recreational activities.

Knowledge of the types of consumers you deal with will provide you with fine clues as to who these people are and what they like to read.

Assuming you have a choice, go with those types of publications you feel would be read most by those wanting to buy fresh honey or bee products.

While a health food type publication would certainly be the best choice here, you also have sport and outdoor recreational minded consumers eager to buy your products as well.

Think about, too, that kind of consumer who likes to buy on

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Hong Kong Bees

By KEN OLSON
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Try a little lemonade on your next visit to Hong Kong. Better yet, sample some lemonade sweetened with honey from Hong Kong bees.

Ibe Leung is happy to serve lemonade to visitors to his bee farm in Fanling. He raises bees and sells both extracted honey and honey still in the comb. Clean, sparkling bottles of a variety of sizes and shapes line the shelves in his little refreshment stand, located a short distance from the train station.

This colorful little refreshment center offers the usual soft drinks, but it's the opportunity to sample unusual flavors of honey that gives the adventurous traveler a sweet bonus.

Travelers to Fanling will remember the communities and the countryside which the train passes through. The tall white apartment complexes in Shatin New Town strike an imposing image against the sky. When the train passes through University, the scene contrasts vividly with the expected view of a campus. Here the buildings are white, not red brick; the lawns are scarce, not endless acres of green expanse; the campus has one or two buildings, not scores of buildings spread all over the landscape; and here the buildings are clean and modern, not ancient edifices with moss and ivy climbing over them.

The train follows the shoreline of Tolo Harbor where a variety of vessels and sea-craft paint a picture of leisure and pleasure.

The trip from Tsim-Sha-Tsui to Fanling takes roughly an hour. When I first started my trip, while passing through the lobby of the hotel, I asked the receptionist to please translate this written request into Chinese: "I want to visit a large beekeeping operation." I planned to hand this request to a taxi driver once I arrived in Fanling.

I caught a bus at my hotel and rode it to the Railway Station, then took a train directly to Fanling. No transfers were necessary, so the trip was hassle-free. A map of the route is posted over the door of each car, and each station has a sign indicating in large letters the name of the town. These signs are printed both in Chinese and in English, so travelers can easily follow on the map the progress of the train towards the destination.

The train stopped at Fanling and I began my quest for the large beekeeping operation. When I presented my written request to the taxi driver, I sensed his reluctance to drive me there. Once we started, the trip was over in less than two minutes. To my surprise, the bee farm was only 400-500 yards from the station.

A large sign made of heavy metal screening identifies the "Po Sang Yuen Bee Farm" to passers-by. The screen is made of hexagonal holes which is a trademark of this family business. Large red Chinese characters hang on this screen near the top, and smaller English letters near the bottom invite the visitor to walk the fifty steps up the gravel driveway to enjoy a rest with a little refreshment.

Ibe Leung was hammering together a beehive when I arrived, but his son was in the refreshment center, and he courteously offered me a chair at the table and poured me a glass of cool, sweet lemonade. This lemonade was not the ordinary lemonade we make at home. This cool drink reduced the agony of hot weather and the anxiety of traveling in a remote foreign area. I soon realized there was absolutely no reason for anxiety about this trip.

Mr. Leung's daughter helped me learn about keeping bees here, while her brother summoned Mr. Leung from the shop. She explained that bees in Hong Kong gather nectar primarily form orange blossoms, litchi blossoms, and longan blossoms, but that scores of other flowers also provide nectar in minor amounts throughout the year. She sat next to me at the table and translated my questions from English to Chinese for her father. She was gesturing and smiling while whipping the pages of her dictionary as the conversation sped from one topic to another.

"This light color honey comes from oranges," she said as she motioned to a cupboard to her left. Seven shelves sagged under the weight of honey the color of light-brown toast. I imagined how good this honey would taste on a warm English muffin on a cold January morning.

"Where does this darker honey come from?" I asked her as I pointed to another bank of shelves. This little honey shop was clean as a clinic. The Leungs obviously took great pride and meticulous care in lining the shelves with clean, sparkling bottles of honey, all arranged according to shades of ambers.

"That honey is from the litchi trees," she replied. "It blooms in early May. It's the bees' favorite." Her enthusiasm for bees, for honey, for visiting with her foreign customer was contagious. She picked a bottle of bamboo-colored honey from the shelf, removed the lid with a sharp twist, and held the bottle toward me. "Smell how good it is!" she bubbled. It smelled just like honey from the Oregon cherry orchards.

Each bottle bore a label with a portrait of Ibe Leung's father. A swarm of bees nestled under the chin of the man in the picture, formed a symmetrical beard of bees hanging from each ear, drooping to his beltline. The same portrait decorates the official stationery of the Po Sang Yuen Bee Farm.

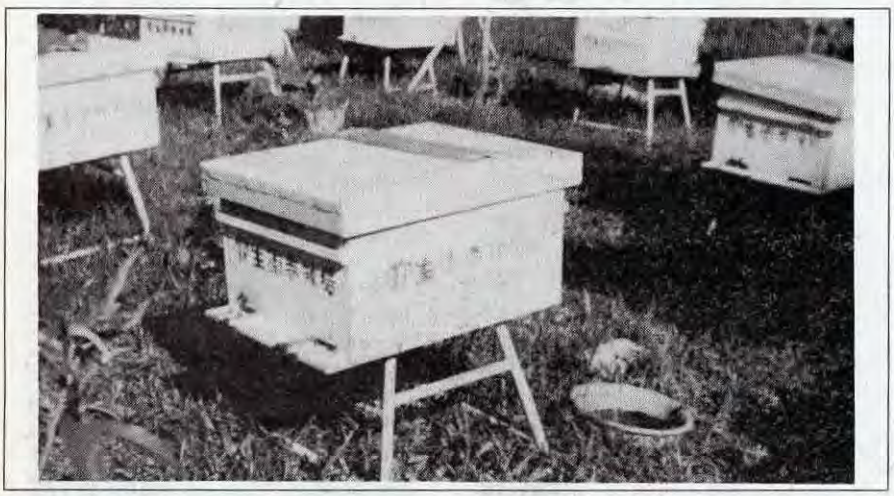
Ibe Leung's father wore a bee beard to startle on-lookers at fairs and demonstrations on bee handling. His photo appears on labels of the bottles of honey from the Po Sang Yuen Farm.

When we finished our lemonade, Mr. Leung led me to his back yard where the hives stand in rows between a variety of fruit trees. The bees were not very active in spite of

Continued on Next Page

HONG KONG... Cont. from Page 35
the sunny weather. Mr. Leung explained that when the sun gets too hot the bees tend to stay in their hives to cool the colony and brood by fanning the air with their wings.

Mr. Leung delicately lifted the lid of one hive to expose the bees. He wore Bermuda shorts, a short-sleeved shirt, sandals on his feet, no gloves on his hands, nor veil over his face. The bees seemed to recognize their caretaker, though, and did not fly out. I wasn't protected, either, so I stayed a long distance away to take pictures in safety.



The hives sat on stands to keep them off the ground where ants would otherwise invade the hive. The stands also prevented ground moisture from rotting the floors.

The beehives were situated on metal legs which keep them 8-10 inches off the ground. When I asked Mr. Leung why the hives needed to stay off the ground, he responded in one word: "Ants." Later in our conversation he indicated moisture from the ground damages the floors of the hives, and mice are less liable to enter the hives if they are raised off the ground.

After touring the beeyard, we went into the shop where Mr. Leung had been working when I arrived. A large pollen-packing machine stood in one corner of his shop. A hopper on top of this machine holds 20 kilograms of pollen. Several of these 20-kilogram bags were standing around the pollen packer, waiting to be processed. Two rolls of foil unwind in the machine as pollen grains pour into the foil sack. When the weight reaches exactly one-half gram, the machine automatically seals the two foil sides together with a clamping, crimping action.

The small foil container of pollen has "Po Sang Yuen Bee Pollen" stamped on the bottom, and a sketch of six hexagonal cells surrounding a seventh cell in the center. This arrangement of seven cells — six cells circling a center cell — also marks Mr. Leung's business card and his letterhead stationery.

Unusual business cards are easy to find, but Mr. Leung's is the most unusual I've seen. The seven cells, each six-sided, are die-cut, so the cells each make a hexagonal hole through the card. It's an appropriate, clever idea for a beekeeper. To dress up the card even further, Mr. Leung had an artist in Japan draw a yellow and black bee in the lower corner of the design. Mr. Leung's name, address, and phone number appears in English on one side and in Chinese on the other side.

In another corner of Mr. Leung's shop, protected from dust and dirt under a large plastic blanket, sits a honey extractor. Mr. Leung anticipated my question when he saw me eyeing the machine, and he lifted the sheet of plastic to show me the name of a prominent U.S. manufacturer. The pollen packer, though, is a Chinese brand, purchased in mainland China.

I asked Mr. Leung if other beekeepers raise honey bees and produce honey in Hong Kong. "No," he said, "I'm the only one." Consequently, there is no beekeepers club, no supplier of woodenware, no magazines about bees, and no classes on beekeeping. Mr. Leung pioneers his own work, learning by experience and trial and error.

I wondered where he obtains the queen bees to replace the aging, non-productive queens. He replied, "Australia". And he mentioned that he can have Australian queens within two weeks after he orders them.

After leaving the workshop, we followed the footpath back to his house and refreshment center. Midway down the path, a white conure stood on the roof of his birdhouse. One leg was tethered to the perch to keep the bird from flying away. Mr. Leung bent over toward the bird and spoke a few words in Chinese to the conure. The bird promptly repeated the sound back to us. I didn't ask Mr. Leung what the bird said, but it sounded something like, "Thanks for coming. Come again".

We settled into chairs in the refreshment center and continued to discuss bees. I asked him what the greatest obstacle is in raising bees here. I thought he would say "Foulbrood" or "Swarming", or he could have mentioned the weather. Instead, he said "Moth". The wax moth is as pesky in Hong Kong as it is in America. "She sneaks in, and she's always around . . . can't keep her out." From a cupboard under the counter he found a frame of beeswax that had tunnels and holes eaten by the wax moth larva. The bees would have to build the wax back again, starting almost at the beginning.

Mr. Leung then asked whether I would like to taste some honey in the comb. I quickly answered, "Sure!" to such a treat. He walked to the shelf which had dozens of cellophane-wrapped packages of comb honey. With his knife he skillfully slit the paper off one package, placed the honeycomb on a small plate, and sliced off a section of honey an inch wide and roughly four inches long. He slid this piece of wax and honey onto another plate and handed it to me. I took a bite of it and began chewing the wax, forcing out the sweet, rich liquid. The taste of the honey brought back long forgotten memories of my boyhood farm in Kirkland, Washington. I was so enveloped in reverie and nostalgia I nearly forgot I was on the other side of the globe.§

BEEKEEPING IN MOROCCO, NORTH AFRICA

By SAID BILALI • B.P. 139, Kenitra Morocco • N. Africa

My own experiences with bees in Morocco goes back to the year 1966. I was on duty that night with a friend of mine who retired a couple of years ago. As he tried to hide two small boxes behind a tree, I asked him, "What are you cooking over there?" "Two swarms of bees," he said, "Would you like one?"

Without knowing anything about bees, except that some folks rob them to get honey, I said yes. Needless to say, from that day on my bee fever and fascination have kept increasing everyday. I took care of my bees for four years in Meknes, an imperial city dating from the eighteenth century,but because of my job I had to move to Kenitra along the Atlantic coast. Money was scarce but my 20 hives provided enough cash to hire 2 tracts of land, one for our house and one for our bees.

Kenitra, with its rich orange groves, sunflower fields and big eucalyptus forests is a bee paradise for an enterprising beekeeper.

Due to lack of time, I have always tried to find permanent locations where I can produce several crops of honey using an intensive system of bee management. I own 2 apiaries not far from each other with about 110 producing hives in each apiary. The number of hives in each apiary can go as high as 250 hives during the rearing period. Increase is made 4 or 6 months before the honey flow. We select the colonies to be divided among our best colonies and the divides or nucs with 7 deep frames of brood and adhering bees are allowed to rear their own queens (Charles Mraz method).

Along the coast, we have fresh pollen all the year round and our bees really don't know the meaning of the word "Wintering".

I use the IO MD hive with medium or Illinois supers as referred to by our American Friends. This super is just wonderful, especially if you use the fume boards during harvest time.

I leave plenty of honey for my bees (R. Taylor principle) because as everybody knows, "It takes honey to make bees and bees to make honey".

At the beginning of February, all the hives are checked and the strong ones, that is to say those with 7 deep frames of brood, are given 2 medium supers of drawn combs at once. At this period, eucalyptus trees start blooming and plenty of other flowers are available. A month later, the 2 apiaries are visited one more time and the hives which were a little bit late at the first visit are checked again. The strong ones are given 4 medium supers at once — 2 drawn and 2 with foundation. The weak ones are united and given 4 supers. The foraging bees join their neighbors since all the colonies in the apiaries are arranged in pairs. Two more medium supers are added to the hives visited in February, entrance reducers are removed and inner covers with small wooden blocks are put upside down to allow maximum ventilation in order to reduce swarming.

I have no nucs in my apiaries, all the hives should be producing honey. I have taken care of my divides 4 or 6 months before the honey flow, in other words, I like to make increase when I don't need bees. I have taken care of the bees in the fall and they must work for me in the spring. I love those strong and tall hives, from which I harvest honey every week or 10 days. The supers are extracted and given back for refueling.

With this system, in a good year you can get big crops of honey — 450, 410 and 390 pounds from the best colonies in one season (1982).§

Negotiating Techniques Ring up $ALES

By GEORGE T. FULLER
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A customer comes in, wastes (or takes) forty-five minutes of your valuable time, and then leaves without buying anything. Have you ever had this happen to you? If it hasn't, you must be selling gold at 10 dollars per ounce.

The parting line of the customer is usually, "I'll have to think it over", "Your price is too high", or "Cheap and Sleazy Distributors has a much lower price".

How many of these people ever come back? Too few, so it is important to sell them when they first come in.

Let's face it, most people aren't going to talk about any product for very long, unless they want to buy it. Yes, there's a minority who will never buy. Let's forget about them.

Many people would rather be golfing, boating, or just sitting around the house rather than shopping. But, if they have come to your place of business, a sale is possible. What can help to close the sale? Simple negotiating techniques can turn the tide and the strategy isn't too difficult to master. It requires proper preparation and flexibility in your sales approach. The principles can be used for any product or service.

You're starting off with a couple of pluses from the moment the customer walks in the door. It's your place of business, which gives you the "home field" advantage. Being the expert on the product is another factor in your favor. Find out as much about the customer right away. This may turn out to be a positive clue to a selling point.

It is very important to establish if he's the decision maker in the buying process. Sometimes, after the sales discussion takes place, a customer begs off by saying that approval is needed of another person. Finding out quickly whether the customer is a potential purchaser is a significant detail. You have to decide how much time to spend with an individual without purchase authority. Why are they looking at your product line? Are they just shopping out of curiosity? Do they really represent a potential buyer?

If two people are together, which one will make the purchase commitment? Discovering this isn't too difficult. During the course of the conversation, one person will usually let the other ask or answer all questions. If possible, try to get the person not making the buying decision to agree with you on the merits of the product. This will sometimes weaken the bargaining position of the decision maker. After all, they don't want to rebuff their companion in public. Therefore, they will be reluctant to dispute anything the other person has agreed to. On the other hand, only one person should do the selling. It gives you complete control over the sales strategy to be used with the buyer. It also prevents the possibility of conflicting statements or claims being made.

As you might surmise, prospective buyers are not all friendly. They may bait, argue with you or even insult you. Losing your temper means losing a sale. The prospective buyer may be deliberately trying to rattle you, to gain the upper hand in the bargaining. Keeping your composure will deflate a hostile attitude, and may weaken the buyer's sales resistance.

Overcoming sales resistance is where the negotiating flexibility comes into play. Always be ready to adjust your sales approach to counter the buyer's objections. For negotiating purposes, decide what trade-offs can be made in terms of price, payment terms, service or delivery, etc. Decide what is not negotiable under any circumstances.

When negotiating the sale, don't make any concessions unless the customer is seriously backing off from buying. Of course, concessions should be made piecemeal, so you always have something in reserve that can be offered to clinch the sale. The important point here is that your overall game plan can be established beforehand. It is only the implementation that will vary from customer to customer. Adequate preparation makes it unnecessary to interrupt sales discussions to work up new figures, or think about whether a particular concession can be made. This is crucial, since any interruption gives the buyer time to think. About what? Maybe an excuse for not making the purchase.

While on the subject of excuses, here's where your prior preparation really pays off. You will have formed a strategy to counteract the customer's objections. In general, customer statements as, "I'll have to think it over", and "I can't afford it right now", result from indecision on the part of the buyer. Overcome this hesitation by giving the customer reasons why an immediate decision is to his advantage. You can, at this point, tell why your having the item in stock and at a set price, will mean immediate shipment, as opposed to waiting for reorder to come in, perhaps at an increased price.

If the prospect keeps harping on the fact that he believes that your price is too high, be prepared to show him advertisements of your competitors showing that your price is actually in line, or lower than those of your competitors. If your price is comparable, but not lower, point out the reliability of your firm, your reputation for service, and other factors as to why and how you stand behind the merchandise you sell.

Despite all your efforts, some prospective customers won't make an immediate purchase. Close off your discussions with these people by leaving them with the responsibility for making further contact with you.

This serves two purposes. You're not wasting time and money contacting what may be a hopeless sales prospect. Furthermore, your initiative may be construed as a willingness to bargain further. However, if the prospect calls you, the sale can probably be made on your terms.

What's the secret to increased sales? There is none. All that is required is knowing your product, recognizing buyer reluctance, and overcoming this hesitation. It isn't easy, but it can be accomplished by adequate preparation in establishing a sales strategy, and flexibility in applying that strategy during sales presentations. Combine this with some hard bargaining, and increased sales will take care of themselves.§

Beekeeping in Swaziland, Southern Africa

By HAROLD M. LIBERMAN
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A recent beekeeping trip took me to Swaziland, a small, independent kingdom in southern Africa bordered by South Africa and Mozambique. During my visit, I talked with Kathy Gau, a young American, and learned about a unique beekeeping project first hand.

Even though African bees are indigenous to this country and the Swazi people are big consumers of honey and other bee products, beekeeping has not been a part of their traditional culture. Thanks to the abundance of wild colonies, the Swazis have long been honey "hunters" and not beekeepers. By using only smoke and simple tools, and braving a multitude of stings from aggressive African bees, honey has been gathered and enjoyed by the people of Swaziland throughout the ages. So, honey has been a highly prized food even though modern beekeeping practices have not been utilized. But now, thanks to Kathy Gau and others, that situation is undergoing some important changes.

Increased western contact has stimulated an interest in modern beekeeping techniques. The arrival of Peter Bechtel in Swaziland in 1982 was going to make a big beekeeping difference in this small African country. Employed as a teacher in a rural secondary school, Peter taught among other subjects — beekeeping. Equipped with prior U.S. beekeeping experience and gifted with an ability to learn the Swazi language, Peter was able to capitalize on the long-time bee gathering practices he found in Swaziland. As a result of his efforts, a local beekeeping association was formed and eventually a grant was secured from the United States Agency for International Development to purchase supplies to build a workshop. Soon Peter's efforts were recognized by the Swazi Ministry of Agriculture and Cooperation and a new position of Beekeeping Field Officer was created. Soon, additional funds were acquired to establish an apiculture training center to assist in teaching about equipment, construction, beekeeping techniques, and marketing.

Several years earlier, a well funded effort to start a large commercial type of operation using Langstroth equipment failed. Under Mr. Bechtel's leadership, the goal of this newly established training center was not to follow in the direction of this earlier large scale and well funded effort, but rather to introduce a style of beekeeping by which the poorest rural farmer could improve his economic situation. The type of equipment to be promoted by the training center would be a critical choice. The rural Swazi farmer has few tools, a small yearly income, and measured by western standards, lives in very primitive conditions. Would it be reasonable to expect such an individual, interested in improving his standard of living, to undergo the cost of constructing or purchasing the Langstroth hive, necessary protective clothing, and processing equipment? The start-up cost would make such an effort prohibitive.

What was needed was equipment that would entail low cost and quick benefit. For that reason, a modified Kenya top bar hive was chosen to be the standard for rural Swaziland. This equipment would be easy to construct with a minimum of woodworking skills and tools and a very small cash outlay. Furthermore, such hives would also be less costly to maintain, operate and replace, especially since it does not use starter foundation as in the Langstroth hive.

Kathy Gau shown with top bar from Kenya hive.

The main disadvantage is that the hive is not suitable for migratory beekeeping, but since the poor Swazi farmer walks or rides the bus, migratory beekeeping is not feasible to begin with. Another factor that eases the start-up cost is the abundance of swarms cast off by the prolific African bees. A trap box hive that is a smaller version of the Kenya hive and uses the same top bar is used for that purpose. All of the other necessary equipment is locally designed and produced. A local student of beekeeping has designed and excellent smoker made out of tin, a bed or car spring, and scraps of leather or plastic from old chairs or raincoats. Veils and gloves are also made at low cost from local resources.

Peter is now on home leave and at present the center is under the direction of Kathy Gau. She arrived in Swaziland some years ago with no prior beekeeping experience and since then her training has been totally with the African bee. She is presently setting up an educational apiary, workshop, office and classroom, and is continuing with the extension work. When Mr. Bechtel returns, he will write a series of beekeeping manuals in the Swazi language which say a lot about his fluency in the Swazi language.

The prospects for beekeeping in Swaziland are excellent. There is moderate rainfall, many nectar yielding plants, even on marginal land, and in rural areas of the country one finds huge forests of eucalyptus and citrus. To date, all honey marketed in the towns is imported from South Africa, a country that cannot meet its own demand for honey. So the potential is there and beekeeping is seen as making use of a resource that is already in place to provide a source of food and cash income for the rural poor in this developing country.

The beauty of this project is that large scale expenditures are not necessary to achieve significant results, but at the same time this does present problems. A lack of transport has limited the reach of this extension effort, and teaching aids and books are in great need.

Miss Gau and Mr. Bechtel are an excellent example of how a few good people can make a remarkable difference in the beekeeping world. Their expertise and leadership will introduce modern beekeeping techniques into this small southern African country, hopefully to the benefit of many.§

If you would like to contact Kathy or make some small donation, she can be reached at: Katherine Gau, c/o LFTC, P.O. Box, Entfonjeni, Swaziland, Southern Africa

BEEHIVE HOME OF THE CELTS

By KATHY and ROGER HULTGREN
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In perusing some information with respect to beehives, I came across a reference for a beehive house. My curiosity led me to a prehistoric people known as the Celts.

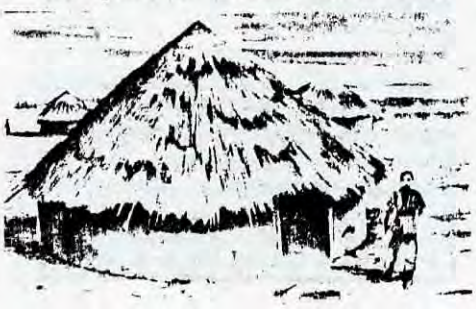
The Celts were the first to expand their settlements North of the Alps. They established themselves and dominated western and central Europe from 500 to 250 B.C. In the first century B.C. the Roman Empire conquered Gaul, better known as France. The Celtic craftsmen who had settled in this area soon discovered that the Romans preferred their own craftsmen. The Romans, at this time, were more interested in cheap mass produced items than the expensive quality products of the Celtic craftsman. Disenchanted with the loss of their status as craftsmen, the Celts migrated to England where their work was in great demand. In 43 A.D. the Britain Celts found themselves again invaded by the Romans. This time, the Celts fled to Ireland, Wales and Northern Scotland and managed to evade full conquest in these areas.

Ireland and Britain are predominantly where the beehive houses were located and their remnants can still be seen today. The term "beehive house" was derived due to their resemblance to straw skeps. Often, these homes were scattered about a farmstead, which gave the appearance of an apiary site located near a source of nectar. The beehive home was circular in shape, approximately 50 feet in diameter and topped with a thick overhanging thatched roof. The main structure of the house was constructed of wooden planks and wickerwork. Interiorly one would find cell compartments radiating from a central room. The walls of these compartments were comprised of screens, material, leather or wickerwork to insure privacy. Furniture was minimal within these rooms, known as imdaes. It was here the various household activities were conducted, such as weaving, washing, and the like. The central room's primary function was for cooking and providing the home with a heat source. A provision for a hole within the thatched roof was provided for smoke to escape. Suspended above the fire from a cross beam was a great cauldron which was employed for roasting, boiling, etc.

The diet of the celts was quite varied. They fished, hunted for birds and boars and raised domestic animals such as cows, chickens and pigs. As farmers their crops consisted of wheat, barley, corn, oats, rye, peas, lentils and flax. They employed the flaxs' linseed oil in the curing of animal skins and for lamp fuel. Salt was used as a meat preservative. It was derived from mining and from a process they developed which evaporated sea water. Honey was their major source of sweetener, but instead of maintaining their own apiary sites, honey was robbed from wild bees located in nearby forests. The honey was used in bread making and in making mead, which was their most characteristic intoxicating drink.

The Celtic people themselves were tall, light-skinned with grey blue eyes and hair color which was blonde or reddish. The men's hair resembled a horse's mane for they would soak it in water which was mixed with crushed chalk. It would then be scraped back towards the nape of their necks where it would dry very stiff. Most men had moustaches, wore trousers called bracae and were extremely figure conscious. If their waist exceeded the standard length of a girdle they would be fined. Quite an incentive for dieting.

The women wore their hair long, dyed their brows black and employed herbs to enhance their cheek color and darken their lips. Their clothes were brightly colored long tunics of wool plaid or checks which were fastened with brooches. These and other decorative ornaments were designed by the Celtic craftsmen who utilized the lost wax method in their creation. The needed beeswax for this process was also collected from the wild forest bees.



The Celts' social organization consisted of independent scattered tribes with each having its own name. Frequent squabbles arose between these tribes for dominance which prevented them from ever becoming a united force. Each tribe had a King or Queen and numerous druids who were the priests and lawgivers. These chief noblemen were responsible for enforcing the laws which were handed down by word of mouth. The non-noble freeman class consisted of the craftsmen who held a very high status within the society and the farmers. Below this class were the unfree members who did not own property or arms while the lowest status was held by the slaves.

The practice of fosterage was quite common among the Celts and in parts of Scotland this continued until the 18th century. Sons, as well as daughters, of a lesser status individual were sent to live and be reared by the noble class. The girls' training was comprised of sewing and embroidery while the boys learned the rudiments of warfare. During this time of fosterage a fee was paid to the foster parents for the care and training of the children. Aside from the fee, this provided the noblemen with extensive power over the paternal parents. Training was completed by the age of 14 for females and age 17 for the males. The foster children thereafter supported their foster parents. This practice aided and perpetuated the existing Celtic society.

Although these people remained scattered in their isolated clans, their cultural influence can still be traced today. One can view the structural remains of the Celtic hilltop forts and farm steads throughout Wales, Scotland, Ireland and England. The Celtic language is found to be woven throughout the present day Irish gaelic, Scottish gaelic, Welsh and Breton dialects. With this much impact still reaching into the present, one can't help but wonder how we would have been touched if these Celtic people united to form a strong empire.§

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FINE TUNE... Cont. from Page 34

impulse. Impulse buying is considered by most small businesses as the most prompt responding type of consumer attitude in the market.

Smart consumers are always looking for ways to reduce costs of food and household goods. They go for couponing, health foods, used cars and used furniture. They also, if they have children, look for bargain deals through garage sales and marketplace newspapers catering to such activities.

This opens even further possibilities for honey and product sales. You can do a couple of things dealing with these areas.

First, you can find out if you have a Dandy Dime or Thrifty Nickel in your area. If you do, this is a very inexpensive advertising vehicle for you, and a very wise one to consider.

You may, too, want to see if there is a used auto or furniture type publication produced in your area. Again, the same kind of premise is working here. You have people looking for a good bargain as well as wanting to buy a quality product for their homes.

As for those garage sales, while it is a long shot, you may want to look into the possibility of your area having a garage sale newsletter or newspaper. If you do, chances are good that this is a better place to advertise than your local paper. More mothers are apt to read this type of media than those reading the local newspaper.

Still on garage sales, you may want to consider the possibility of selling some of your honey and products along with one of these garage sales. Especially if the sale is big. More so if the garage sale is being sponsored by a church organization. Not only will you be able to sell your honey and products, but you will be doing some advertising in the process.

The last alternative is, of course, your local newspaper. You should check and see if your local paper is a morning or evening edition. Evening, chances are good that your honey advertisement will go unnoticed. The reason for this is quite simple if you stop and think about it. Many women are home during the day while most men are around at night, generally taking command of the evening paper.

Here, timing is important. You may want to run your advertisement only on the weekend and during the payday period in your area. You may, too, want to advertise on the day when most of the garage sales occur in your area.

Remember, most of your customers are women. They will be reading those garage sale advertisements in the classified section. That may very well be where you will want your advertisement placed.

All of these are, of course, designed to help you sell the most honey and bee related products without having to pay a lot of money to advertise. Working together, they will sell your honey and products. Perhaps, more than you realize.

There are thousands of potential customers. It is up to you to address the market — and advertise appropriately.§

Richard Thomas Edwards is a freelance writer with over 200 current bylines. Trade articles dealing with business subjects have included: Gleanings in Bee Culture, Farm Supplier, Outdoor Power Equipment, Auto Body, Auto Trim, Miniatures Dealer Magazine, National Beauty School Journal, Prophet$, The bookdealers Profile, General Aviation News, Aviation/USA Security Systems Administration, Studio Photographer and Rangefinder.

BEE FLORA: THE MILKWEEDS

This native plant, whose botanical name is *Asclepias* (after a Greek god of Medicine) is not only an excellent honey plant, but has a long history of culinary and medicinal value. Although it is a weed, it is not too noxious and is easily controlled. There are over 50 species of milkweeds in the New World.

Colonists learned from native Amerids that young shoots, top leaves and immature pods were good as a cooked green. The milky sap, which is characteristic of the *Asclepias*, is dissipated if the greens are boiled in several changes of water. Some Amerids used this milky sap as a chewing gum. Blossoms and buds were also added to soups and stews as a thickening agent. While Milkweeds prepared thus are edible to humans, the plants, raw or dried in hay, are poisonous to cattle, sheep and horses, and most insects except the Monarch Butterfly and a few aphids.

As a medicine, the milky sap has been used to treat warts, moles, ringworm and as topical antiseptic. Mashed roots applied as a poultice, have been used to treat swelling.

The plant itself is a tall, hardy perennial found from Canada to Georgia and as far West as Iowa. It prefers sunny, open meadows or roadsides and is tolerant of many soils if they are not too dry. Some species are grown in wildflower gardens for their attractive flowers and sweet scent. Species attractive to honey bees can be propagated by seed or by roots but should not be planted near hayfields. Milkweeds bloom in summer, from July to September and are orange, pink or white, species depending. The seed pod is easily recognized, for when it bursts open in the fall, the flat brown seeds are borne by the wind on silky hair umbrellas.

The flower has an unusual pinch-trap mechanism. The pollen is carried on a V-shaped clip called a 'pollinia' in

which foraging bees get their feet entangled. Some bee deaths have been reported, but these are not significant. One result of this, however, is the questionable use of these pollinia as a pollen source. Most references state that bees discard these structures and the pollen is not collected.

The honey, however, is excellent; white with a yellow tinge, it has a characteristic quince-like tangy flavor and granulates only after several years.§

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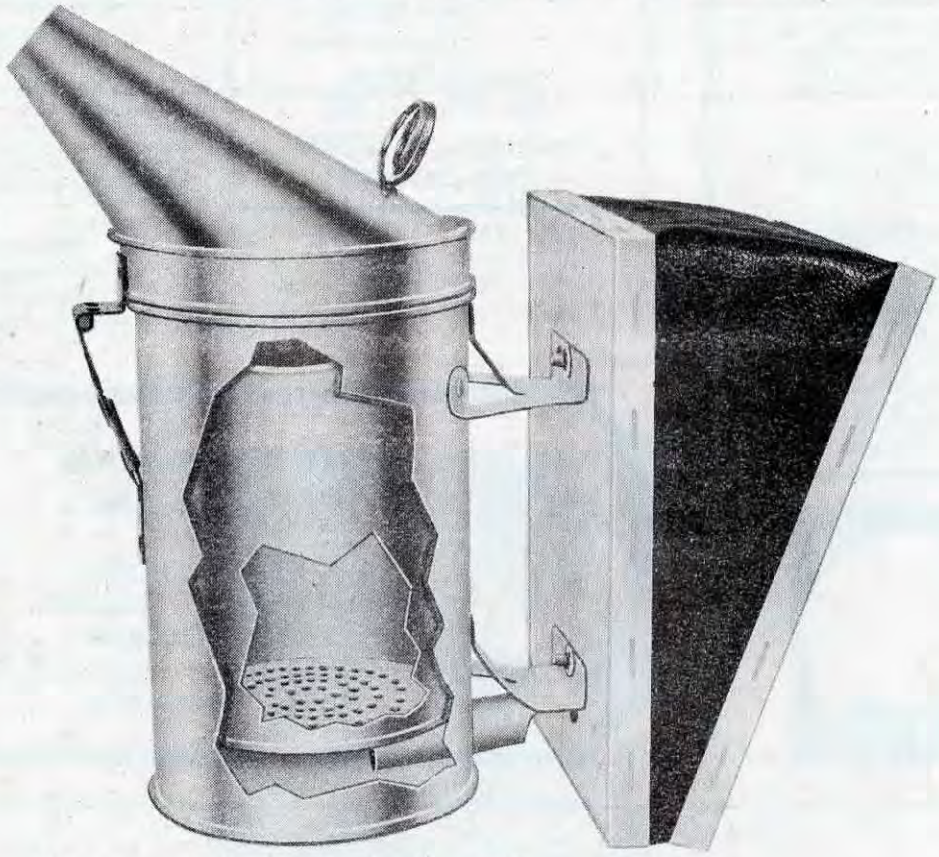

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THE PRICES HAVE CHANGED A BIT, BUT NOT THE ROOT QUALITY

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Handling Customer Complaints !!!

By STUART COVINGTON • 761 N. E. 180 Street
North Miami Beach, FL 33162

Every business has its share of customers, rightly or wrongly, who complain. In some circles they're dubbed as the "headache" customers.

More customarily, they're referred to as grouches. These individuals bombard the business owner with petty complaints. Their complaints range and run the gamit from inferior merchandise to surely personnel to too-slow delivery service. Frequently their complaints lack any merit whatsoever, or stem from flimsy or imaginary reasons.

Often the dissatisfaction of the complainant costs the merchant profitable accounts in the ill-will they spread to relatives, friends or business associates.

More than ever, today's business owner regards each customer as a precious commodity — an asset that he can ill-afford to lose.

No sure cure is available for these cantankerous customers. But comon sense and logic, blended with diplomacy and tact, are usually successful in converting chronic grouches to satisfied customers.

The following are suggested remedies which if followed, can prove beneficial when dealing with customers who have gained unenviable reputations as "headache customers".

1. Keep your cool. There are some individuals who actually derive pleasure from harassing a merchant. Despite this, they should not be verbally abused. EVEN if the customer's remarks cause you to become emotionally bothered.

If you're overworked and plagued by anxiety or outrage you'll find yourself a poor match for a displeased customer. Handled with "cool", you'll find that most likely he'll fumble his way through responses and perhaps even bypass an opportunity for a reasonable rebuttal. In fact, he is likely to err in his analysis of a complaint.

2. Urge the miffed customer to air his full complaint. Many customers will reveal only portions of their grievances. They may feel that you'll be inattentive to a lengthy complaint, or you'll be too pressed for time to really listen to them. Try to dispel these thoughts for unless you can accurately determine the dimensions of the complaint, you're not going to be able to really come up with a solution. Showing your concern with a complaint will impress a customer favorably and the full information you've gathered will aid you in understanding and resolving the complaint.

3. Don't abruptly terminate your customer's complaint. A customer may become abusive and unreasonable, but this is because he honestly believes he is right and has a need to display his feelings. He is likely to resent any interruption from you, even though you offer a valid reason for ending the discussion. To your loss, he may voice that resentment at a later date. Should you be obliged to leave unexpectedly, tender your apologies for the break and assure the customer that you'll get back to him as promptly as possible.

4. Never make light of a complaint. Customers with complaints are rarely receptive to humor. They're often convinced that you intend to "rip them off". A jest or carefree manner, no matter how bland, could ignite an outburst of anger. The only appropriate time for jollity on such occasions is after the complaint has been fully resolved to the customer's satisfaction.

5. Ask the customer for suggestions to upgrade your service. Such strategy places the customer on the defensive and gives him a feeling of importance. Plain and simple, you'll be seeking an answer to the problems which he has raised. In fact, you're indicating that you respect his judgment and may adopt his plans. More important, the customer is receiving assurance that you are genuinely interested in his complaint and you're not just going to listen and then ignore it.

6. Avoid assuming the defensive. Frequently the customer will relish such a reaction. Be tactful, be polite so that you don't have to assume a defensive attitude which might be taken for indifference. Thus you won't forfeit command of the situation. Yet, you're offering the complainant an opportunity to renew his criticism of your business.

7. Assume all complaints have some validity. Complaints aren't always voiced by "soreheads" or unreasonable individuals. Perhaps the customer has registered a "crank" complaint in the past. This is no reason to assume that there is no basis for his latest complaint.

For instance; A customer may have detected an obscure flaw in one of your more popular items. Sales of other items in the identical lot could produce additional complaints and possible loss of valued patronage. Taking note of his complaint can avoid problems in the future and your listening might very well yield dividends.

8. Don't be evasive and try a cover up. The customer will most likely be impressed by your forthrightness and this will lessen his indignation. He'll at least depart with a more favorable opinion of your establishment.

Keeping complaints under control can often be the key to a more successful business. Proper relations with a protesting customer stands hand in hand with the priority of sound merchandising practices, good employee relations and astute sales promotion. Adequate attention to this phase of your business can yield dividends through improved sales, keeping present customers and gaining new ones.§

NEW PRODUCT

A new Uncapping Plane is announced by Maxant Industries.

This electrically heated, hand-held plane has a replaceable heating element. Features are: an adjustable blade for depth of cut, a large comfortable handle that is much easier on the wrist, and a safer uncapping tool.

The blade can be kept sharp without removal.

For more details and pricing data, write Maxant Industries, Inc., P.O. Box 454, Ayer, Massachusetts 01432.

National Honey Board Chooses Manager

At the December meeting several landmark decisions were made by the National Honey Board.

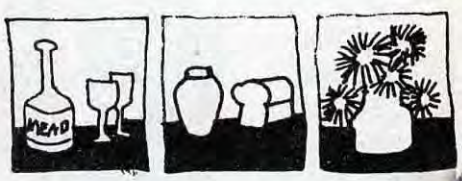
First, after sifting through over 250 applications, 6 people were chosen to interview for the job of Manager. From these, Mr. Dan Hall, Langmont Co. (near Denver) was chosen to lead the industries first self-help program.

Mr. Hall has been working as a marketing consultant for the past several months, and was the Executive Director of the National Potato Council. He brings a wealth of marketing experience to his present position and the challenges he faces in his new job will certainly put him to the test. We wish you all the best, Mr. Hall.

Next, the office site for the National Board was chosen. After several suggestions, the greater Denver area was selected as the best site possible, all things considered. The advantages of this choice are many. Mr. Hall is immediately on 'home turf', which facilitates finding office space and hiring staff. Denver was chosen on a one year interim basis, and will be re-evaluated next December.

Another program was discussed, debated and decided on at the meeting. The National Honey Board Data Network was put in place.

This network has key persons in EVERY state and Washington, D.C. Their job is to find, in their area, every honey handler who will be responsible for collecting assessments. These names will be forewarded to a central data base clearing house so that they can be informed of all the rules and regulations of the act. Education and communication — the two best tools the industry has to make this program a success.§



The Cheapest Hive?

By PIOTR JURGA
Poland

Yes, I suppose it is. You might have seen skeps and straw - wooden - framed hives many times before but I do not expect you have seen the hive in the photo above.

There is a deep floor board with a feeder and pollen trap installed (two plastic queen excluders put crosswise work here as a pollen trap). The deep floor board is very convenient in view of varroa treatment.

Please notice that supers are made of nothing but straw and plastic string; *no wood but very strong!!!*

Each super contains 10 frames 360 x 230mm which are hung normally. It's alright when you keep bees that do not propolize much. A metal nine-frame spacer would work perfectly here, I suppose.

A hand-powered press of about 15 tons is used for making those straw supers. My fellow intends to build an electric motor in the press just to make the job easier. At present he needs something around 25 minutes to make a complete super; ". . . if this was an electric-powered press, 15-20 minutes per super would be enough", he says.

My friend has been keeping a few of these hives for 5 years but they are still in a very good condition and, what is more, bees just love them; winter loss is lower and spring development is faster by 10-14 days when compared to those in wooden hives.§

Wax Extractor

By PIOTR JURGA
Poland

Wax costs 3-4 times more than honey in Poland. The reason for such a high price is the anti-importing politics conducted in this country and, on the other hand, the fact that wax is still a very important product for many branches of our industry. Taking the advantage of, relatively speaking, the high price, a number of beekeepers try to intensify wax production as well as improve methods of extraction from comb. Varroa disease is of some importance here, too, because it is very often that drone brood combs have to be processed just to kill varroa females occupying them, as much as 15 times more frequently than worker brood. This is why some types of wax melters proved to be less useful, while others are quite convenient for the job. To keep up with the demand for such an extractor, I have constructed the machine which, in addition, can serve as a wax-clarifier, water heater for making syrup and honey melter (decrystalizer). (Fig. 1)

Figure 1.

This is how it works. When drone brood combs are processed I do not power the press; larvae fall down while wax comes up and may be poured off into a pail.

When melting honey clarifying wax or warming water for syrup a thermoregulator should be employed. It keeps a steady temperature perfectly. (Fig. 2) An electric heater is placed under the bottom.

A sack with crumbled combs is put on the bottom, water is poured into extractor and the heater is switched on. Water should have been boiling for 20-30 minutes before (Fig. 3) a plunger is powered (in my machine a manual car jack was used). When all wax is extracted and poured off the sack is removed with a hook and another batch can be processed. Water, if dirty, should be changed (rain water is the best but tap water with a little vinegar may be used, too). My wax extractor is made of aluminum and galvanized steel; stainless steel would be better, however.

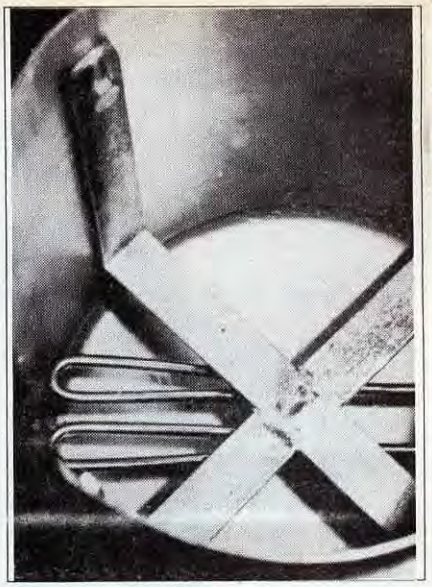


Figure 2.

Before extraction, combs should be soaked in rain water for 2-3 days to wash comb pigments away; water should be changed 3-4 times. In the meantime water joins protein cocoons so that more wax in the comb becomes free to be extracted. In practice, I put by bags with combs only into a stream for 2 days. It is imperative, however, that well water was not used for either soaking or extraction because salts in the water join acids in wax that will cause it to emulsify. Vinegar precipitates those salts and should be added when tap water is used in the proportion of about 1000:1 vinegar:water.§

Figure 3.

WASHINGTON SCENE:

By GLENN GIBSON
Minco, Oklahoma 73059

"It's almost a certainty Congress will change the farm bill and this means that the newcomers in the Senate need to be advised about our problems with markets and what we are doing about it."

The new year brings us our 100th Congress and many questions about how it will cope with the country's great problems. Everything seems to need attention and problems seem to breed like rabbits. Whatever might develop in 1987 I hope Congress does not choose the continuing resolution route as it did during the closing hours of the 99th Congress. If a continuing resolution becomes the regular way of funding the government, then I would recommend that Congress convene for a 4 week period at the end of each fiscal year. This would eliminate the need for committees and reduce the cost of government.

I have no reliable crystal ball about the attitude of the new Congress toward our small honey loan program. Conversations with legislative assistants tell us that things will change for the better for agriculture. A trade bill will be pushed and the new chairman of the Senate Committee on Agriculture, Patrick Leahy, has stated that he will hold hearings on the farm question as quickly as possible. Since we have received a great deal of attention in the past, I would guess that we will be included in any changes.

Our opponents in Congress came close to killing our program last year. The Conte-Quayle-Brown faction will probably continue its opposition. The Media Elite, which includes the major dailies and television stations, will probably continue the negative reporting. Our defense against the possibility of termination is beekeeper letters to member of Congress. Letter-writing saved our bacon these last 2 years — now is the time to make contact with that new member or renew your contact with old members.

•

Convention time nears and soon a number of our members will convene in Corpus Christi and shape up our program for 1987. After finalizing the convention program each year, I have an uneasy feeling that we are overlooking some important points. Vice President Richard Adee voiced concern about the effectiveness of our national conventions in a letter to a number of beekeepers last spring:

"In a number of ways our state and national conventions are not truly successful. I have a feeling that we spend too much time on the details of our problems such as mites, Africanized bees, price supports, etc. Everybody agrees that mites (varroa and tracheal), Africanized bees, imports, and low consumption of honey are all real problems. However, we spend too much time talking about the problems and not enough on how the problem can be solved. Resolutions — are certainly in order, but the 'how to get them implemented' is missing."

We have attempted to design the convention to cover the "how to".

•

LOOKING TO 1987

If we do what we should in Washington, it will be a busy year. It is almost a certainty Congress will change the farm bill and this means that the newcomers in the Senate need to be advised about our problems with markets and what we are doing about it. Also, our old contacts need to be updated from time to time or they will forget us.

Africanized bees will receive a great deal of attention this year, not only from the government and industry but the News Media as well. (News stories will be sensational.) It is doubtful that one would be able to get a consensus of industry thinking on the seriousness of an invasion of Africanized bees. Confusion abounds among scientists and beekeepers. The proposed $8 million bee barrier has raised a number of questions. Why wait until now to unveil the plan and does the Animal Plant and Health Inspection Service (APHIS), USDA expect the industry to lobby for the funds? If so, I feel it would be reasonable to have our questions answered before commencing any work in the halls of Congress.

On two occasions Senator Charles Mathias tried to get additional funds for Africanized bee research -- $500,000 in 1985 and $1,000,000 in 1986. Both items were approved by the Senate but failed to survive the Conference Committees. Apparently the bee barrier plan has been in the mill for a year or two. Senator Mathias explains his position in a letter:

"My amendment would have set aside $1 million to be used by the U.S. Animal and Plant Health Inspection Service to establish a biological barrier in the Mexican isthmus of Tehuantepec. The barrier would be made up of a package of devices designed to attract, capture, and kill Africanized bees entering the isthmus.

"I had offered my amendment based on inquiries by my staff with APHIS scientists who developed the barrier idea and with members of the American honey bee industry who attended an APHIS meeting held to discuss the idea and solicit industry reaction. I understand that industry representatives at the meeting were uniformly enthusiastic about the prospect of establishing a barrier, and I have been assured by APHIS scientists working on the plan that such a barrier very likely would be effective".

It is obvious that the Senator was misinformed. I have learned that some industry members at the APHIS meeting were not enthusiastic

Continued on Next Page

GIBSON... Cont from Page 49

about the plan. Hopefully, APHIS will fully explain the barrier and their plan to "eradicate" the bee when it arrives in the states.

If the APHIS plan of action includes depopulating hives and quarantining apiaries that are supposedly Africanized, I feel that we should be indemnified and the serious discussion of funding an indemnity program should begin **NOW.**

YOUR HELP, PLEASE

And this means we hope you will write your congressman and keep him up to date. Also, please make plans to attend our convention at the Sheraton-Marina Hotel, Corpus Christi, Texas -- January 13-17, 1987. We need your support.§

KOOVER'S KORNER

By CHARLES KOOVER
1434 Punahou St. #709
Honolulu, Hawaii 96822

"Fortunately, the public does not read beekeeping magazines or the sale of honey would suffer."

If we are going to put up a fight to prevent our country from being flooded with honey of unknown purity we should set an example to all the honey producing countries of the world. To wit, *that no bees shall be kept that do not have a queen excluder above the broodnest; furthermore, that no honey shall be extracted from combs that have contained brood.*

I am sticking my neck out. Go ahead and whack at it and I will fight back. W. Herrod-Hempsall in his *Bee-Keeper's Guide* wrote, "Honey extracted from combs that have contained brood, used in the movable comb hive system, is UNCLEAN. Indeed, to offer such honey for consumption by human beings is on a par with being invited to eat jam stored in a used chamber utensil, any demur on the part of the individual tempted being met with the bland assurance that the jam is alright because the utensil has been well washed."

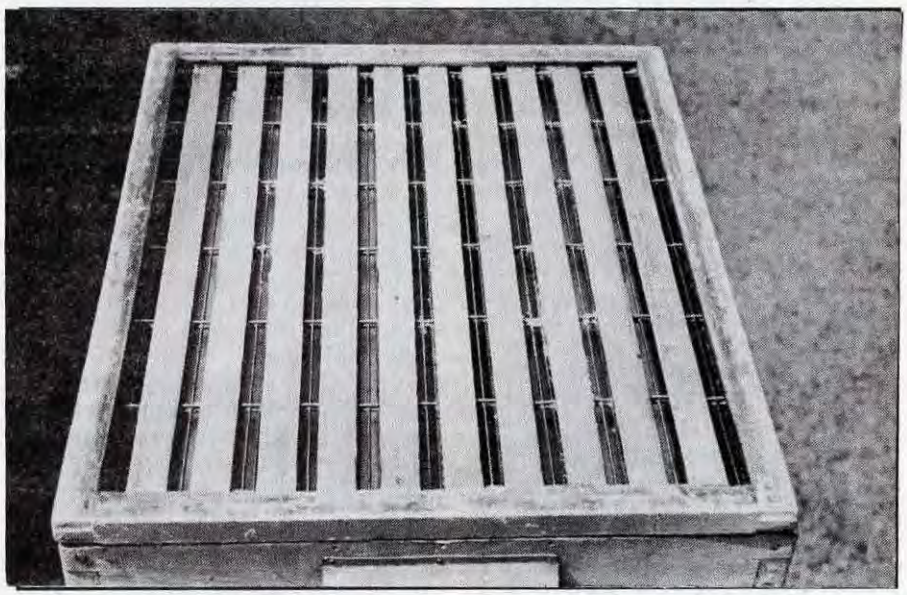
I can hear an uproar getting started that will last all of 1987. It should. We have allowed honey being produced and sold as table honey, that, although filtered, is not fit for human consumption. No matter what you say, you can't filter out some kinds of dirt.

"Let Sleeping Dogs Lie" is a popular slogan; but not where food is involved. I am not going to be specific as to the intolerable practices tolerated in the beekeeping industry. Fortunately the public does not read beekeeping magazines or the sale of honey would suffer. So, first of all let's get our house in order. You can't complain unless from now on you have a queen excluder over every broodnest in every hive you own. Do we have to wait until the Health Authorities make it mandatory? Next to Holland, where I came from, America is the cleanest country in the world. We as beekeepers have a reputation to uphold.

As for what queen excluder to buy? In my opinion the only worthwhile excluder is the one that does everything a queen excluder should do and that is the one manufactured by the company that publishes *GLEANINGS* — for this reason.

It allows no beespace on the side next to the broodnest. If it did bees would build burr comb in this double bee-space, which would interfere with the ventilation of the hive. That's why bees hang out when it gets too hot inside.

Next. There are 2 kinds of queen excluders — framed and unframed. Don't buy the unframed kind. Their spacing on the top side is incorrect, for it allows the bottom bars of the frames in the super above the broodnest to rest on the wires of the queen excluder. This means that every wire is propolized to the bottom bars above and when you want to take the super above off, you will rip off the bottom bars from the frames. The picture tells the story. Yes, I too had to learn my lesson.



I find no fault with the spacing between the wires with most other queen excluders. No laying queen is fighting every bee space between the wires to get up above to lay eggs in the supers. Her extended abdomen will not let her through even if the spacing is not 100% correct. A newly hatched virgin may slip through if she is a pygmy, on her way out to mate. Was it Dr. Miller who said that it happened to him only once in all the years he kept bees?

If you strictly adhere to what I am telling you, drones won't be getting into your surplus supers either. Drones are filthy. You know what they do, or rather not do. They won't go out to relieve themselves, especially when it is too cold to suit them. You can't strain that out of your extracted honey.

We beekeepers should produce

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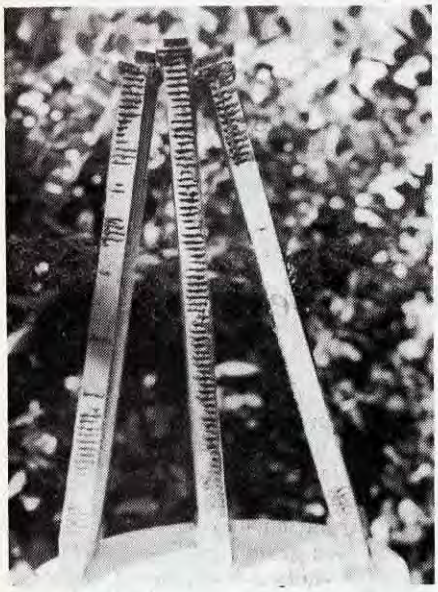
KOOVER... Cont. from Page 51

honey we are proud to serve to our children. If you do that you are my man. And finally, on every jar you



bottle stick an extra label proudly announcing that your honey is 100% American pure honey. That will fix the foreign competition.

And one more thought. Write a postcard to your Congressman. Let them know, in your own handwriting, that the importers of cheap foreign honey are starving you out and soon you can't vote for them anymore. That hits them between the eyes. Good luck and don't give up.§

Position Created To Study Import Competition

The North East Association of State Departments of Agriculture (NEASDA) recently hired a full-time consultant to analyze those agricultural industries affected by foreign imports and to develop strategies to compete with imports.

Joel Wollner, a food industry marketer from New York, was appointed to work for the Import Competition Project for one year under a Federal State Marketing Improvement Program (FSMIP) grant.

Engineers Study Tell-Tale BUZZ!!

OAKRIDGE — Oak Ridge National Laboratory engineers have developed instruments to detect Africanized bees by the noise they make, and officials will travel to Venezuela in January to field-test the portable unit.

The invention could play an important role in controlling the hostile African bees, which have migrated through Central and South America for the past decade and are expected to reach the United States before 1990.

Howard Kerr, a group leader in ORNL's Engineering Technology Division, said he could not discuss details of the bee-tracking equipment because a patent application is still pending.

His instruments, however, are based on noise-detection technologies developed at the Department of Energy lab over the past 20 years for assessing problems in nuclear reactors and, more recently, for measuring underwater sounds of Navy submarines.

"There is a technique we think is available for identifying these Africanized bees," said Kerr, himself an avid beekeeper who maintains about 120 colonies at his Blount County home. "We have assembled some laboratory hardware to show it can work, and , if it is valid, then a commercial unit could be built in a matter of hours."

The African honey bees, slightly smaller and darker than the European strain dominant in the United States, are extremely aggressive and have been responsible for the deaths of farm animals in South America.

Almost everywhere the bees have settled, the African drones have mated with the European queen bees until the host bees are "hybridized" out of existence. The hybrids then take on the same aggressive traits of the purebred African bees.

Many South American beekeepers have destroyed their bee colonies rather than deal with the consequences.

The January tests in Venezuela will be conducted by Kerr and another Oak Ridge engineer under the supervision of the U.S. Department of Agriculture. Colonies of European and African bees will be tested, and the toughest part will be assessing the sounds of hybrid bees, Kerr said.

While detection equipment developed in Oak Ridge will not stop the Afri-can bees from entering the United Sates, it could provide quick identification and allow officials to take steps toward controlling the hostile insects, Kerr said.

Kerr said his objective is to develop the prototype for a simple device that can be made available commercially for less than $100 and be widely distributed to beekeepers, farmers and other interested parties.

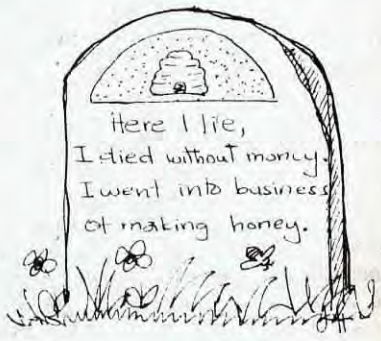
An uncontrolled African bee population could have a devastating effect on U.S. agriculture, Kerr said. Farmers depend on honey bees for pollination of many crops — ranging from apples and watermelons to beans and almonds, he said.

There currently are about 500 million bee colonies — housing between 30,000 and 80,000 bees each — in the United States, Kerr said.

If deaths or injuries to humans are caused by the infiltration of Africanized bees, the public outcry could spell an end to commercial beekeeping in the United States, Kerr said. Such a move would force farmers to find other means of pollinating their crops, he said, with a warning:

"If you think agriculture is expensive now . . .".

Reprinted from the News Sentinel, Knoxville, TN, Nov. 20, 1986.



STARTING RIGHT WITH BEES

By STEVE TABER

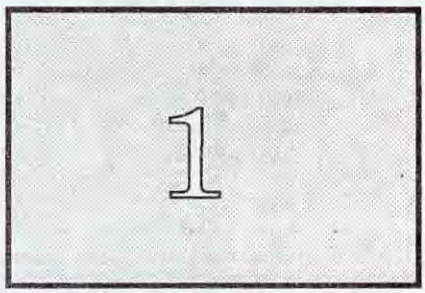
"The Study and Keeping of Bees"

It's almost impossible to keep bees without studying them, but not everyone wants to keep bees. Some like to just study them. The purpose of this article is to give literature references for study and thought and some source material for acquiring bees and paraphernalia necessary for their keeping. Modern scientific information is constantly providing more insight as to why bees and other social insects behave as they do, as well as explaining some of the earliest observations made of bees.

There are four different species of bees: all are native to Asia and only one to Europe, *Apis mellifera*, the same one we are familiar with in North America. The *mellifera* bee was brought to America by our forefathers hundreds of years ago and kept in straw hives (skeps) or hollow logs (gums). Combs built by the bees were fixed in place in all the early hives and it was only about 130 years ago that L. L. Langstroth, an American, developed and patented the first truly movable comb hive by having the bees build the comb inside a wooden frame. Today thousands and thousands of man-made hives are stocked with bees that are patterned after the bee hive built by Langstroth.

Bees are subject to many diseases, pests and parasites and some of these make headlines in various news media from time to time. Most of these diseases are not a problem to amateur beekeepers. The worst problem by far that bees face from beginning beekeepers is neglect, starvation and mistreatment. Bees can and do maintain themselves in the wild, but many also fail to survive severe Northern U.S. winters. A newly-hived swarm, or purchased package of bees with queen, should be hived in a Langstroth-type hive away from public view, since most people are fearful of bees in general. Newly-acquired bees should be fed between 20 to 40 pounds of sugar, in syrup form, over several weeks. Also, the county agricultural advisor should be contacted to aid in locating any local beekeeper organizations that could provide information and assistance.

Mistreatment of bees by beginning beekeepers is common; most prevalent is spraying the bee hive and surroundings with an insecticide to kill invading ants, roaches and moths. It is easy to forget that bees themselves are insects and could be killed in the process. Perhaps the next worse thing that beginners do to their bees is to keep them in just one box (termed a brood chamber or super) and to remove most of their stored honey as soon as they can, causing starvation for the bees.



Beekeepers and their neighbors are frequently home gardeners. Keeping bees at your home for your own interest or hobby is good for you and the whole neighborhood.

Think about pollination in your home garden: Have you ever noticed that the top of the first strawberry from the crown of the plant has a woody, tasteless texture? It's because the stigmas in the flower did not receive pollen. The fruit of the first blossom is called the primary berry and is usually the largest, averaging 380 seeds. The second flower produces a smaller berry with an average of 220 seeds and succeeding flowers produce smaller fruits with smaller numbers of seeds. And are the melons you grow lop-sided? How many seeds do they contain? Do you realize that each seed is the result of one pollen grain and that it takes 12 or more visits to one female flower by bees bearing pollen on their bodies to properly pollinate that flower? Some day, count the seeds in your cantaloupe melons; if there are 400 or less, it was improperly or incompletely pollinated. If it contains 550 or more seeds. it is not only sweeter but it will look better (rounder).

Some plant species have to be cross-pollinated with a pollinator variety. These include apples and almonds among the most popular for the home garden. If you are growing, or planning to grow this type of fruit, be sure to find out whether or not you also have to plant a pollinizer tree to make it bear. And then there are some plants, such as the newly-popular kiwi, that produces only male flowers on one plant and female flowers on another. If that is the case, you will get much better pollination and nicer fruit if you plant twice as many male bearing plants as female.

It has always been fascinating to me to watch bees work in gardens. They will almost always stay with one flower type on any one observed trip, thereby making cross-pollination possible. But don't be surprised if you see a bee visit flowering broccoli, kale, cauliflower, cabbage and Brussels sprouts on the same trip because they are all the same plant species, *Brassica oleracea*. It will be rare to see a bee visit a radish and clover (different species) on the same trip. Watch some bees pack pollen on their hind legs in the "pollen basket" while other can be observed collecting nectar.

Bees are erroneously termed

Continued on Next Page

Answers to Testing Your Beekeeping Knowledge

1. True Ethylene oxide gas (ETO) is a low temperature sterilizing gas that is used in some states to fumigate diseased beekeeping equipment. Specialized fumigation chambers are required to control temperature, pressure and humidity. Proper mixtures of ethylene oxide and carbon dioxide are effective in killing the pathogens that cause chalkbrood, American foulbrood, European foulbrood and nosema.
2. False Spores are produced by the pathogens that cause American foulbrood, nosema and chalkbrood but not sacbrood.
3. True American foulbrood spores are very resistant to heat, chemical disinfectants and desiccation. Once combs become contaminated with spores and scales, the best control technique is burning.
4. False Terramycin (oxytetracycline HCL) is the only drug approved for use as a preventive treatment against American and European foulbrood. No antibiotic is effective in preventing or controlling sacbrood.
5. True European foulbrood generally kills larvae 4-5 days old while they are still coiled in the bottom of the cells.
6. False Powdery scale disease is caused by the spore-forming bacterium, *Bacillus pulvifaciens*.
7. False Eggs of the bee louse, *Braula coeca*, are laid on the inner side of the cappings, and sometimes the walls, of cells full of honey.
8. True American foulbrood is the most widespread and destructive of the brood diseases, afflicting queen, drone and worker larvae.
9. False Unlike the honey bee tracheal mite, *Acarapis dorsalis* and *Acarapis externus* are external parasites of adult honey bees.
10. False Apiary inspection in the United States is under the jurisdiction of State Departments of Agriculture and their primary function is the detection and control of American foulbrood.
11. True Several studies have shown that terramycin is relatively unstable in honey and syrup solutions, therefore, it is normally mixed with powdered sugar and dusted over the tops of brood combs.
12. E) European foulbrood
13. A) Fly
14. D) Ventriculus or mid-gut
15. C) American foulbrood
16. *Bacillus larvae* occurs in two forms: vegetative (rod-shaped bacterial cells) and spores. Only the spore stage is infectious to honey bees.
17. Fumagillin treatments are normally recommended for newly installed packages in the spring since package bees are very susceptible to nosema and often results in queenlessness.

There were a possible 20 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
20 - 18 Excellent
17 - 15 Good
14 - 12 Fair

Games Gallery Answers . . .

1. C	10. F
2. I	11. M
3. D	12. K
4. H	13. N
5. G	14. P
6. L	15. J
7. B	16. O
8. A	
9. E	

STARTING . . . Cont. from Page 43

"social" insects when actually they are extremely anti-social. The so-called social behavior, making bees cooperate with one another for collection and storage of food and for defense of the hive, is usually caused by chemicals called pheromones. The pheromones actually instruct or force the bee to do what it does. The bee has no choice. Other behavioral mechanisms, notably the bees' propensity to sting, are governed by certain genetic factors, termed genes, that also regulate exactly what the bee will or will not do. There is no one book that will tell you all you want to know about bees and reading all the books referenced here will not make you a bee expert; however, you may enjoy reading them.§

• **For General Information:**

The Insect Societies, by E. O. Wilson, 548 pages, 1976, Belknap Press, Cambridge, Mass.

The Social Behavior of the Bees, a comparative study, by C. D. Michener, 404 pages, 1974. Belknap Press, Cambridge, Mass.

• **Pollination Information:**

Floral Biology, by Mary S. Percival, 243 pages, 1969, Pergamon Press, N.Y.

The Effects of Cross and Self-Fertilization in the Vegetable Kingdom, by Charles Darwin, 482 pages, 1889, Appleton, N.Y.

Insect Pollination of Cultivated Crop Plants, by S. E. McGregor, 411 pages, 1976, USDA Handbook No. 496.

• **Bee Communication:**

The Dance Language and Orientation of Bees, by Karl von Frisch. 566 pages, 1967, Belknap Press, Cambridge, Mass.

Communication Among Social Bees, by M. Lindauer, 161 pages, 1971, Harvard University Press, Cambridge, Mass.

• **General Information About Bees:**

ABC and XYZ of Bee Culture, published by A. I. Root Co., Medina, Ohio.

The Hive and Honey Bee, by 27 authors edited by Dadant and Sons. 740 pages, 1975, Dadant and Sons, Hamilton, Ill.

Social Insects, Chapter 3 Honey Bees by A. Dietz, page 323-360, 1982, Academic Press.

• **Bee Magazines:**

Published monthly. Sample copies furnished free by publishers.

American Bee Journal, Hamilton, Ill. 62341.

Gleanings in Bee Culture, P.O. Box 706, Medina, Ohio 44258.

INNER COVER . . . Cont. from Page 3
colonies registered with his office. That way, your neighbor over the hill would've notified you before he sprayed his sweet corn and you could have taken some preventative steps to avoid all this," Lance said as he pointed to the millions of dead bees.

Well, to say Merle was repentant and swore never to sin again would be a bit of an overstatement, but he did offer to help Lance with his truck and promised to get *all* his colonies registered. This was one lesson he had learned.

As Lance was returning to the office, an urgent call came over his CB. Another beekeeper in trouble — this time with bears. Lance checked his rifle and ammo and turned his truck to another adventure.

Stay tuned for the next episode of Lance Ashemore — Apiary Inspector in "The Bear Facts".

•

I don't celebrate New Years Eve anymore. It's not that I'm anti-social or anything like that. It's just that December 31 doesn't signal the end of anything important, just as January 1 doesn't usher in much of anything new. That is unless you consider getting the date correct on your checks or on the cover of this magazine. I suppose the tax year must be taken into account here too, but the government will get you no matter what the date.

Having been involved, in one form or another, with the Agriculture Industry for so long, I guess my biorythms focus more on growing seasons than calendars. Although each day isn't strongly regulated by the rising and setting of the sun, the seasons play a dominant role in my year.

I have no argument with the folks who put together the Julian Calendar, but personally, I'm inclined to follow the many cultures who consider spring as the beginning of the year. After that it's all down hill, bottoming out about the end of January.

The frenzy of spring, the joys of summer and the quiet beauty of autumn certainly possess their own time frames and passage from one to the next is easily marked. For me though, passing from fall to winter is less well-defined until snow and ice enter the scene. But this too is a time frame that can be captured and enjoyed by some, and endured by the rest of us.

Maybe you can understand how I feel. The middle of winter is just that — the middle. It's not the end of one thing and the beginning of something new, but rather an arbitrary date selected by, I'll bet, a committee. The choice of January 1 as the beginning of a new year must have been a compromise. Sort of like the platypus or camel.

But for those of you who do follow the calendar year there is an advantage. From now on it can only get better.

•

Regardless of my seasonal attitude toward a New Year, many things do "begin anew" at this time. I'd like to mention a few as food for thought.

• The honey check-off program begins now, something that certainly deserves some positive attention.

• Many catalogs come out at this time; Bee Supply companies included. I hope to see some new prducts this year. Something innovative, something that will make me sit up and really take notice. SOME progress must have been made in the last 12 months.

• *Bee Culture* has a somewhat new look starting now. Although many changes have taken place in the last few months, the size has increased and with it a lot more *reading* material.

• The National meetings happen soon. Certainly worth attending, and learning from.

• Finally, we all get another chance to prove that we are, really, good beekeepers. Beekeeping has always been a 'perpetual series of occasions for hope', and another occasion begins soon.

Happy New Year!

FOR THE RECORD . . .

Gleanings continually seeks accuracy in our publication. We recognize that errors do occur and use this space to correct them when discovered by staff or readers. Mistakes may occur in writing, editing or mechanical reproduction of the magazine. It is our policy to correct these mistakes. We encourage questions or comments from readers. Call (216) 725-6677 during business hours or write us at the address on the contents page of this magazine.

Yes, the cover on the December issue was, technically, up-side-down. Take a close look. Honey on the bottom, queen laying on the top. But artistically speaking, the dynamics of the photo flows from top to bottom, left to right. Artistic license occasionally takes precedence over reality.

Who's Who Update

Shortly, we will be sending out the update forms for our 1987 Who's Who In Apiculture Directory. The Secretary of the the State or Provincial Association listed in the 1986 Directory will be our contact person. We will be looking for the following information: Secretaries Name, Address and Phone Number; Newsletter Status; Professor of Apiculture in the State or Province; Beekeeping Extension Specialist; State or Provincial Apiarist (inspector); Bees on Combs Admitted (certificate or permit required); and is colony or apiary registration required.

This directory has proven to be one of the most beneficial methods of rapid, continental communication our industry has ever developed. Needless to say, your cooperation is of utmost importance. We do not like to publish erroneous data — we need THE MOST CURRENT INFORMATION AVAILABLE FROM YOUR GROUP. If you are not responsible for returning your form, please check with the Secretary responsible to make sure we receive the form in a correct and timely manner. Thank you.

Farm Prices Fluctuate

The September All Farm Products Index of Prices Received by Farmers, at 122 percent of its January-December 1977 average, decreased 3 points from August. Lower prices for corn, broilers, hogs, potatoes, apples, soybeans, and lemons were partially offset by higher prices for milk cows, lettuce, and peaches. The index was 2 points above a year ago. During September, hog and broiler prices declined from the record high levels reached in August. Prices for corn, soybeans, barley and flaxseed were at the lowest levels since the early seventies.§

Reprinted from the Connecticut Market Bulletin, November, 1986.

What?!, Me Write A News Release?

The term 'Promotion' has been heard a lot recently, and will probably continue to be heard for some time. It's usually used in the context of selling honey, or at least some commodity produced in the hive. Occasionally, it will be used in a broader sense; that is, conveying a positive image for beekeeping and beekeepers to people not yet familiar with those of us in the trade.

For now, lets leave the selling of products to the experts in marketing, and look at the broader meaning of the term — selling beekeeping and beekeepers.

An individual can do much to accomplish this and in many cases has made giant strides in educating the rest of the world about us. But usually a group works better, if for no other reason than to spread out the work load. So let's take a closer look at a group.

First, you have to have members. As with any group there is attrition, or loss of members, so new people must be recruited. You can knock on doors, send mailings to known beekeepers in an area and so fourth to accomplish this. Again, this relies on a great deal of *individual* effort. This can be quite effective, but limited in scope because you're not reaching the people you don't know about.

So, you put a meeting notice in a local paper or magazine. This reaches a lot of people you don't know who keep bees, and may attract some who want to start but don't know where to get information.

A news release is easy to write, and if done effectively, will attract some attention. What does it contain? ALWAYS — WHO, WHAT, WHERE, WHEN, WHY AND WHO AGAIN. For instance:

WHO: The Tri-County Beekeepers Association.

WHAT: Will have their Fall meeting.

WHERE: Merrimack Hotel, Frontier Room.

WHEN: Sat., Nov. 15, 1987, 8 a.m. - 2:30 p.m.

WHY: To listen to Mr. Jim Jones talk about how to winter bees.

WHO: Contact person, Mike Smith, 555-0000.

If this basic information is used, here is what it will probably look like in your paper:

BEEKEEPERS MEET

The Tri-County Beekeepers Association will hold their fall meeting in the Frontier room of the Merrimack Hotel, 123 Main Street, Wooster, Ohio on Saturday, November 15, 1987 from 8:30 a.m. until 2:30 p.m. The speaker will be Mr. Jim Jones, who will discuss 'How To Winter Bees'. For more information contact Mike Smith, president, at 555-000.

This notice covers all the bases, and is about as flat as paint on a wall. You may attract the attention of someone wanting to get started, but probably not, and you probably won't gain much attention from the newspaper staff either. They'll put it on page 19, right next to a drug store ad and be done with it. It's not news.

Let me tell you a little secret about newspaper psychology, at least from my experience with dealing with the media. Reporters need contacts. They need to know somebody in almost every field imaginable. That way they don't need to be experts. They get paid to write well, so the more they can find out about a subject from one of their contacts, the better the story is, the better they look. Simple.

Become that contact. Call up the paper and find out who to send your notice to. Always send it to a person, not just the newspaper office. Better yet, deliver it in person if possible. Hand it to *your* contact, face to face. That way they know who you are and what you look like. This will help confirm the fact that beekeepers aren't different, that we don't have 3 arms or whatever other myths the reporter may have.

On to the release. Remember the first one? Try this.

DO BEES SHIVER ALL WINTER?

Find out at the Tri-County Beekeepers meeting on Saturday, November 15, 1987 in the Frontier Room of the Merrimack Hotel in Wooster, Ohio. Jim Jones, long-time beekeeper and past president of the group will tell all about how bees spend the winter, and how beekeepers can lend a hand.

The meeting starts at 8:30 a.m. with a short business session, with Jim scheduled to speak at 9:00 a.m. Lunch is available at the coffee shop or other restaurants are nearby. There is free parking available in the Hotel Parking Lot. Displays by local dealers are ongoing and a honey show will start in the afternoon. For more information on the Tri-County Beekeepers Association or the meeting on the 15th, contact Mike Smith, president, at 555-0000 after 6 p.m. Admission is free and every and any one is welcome to find out if bees really do shiver all winter.

Now *that* will attract some attention. Not only from beekeepers, but teachers, nature lovers and other assorted people with a peripheral interest in insects. It will also make your reporter contact sit up and take notice, and remember ***you*** as an expert on bees and beekeeping. Maybe not the first time or even the second, but the message will come across — you will have an ally in the newspaper camp. An incredibly valuable ally.

•

But what about the rest of us? Those groups who meet on a fairly regular basis with less than exciting programs to offer?

First, when you do have an invited speaker, make it known in an ad similar to the one above:

COOKING WITH HONEY

Learn the trade secrets from an expert at the Medina Co. Beekeepers Meeting, Monday evening, November 24 at 8:00 p.m. at the Legion Hall, 123 Main St., Medina, Ohio. Ms. Dorothy Jones, noted cook and beekeeper will explain all the do's and don'ts with samples and recipe demonstrations. For more information on the Medina Co. Beekeepers Association, or on cooking with honey, contact Bill Williams, president, at 555-1234 after 6:00 p.m. Admission is free and every and any one welcome.

Occasionally, you won't have a speaker, but rather your meeting will be task-oriented; for instance, planning for the upcoming fair or a business meeting with elections. These are not the attention getters, but the nuts and bolts of what keeps a group running. That doesn't mean

Continued on Page 63

News & Events

☆ ARIZONA ☆

The Sixth Annual Arizona Beekeeping Seminar will be held February 7 and 8, 1987. Steve Taber will lead the program discussing Queen Rearing.

Only 30 persons can be accommodated. Fees, $50.00 which includes lunch, must be paid by January 4, 1987.

For additional information contact: Brett E. Cameraon, 6849 West Lewis Avenue, Phoenix, Arizona 85035, (602) 245-1391 or Mike Kuzmik, 1544 West 6th Street, Tempe, Arizona 85281, (602) 968-0969.

☆ CANADA ☆

SASKATCHEWAN
Saskatchewan Beekeepers Association
Annual Meeting and Convention

The Annual Meeting of the Saskatchewan Beekeepers Association will be held February 5, 6 and 7, 1987 at the Sheraton-Cavalier Hotel in Saskatoon. The meeting will focus on the tracheal mite research project which is being conducted in La Ronge, Saskatchewan and on the problems of the approaching Africanized bee in Central America.

Reservations can be made by calling the Sheraton-Cavalier in Saskatoon at (306) 652-6770 and further information regarding the program can be obtained from John Gruszka,Secretary-Treasurer,Saskatchewan Beekeepers Association, Box 3003, Prince Albert, Saskatchewan, S6V 6G1, (306) 953-2790.

☆ GEORGIA ☆

A beekeeping short course will be held at Clayton State College, Morrow Georgia, February 24, 26 and March 3, 5, & 10, 1987. The course is sponsored by the Clayton County Extension Service and the Tara Beekeeper's Association of Jonesboro Georgia. All the instructors are members of the Tara association.

The subjects covered in this short course will enable a novice to get started in beekeeping. The courses will help a person who is already into beekeeping improve his/her way of keeping bees.

The class is open to anyone who would like to start keeping bees, anyone who is already a beekeeper, and anyone who is interested in learning more about honey bees.

For more information, contact: Evelyn Williams, 528 Bridge Avenue, Forest Park, GA 30050 (404) 366-6404 or Richard Morris, 174 W. Windemere Way, Jonesboro, GA 30236 (404) 471-3368.

☆ MASSACHUSETTS ☆

The winner of this years Essex Co. Beekeepers Association A.I. Root Award was George Rigby, Salem, MA (R). This prize is awarded to the winner of the Shallow Frame Cut Comb Honey Competition. Congratulations. The award was presented by William Wiley.

☆ MISSISSIPPI ☆

APIARY INSPECTORS OF AMERICA
January, 1987 Conference
Howard Johnson Motor Inn
Biloxi, Mississippi
January 26-29, 1987

Monday, January 26, 1987

7:00 Rekindle Acqaintances Executive Board Meeting

Tuesday, January 27, 1987

9:00 Call to Order, Pat Paswater, AIA President, California; Invocation, Thomas Hart, Sate Apiarist, Tennessee

9:15 Welcome, Harry Fulton, State Apiarist, MS

9:30 Tracheal Mite Project in La Ronge, Saskatchewan, John Gruszka, Provincial Apiarist, Saskatchewan

10:45 Politics of Tracheal Mites, Dr. H. Shiminuki, USDA Beneficial Insects Lab Director, Beltsville, MD

11:30 Honey Bee Tracheal Mite Symposium Report, Richard Hyser, State Apiarist, MN

12:15 Lunch

1:45 Call to Order, Ed Bianco, State Apiarist, Utah

1:45 *Acarapis woodi* Research in Northeastern Mexico, Dr. Frank Eischen, Univ. of GA, Athens, Georgia

2:45 Questions and Answers

3:00 Trip to Beauvoir

5:00 Southern Style Catfish Cookout

Wednesday, January 28, 1987

8:30 Call to Order, John O'Brien, State Apiarist, Nevada

8:40 Mite Research at the Weslaco Lab, Dr. Joe Moffett, USDA, Weslaco, TX

9:40 Tracheal Mites as Seen Through a Package and Queen Shippers Eyes, Harry Fulton, State Apiarist, Mississippi

10:30 Report of AIA Group Visit of USDA Africanized Bee Lab in Acarigua, Venezuela, Barton Smith, Judy Carlson, Pat Powers, Gene Killion, Marion Ellis

11:30 Questions and Answers

12:00 Lunch

1:30 Call to Order, Vernon Harrison, State Apiarist, Oklahoma

1:40 Africanized Bee Barrier Proposal, Dr. Tom Rinderer, USDA, Baton Rouge

3:15 CAPA Report, Pat Paswater, AIA President

3:45 Judging Honey Shows, Gary Ross, State Apiarist, Kansas

4:15 Open Forum, Appropriate Regulation, Tracheal Mites and Africanized Bees, Paul Jackson, Moderator

7:00 Banquet

Thursday, January 29, 1987

8:30 Call to Order, Lawrence Cutts, State Apiarist, FL

8:40 Colony Strength Certif. for Pollination, Pat Paswater,

Continued on Next Page

NEWS/EVENTS... Cont. from Page 58

State Apiarist, Calif.
9:20 The Principles and Practices of South Dakota's Registered Apiary Locations Law, Bob Reiners, State Apiarist, SD
10:15 Problem Products and Materials Used by Beekeepers, Marion Ellis, State Apiarist, NE
10:45 AIA, Looking Back and Ahead, Pat Powers, State Apiarist, Virginia
11:15 State Reports
12:00 Lunch
1:30 Keeping Your Back Healthy, Speaker from Mississippi Medical College
2:30 State Reports
3:30 First Reading of Resolutions
4:00 State Reports

Friday, January 30, 1987
8:30 Call to order, Pat Paswater, AIA President
8:40 Business Meeting

This meeting is open to anyone wishing to attend. Pre-registration information is available from Mr. Harry Fulton, State Apiarist, MS Dept. of Ag., Division of Plant Industry, P.O. Box 5207, MS State, MS 39767.

☆ MISCELLANEOUS ☆

American Honey Producers Association Eighteenth Annual Convention
Sheraton-Marina Hotel
Corpus Christi, Texas

Tuesday, January 13, 1987
9:00 Registration all day, Executive Committee Set up Exhibits
1:30 Board of Directors
5:00 Convention Committee Meetings; Resolutions, Nominations, Audit & Finance
8:00 Get Acquainted Reception

Wednesday, January 14, 1987
8:00 Registration
9:00 Call to Order — Glenn Gibson, President, AHPA,
9:30 President's Address, Glenn Gibson
10:00 Kim Flottum, Editor, Gleanings in Bee Culture, "Our Editorial Policy"
11:00 Joe Graham, Editor, Am. Bee Journal, "Our Editorial Policy"
11:30 Dr. James Tew, Ohio Cooperative Extension Svc., "Our Industry Needs a Federal Extension Program"
1:30 Dr. H. Shimanuki, Bee Lab. Beltsville, MD, "History of Federal Bee Research"
2:00 Dr. Joe Moffett, ARS, Bee Research, Weslaco, TX, "Honey Bee Pollination of Non-Agricultural Plants"
2:00 Jack Meyer, Jr., AHPA Exec. Committee, "Our Bylaws Are Beautiful"
2:30 Dick Kehl, Equip. Mgr., A.I. Root Co., "Changes in Equip."
3:30 Dr. Roger Hoopingarner, Dept. of Entom. MSU, "An Outside View of the Economics of Beekeeping"
4:00 Dr. W. T. Wilson, ARS, Honey Bee Research, Weslaco, TX, "Updating Mite Research"
4:30 Ross Ballard, ASCS, USDA, Washington, D.C., "Writing Price Support Regulations"
7:30 An Evening with A Panel of Africanized Bee Experts

Thursday, January 15, 1987
9:00 Brian J. Sheriff, Cornwall, Eng. "Sale and Distribution of Imported and Domestic Honey in the British Isles"
9:30 Jerry Stroope, Commercial Beekeeper, Alvin, TX, "Reducing Moisture Content of Bulk Honey"
10:30 The New Honey Board, NHB A Panel Discussion Richard Adee, Moderator
1:30 David Miksa, Com. Beekeeper, "Beekeepers Should Be Paid For Colonies Destroyed Under APHIS Regulatory Programs"
2:00 (Speaker not Confirmed) APHIS, USDA, Hyattsville, MD "Objectives and Costs of an Africanized Bee Barrier in Lower Mexico"
2:30 Dr. Bud Wright, ARS, USDA, Beltsville, MD, "The ARS Part of the Africanized Bee Barrier"
3:15 A Panel Discussion of the Africanized Bee Barrier, Richard Adee, Moderator. Member: Dr. Tom Rinderer, ARS, USDA; Dr. Orley Taylor, Univ. of Kansas; Marion Ellis, Nebraska State Apiarist

Friday, January 16, 1987
9:00 Jerry Cole, AHPA Exec. Comm. New Mexico, "Congressional Letter Writing"
9:30 Glenn Burkett, Pres., Iowa Honey Producers, "Keeping in Touch With Your Congressman"
10:00 Jack Thomas, Mann Lake Supply, "Feeding Syrup"
11:00 Richard Adee, AHPA Vice Pres., "Washington Legislative Comm. Report"
1:30 Richard Goldberg, Ast. Secy. of Ag., "Honey Support Program For 1987"
2:00 Business Session, Gen. Assem.
7:00 Banquet

Saturday, January 17, 1987
9:00 Executive Committee

For additional information cotact: Glenn Gibson, President, AHPA, Box 368, Minco, Oklahoma 73059 (405) 352-4126.

☆ OHIO ☆

International Symposium on Africanized Bees and Mites of Bees
The Ohio State University
Columbus, Ohio
MARCH 30 - APRIL 1
1987
for Information Contact:
Dr. Glen Needham or Dr. Rob Page
Department of Entomology
The Ohio State University
Columbus, Ohio

☆ SOUTHERN STATES ☆

The Southern States Beekeepers Association is sponsoring a 10 day trip to England during October, 1987. The trip includes a visit to IBRA, a chat with Brother Adam, several days in London including the 'Nationals', and an incredible array of side trips for sightseeing and relaxation.

Cardiff/Plymouth/London
October 17-26, 1987
10 days / 9 nights

Cost: $1,250.00 per person/double occupancy. **Trip Includes:** Round-trip airfare from New York to London via KLM Royal Dutch Airlines; Transfers via deluxe motorcoach airport/Cardiff/Plymouth/London; Lunch in Bath; Two (2) nights' accommodations at the Post House Hotel in Cardiff; English Breakfast and dinner in Cardiff; Lunch at the Buckfast Abbey; One (1) nights' accommodation at the Holiday Inn in Plymouth; English Breakfast and dinner in Plymouth; Guided sightseeing in Stonehenge and Oxford; Lunch enroute to London; Five (5) nights' accommodations in London at the London Tara Hotel; English Breakfast each day in London; All taxes and service charges; U.S. Departure Tax and Customs fee.

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NEWS/EVENTS... Cont. from Page 59

Daily Itinerary

Day 1: Saturday, October 17, 1987: Depart home city for New York's Kennedy Airport. Depart New York at 6:00 p.m. via KLM #642.

Day 2: Sunday, October 18, 1987: Arrive Amsterdam at 7:05 a.m. Depart Amsterdam at 8:00 a.m. via KLM #115. Arrive London at 8:05 a.m. Transfer via deluxe motorcoach to Cardiff stopping at Bath for lunch. Dinner in Cardiff.

Day 3: Monday, October 19, 1987: English Breakfast and dinner at hotel in Cardiff.

Day 4: Tuesday, October 20, 1987: English Breakfast at hotel in Cardiff. Motorcoach transfer to Plymouth. Lunch at Buckfast Abbey. Dinner at hotel in Plymouth.

Day 5: Wednesday, October 21, 1987: English Breakfast at hotel in Plymouth. Motorcoach transfer to London with sightseeing stop in Stonehenge and Oxford. Lunch enroute to London.

Day 6 - 9: Thursday - Sunday, October 22-25, 1987: English Breakfast at hotel.

Day 10: Monday, October 26, 1987: English Breakfast at hotel. Depart London at 9:25 a.m. via KLM #118. Arrive Amsterdam at 11:30 a.m. Depart Amsterdam at 1:15 p.m. via KLM #641. Arrive New York's Kennedy airport at 3:20 p.m.

For more information on this once in a life time opportunity, contact Dr. John Ambrose, Dept. of Entomology, NCSU, Box 7626, Raleigh, NC 27695-7626. (919) 737-2129.

☆ VIRGINIA ☆

The 1986 Virginia State Fair was held in Richmond, Virginia from September 18 thru 28, 1986. The Beekeepers of Virginia Honey Booth is sponsored by Richmond Beekeepers Association. The booth grossed $4,350 and sold 1976 pounds of honey. Four Virginia Beekeepers' Associations participated.

James Cassada (L) and Betsy Woodburn (R).

The 1986 Richmond Beekeepers Honey Queen, Miss Betsy Woodburn was crowned by Virginia's Governor, Gerald Baliles, who also presented the Governor's Award to James (Jim) P. Cassada of Richmond, VA. Jim is the current treasurer of Richmond Beekeepers Association. The Governor's Award is given to a member who has contributed time and talents to the Association this past year.

☆ FOREIGN ☆

BEEKEEPING TOUR OF ENGLAND

Thanks to the cooperation of Eric Ward, an English beekeeper, and the Orpington Beekeeping Association, a beekeeping and sight-seeing tour of London and southern England is planned for July 1987. The cost of the tour including bus transportation, bed and breakfast is estimated to be $725 per person. Note: *Transatlantic air fares are not included.* The tour dates are July 9 through July 22, 1987. We will be hosted and accompanied by English beekeepers. Reasonable transatlantic flights are being arranged. For further details contact: Harold Liberman, Free State Bees, 2701 Oxford Circle, Upper Marlboro, MD 20772.

ITINERARY

July 9: Arrive Gatwick. Met and transported to Tonbridge Wells. Quiet evening to recover from jet lag.

July 10: Sightseeing tour of Kent. Hever Castle, Bodiam, Battle Abbey. Cream tea at Battle. Return to hotel. Welcoming supper at home of Chairman, Orpington Branch KBKA.

July 11: Morning free in Tonbridge Wells. Afternoon spent at Orpington Apiary. Tea with local beekeepers.

July 12: London by train. Ferry from Westminster to Greenwich. See Thames barrier, National Maritime Museum, Greenwich Observatory, Cutty Sark. Return same way.

July 13: Visit Rochester Castle on the Medway. Visit Hadlow College and commercial apiary of Mr. Beevor or Mr. Hood enroute.

July 14: Visit local historic homes. Winston Churchill (Chartwell), Wolfe of Quebec (Westerham), Charles Darwin (Downe).

July 15: Free day London.

July 16: Depart for West Country. Visit Stonehenge on way.

July 17: Brother Adam, Buckfast Abbey. Afternoon visit at a butterfly farm. Evening in Torquay.

July 18: Quince Honey Farm, South Molton.

July 19: Depart for Stratford-upon-Avon via pre-historic monuments at Avebury and Silbury Hill.

July 20: National Beekeeping Unit, Luddington. Afternoon Warwick Castle.

July 21: To be arranged.

July 22: Free day. Evening farewell dinner at hotel.

July 23: Depart.

☆ AWARDS ☆

The Eastern Apicultural Society's Awards for research excellence were presented at the 32nd annual meeting held at the University of Delaware, Newark, Del. This year for the first time, three awards were presented; the J. I. Hambleton Award, the EAS Graduate Student award, and the newly initiated undergraduate award.

• The J. I. Hambleton Award winner for 1986 was Dr. Eric H. Erickson. Dr. Erickson for the past several years has been research leader of the USDA North Central Bee Research Laboratory, Madison, WI. Dr. Erickson is also a faculty member of both the Dept. of Entomology and Bio Medical Engineering Center, Univ. of Wisconsin.

Dr. Erickson is widely recognized for his research in several areas. These include honey bee nutrition, honey bee foraging behavior, including bee-plant interactions, the influence of naturally occurring surface potentials on honey bee behavior, honey bee anatomy, honey bee genetics and honey bee pesticide interactions.

Dr. Erickson has held offices in many professional and honorary societies, presented numerous invitational papers at scientific meetings, technical conferences, and work shops and published over 100 papers in referred journals.

• Dr. Daniel Pesante was the 1986 EAS Graduate Student Award winner. Mr. Pesante received both a plaque and a cash award of $500. This year, the Graduate Student Award was sponsored by BIo-Serv. Inc., Frenchtown, NJ.

Mr. Pesante is currently finishing his Ph.D. degree at the Louisiana State University and is working at the University of Mayaguez in Puerto Rico. Mr. Pesantes major areas of interest include population and nest biology, foraging behavior, management strategies for honey pro-

Continued on Page 63

☆ Classified Corner ☆

Classified rates: 49¢ per word, each insertion payable in cash in advance. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it) counts as one word. Not less than 10 words accepted. Copy or cancellation orders MUST be in by the 1st of the month preceding publication (Example: January 1 for February publication). Tear sheets available on request for an additional charge. Send classified ads to: The A.I. Root Co., Attn: Cyndi Stephens, Class. Ad. Mgr., P.O. Box 706, Medina, Ohio 44258-0706.

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TF

THE SCOTTISH BEEKEEPER Magazine of The Scottish Beekeepers' Association, International in appeal. Scottish in character. Membership terms from A. J. Davidson, 19 Drumblair Crescent, Inverness, Scotland. Sample copy sent, price 20 pence or equivalent.

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What do you know about the INTERNATIONAL BEE RESEARCH ASSOCIATION? The many books and other publications available from IBRA will deepen your understanding of bees and beekeeping: an IBRA membership subscription — inclusive of *Bee World*, a truly international magazine published quarterly in the English language — will broaden your beekeeping horizons. Details from IBRA voluntary representative H. Kolb, P.O. Box 183, 737 West Main, Edmond, OK 73034 (phone 405-341-90984); or from IBRA, 18 North Road, Cardiff CF1 3DY, UK. TF

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BEEKEEPING. A West Country Journal — written by beekeepers — for beekeepers. 1.50p inland or 1.80p ($4.00 Overseas). 10 issues yearly. Editor, R. H. Brown, 20 Parkhurst Rd., Torquay, Devon, UK. Advertising Secretary, C. J. T. Willoughby, Henderbarrow House, Halwill, Beaworthy, Devon, UK.

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BEE CRAFT — Official (monthly) magazine of the British Beekeepers Association. Contains interesting and informative articles. Annual Subscription $5.10 (Surface mail) and $7.10 (Airmail). The Secretary, 15 West Way, Copthorne Bank, Crawley, Sussex, RH10 3DS.

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INDIAN BEE JOURNAL. Official organ of the All India Beekeepers' Association, 817, Sadashiv Peth, Poona 411030. The only bee journal of India Published in English, issued quarterly. Furnishes information on Indian bees and articles of interest to beekeepers and bee scientists. Annual subscription postpaid in foreign countries: For individuals US $7.00; for institutions, companies and corporate bodies US $10.00 or it's equivalent, to be received in advance by IMO or bank draft, payable in Poona (India).

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NEWS RELEASE... Cont. from Page 57
you shouldn't advertise, you just need to change your focus.

BEEKEEPING ASSOCIATION FOCUSES ON MEMBERSHIP DRIVE

The Medina Co. Beekeepers Associations December Meeting will focus on upcoming membership. The meeting is at the Medina Legion Hall, 123 Main St., Medina, Ohio at 8:00 p.m. Now is a PERFECT time to join, or to offer YOUR ideas. For more information on the Medina Co. Beekeepers Assn., how to join, or to offer your suggestions, Contact Skip Simmons, president, 555-1247 after 6:00 p.m. Admission is free and every and any one welcome to join or help.

All of these news releases have several things in common — they give all the pertinent information, (who, what, etc.), the headline will attract not only beekeepers, but those interested in becoming beekeepers and those just interested in bees. Further, they are more eye-appealing and interesting to read than 'Beekeepers Meet'. Finally, they will get, and keep, the interest of YOUR newspaper contact.

The right information, presented in the best possible light, given to the right person at the most opportune time — the 'Perfect' news release!§

NEWS/EVENTS... Cont. from Page 60
duction in tropical and temperate ecosystems, and morphometric analyses for determination of African and European honey bees.

• The winner of the first annual undergraduate award was Ms. Carla Dennis. Ms. Dennis received a plaque and $200 at the EAS Awards Banquet. Ms. Dennis is a junior at NC State University majoring in the Biological Science Program in the School of Agriculture and Life Science. Her topic of research involves the attractiveness of various artificial sweeteners to honey bees. Ms. Dennis' advisor on this project is Dr. John Ambrose.

Eastern Apicultural Society Award Nominations Due by April 1, 1987

The Eastern Apicultural Society will present 3 awards for Apicultural "Excellence" at its annual meeting to be held at the Virginia Polytechnic Institute and State University (VPI and SU), Blacksburg, VA, August, 1987. These awards are the James I. Hambleton memorial award, Graduate Student award and the Undergraduate Student award.

Nominations are now being accepted for all three awards. Candidates names submitted for the Hambleton and Graduate Student awards must be accompanied by a biographic sketch of the nominee, a list of his/her publications, specific identification of the research work on which the nomination is based and an evaluation and appraisal of the accomplishments of the nominee, especially of work in the last five year period. Judgement of nominated graduate student candidates will be made on the basis of demonstrated excellence in Apiculture, letters of recommendation (at least 2 required) and other supporting information supplied by the nominee and the person who nominated the student.

An application for the undergraduate award should consist of a res-ume submitted by the student, at least one letter of recommendation from a Professor about the applicant, a certification of the apiculture background of the student and/or his family, and a statement from the applicant about his intended future. The student must maintain a 3.0 grade point average in order to qualify. Any supporting evidence to tie applicant to the field of Apiculture would be welcome.

Nominations and supporting information should be submitted to: EAS Awards Committee, c/o Elton Herbert, Beneficial Insects Laboratory, ARC-East, Bldg. 476, Beltsville Research Center, Beltsville, MD 20705.

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