GLEANINGS IN BEE CULTURE OCT '88

BEE CULTURE

SELL MORE HONEY!

With Attractive Containers from

DADANT & SONS, INC.

GLASS CONTAINERS The standard for liquid honey. Furnished with white enameled caps.

SHIPMENT OF GLASSWARE: Glassware is not shipped by UPS due to excessive breakage. We urge our customers to order in sufficient quantity (25 or 30 cases) so that shipment can be made by commercial truck lines. Prices listed are for case lots. We also deal in full and split trailer loads. Contact your nearest branch for special pricing.

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C - M00198 2 lb. Queenline c/12 wt. 12 lbs. ____ **$7.66**

D - M00199 4 lb. Queenline c/6 wt. 10 lbs. ____ **$6.68**

E - M00191 2½ lb. Chunk Honey Jars c/12 wt. 13 lbs. ____ **$9.20**

F - M00193 3 lb. Round Jar c/12 wt. 12 lbs. ____ **$8.00**

G - M00192 5 lb. Round Jar c/6 wt. 10 lbs. ____ **$6.76**

PLASTIC CONTAINERS:

H - M00240 Plain plastic dispenser c/12 wt. 3 lbs. ____ **$4.56**
M002491 Plain plastic dispenser c/260 wt. 25 lbs. ____ **$79.96**
M00226 12-pack cartons for above, each wt. 8 oz. ____ **$1.08**

I - M00255 Squeeze Bear w/cap & collar c/12 wt. 3 lbs. ____ **$5.72**
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J - M00188 1 lb. Plastic Queenline c/24 wt. 3 lbs. **(discontinued)**

K - M00275 3 lb. high density plastic cannister with brightly colored plastic lid, ea. wt. 1 lb. ____ **$ .88**

L - M00269 5 lb. high density plastic cannister with brightly colored plastic lid, ea. wt. 1 lb. ____ **$ .96**

M - M00217 5 lb. clear plastic cannister w/brightly colored plastic lid, each, wt. 1 lb. ____ **$1.00**

N - M00206 1 gal. round plastic jar w/ plastic lid c/4 wt. 3 lbs. ____ **$4.50**

O - M00203 1 lb. creamed honey container with lid c/10 wt. 2 lbs. ____ **$4.52**
M00203 lots 50 or more, per 10 ____ **$3.88**

BULK PLASTIC CONTAINERS:

P - M00238 2 gal. plastic pail with lid, each weight 1 lb. 8 oz. ____ **$3.60**

Q - M00212 60 lb. plastic pail w/lid, ea. wt. 4 lbs. ____ **$5.20**

R - M00218 60 lb. plastic pail w/lid and plastic gate each, wt. 5 lbs. ____ **$16.16**

S - M00266 60 lb. closed top container with lid, each wt. 4 lbs. ____ **$4.40**

T - M002663 3/4" plastic faucet for 60 lb. closed top container, each wt. ½ lb. ____ **$1.84**

U - M002664 1½" plastic gate installed in lid for 60 lb. closed top container, each, wt. ____ **$9.96**

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V - M00253 Plastic Cut Comb Boxes— clear plastic with 4⅛"x4⅛"x1⅛" inside measurement. Reusable container, c/100 wt. 36 lbs. ____ **$58.68**
M00250 Carton of 12 wt. 6 lbs. ____ **$8.84**
M00228 Corrugated cartons for M00253 (above). Each holds 12 cut comb boxes. 10 ctns. wt. 5 lbs. ____ **$13.80**

W - M00261 Window cartons— Eye appealing design with skep shaped cellophane window. 4¼"x4¼"x1⅞" colorful cardboard cartons, per 100, wt. 6 lbs. ____ **$15.40**
M00262 per 500, wt. 25 lbs. ____ **$62.00**
M00262 Lots of 2, 500 packs or more, each ____ **$59.00**

X - M00937 Stainless steel comb cutter. Cut 4⅛"x4⅛" sections for M00253 or M00261 containers above. Each, wt. 1 lb. ____ **$6.92**

Y - M00201 Honey Skep Jug—Ideal for table use. Holds 16 oz. honey. Lid should be sealed in place with melted parrafin or beeswax. Excellent gift. Each, wt. 1 lb. ____ **$5.00**
M00201 Lots of 24 or more, Each ____ **$4.40**

Z - M00298 Comb Honey Dish, each wt. 2 lbs. ____ **$11.52**

AA - M00295 Cookie Jar. Hand-made Ceramic, Ea. wt. 5 lbs. ____ **$22.00**

BB - M00294 Skep Honey Pot. Ceramic, Ea. wt. 2 lbs. ____ **$8.00**

CC - M00892 Wood Honey Dipper, Ea., wt. 3 oz. ____ **$1.10**

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OCTOBER '88
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115 Years Continuous Publication by the Same Organization

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NEXT MONTH

November — The month of Thanksgiving; of not quite, but almost, winter; and certainly a time to prepare for next season. So — some things to build, some things to learn, and some things to try, coming in November.

First, we'll have number 1 in a 3 part series on how to design, organize and run a bee school. This starts with the idea, and finishes (in the January issue) with how to assign a clean-up crew. We've covered (nearly) every thing YOU'LL need to know, all the details that have to be attended to, and, we hope everything else it takes to run a successful bee school. Whether you'll have 3 or 300, we'll have the information you need to pull it off without a hitch (however, we can't do a thing about the weather!).

Another series we're starting next month is called 'Southeast Exposure'. Dedicated to, and about, those who reside south and east of the rest of us. We'll be taking some detailed looks at everything from what are the predominant honey plants, to how they keep bees, to the good, the bad, and the rest of *Southeast Beekeeping*.

These alone are enough to tune-in, but there's always our regulars (and semi regulars), the Honey Market Report, the Mailbox, and all the rest — coming in November.

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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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THE INNER COVER

The Federal Government can, if it chooses, take away your bees and not let you have them back. And if you don't bother paying attention to what they're doing, that just may happen.

Are you of the group that believes national politics doesn't really have anything to do with beekeeping — at your level? If you do, you're kidding yourself.

National politics (and the people who play that game) can, and (if necessary) will, change the price of honey; the number of people who keep bees; where bees are kept; the importance of pollination and the power of the Honey Board. They will also change the import and export situation; the rules for moving bees; the degree of scrutiny honey, as a food product, will undergo; the funding level of apicultural research; and probably a hundred other things I haven't mentioned. In fact, nearly all of these things are, to some degree, already under the Federal Thumb, as it were. If not, it's only because they haven't seen a need for it, or noticed it, or figured out how.

The people who will be elected this fall, the people you will vote for or against, are those who will make these decisions. Even if no decision is made, even if one of the above subjects is never considered, they can affect it's existence.

Back in the 1960's, a fairly radical minister coined, or at least made popular, the saying "Not to decide is to decide". If the Federal government *doesn't* act on something (for instance chemical use and regulation in bee hives, or funding for any variety of research projects), the die is cast. Chemical use will be regulated at state or lower levels. There are 50 states, thus at least 50 regulations. Research will, of course, continue to be nonfunded.

By ignoring a situation, the Feds can literally make it go away. Well, O.K., not really, but almost. Or, by merely a nod, or the wink of a well lobbied eye, can raise it to a level of importance bordering on national security.

You should vote next month, and that vote should be for the person, or party, that you think will do our industry the most good at the Federal level. Unless, that is, you feel like I do. I am still looking for that person who will do us the least harm. The two are not necessarily the same, and it is an interesting search.

•

Last time I made some rather strong statements regarding beekeepers, africanized honey bees and the press. I meant every word.

In fact, I was fairly tame compared to what I should have said. But I don't need to go out of my way to upset people. Looking for trouble never seemed a profitable pastime to me.

Nevertheless, YOU will be a prime candidate for any media type to confer with, at any time of the day or night, whenever they want, about anything remotely related to bees, beekeeping, honey, killer bees, pollination and probably some other topics I haven't thought of yet. Why? Well, you are an expert. You are a BEEkeeper. It's right there in your title. You know all about these things right? Yes? No? It doesn't matter, you have been pegged. And, if you happen to make your living at it, well, so much the better. That not only makes you an expert, but a full-time expert.

From the media's point of view, you're the most likely target, or, ah, maybe I should say the best candidate, to interview — to get that bee story from.

When I was a kid we often played a game called tag, and it always started with some wiseacre punching you in the shoulder and saying, "You're It". If you're a beekeeper, consider yourself "It" from now on. But that's not as bad as it sounds, if, and this is a BIG if, you know what you're doing.

"And," you ask, "How do I find out how to deal with those folks so I get things right, don't make a fool of myself, and at the same time keep on the good side of the media?"

Continued on Page 590

COVER . . . Asters are an important source of fall flow in most parts of the country. Bloom begins as early as late July in the north, and continues through mid December in the South. This photo was taken in Carrol County, MD, by Steve McDaniel of Baltimore who is an occasional contributor to *Gleanings in Bee Culture.*

OCTOBER Honey Report

October 1, 1988

These figures represent current prices from our contributors. They are based on reports from many states and averaged for each region. Where insufficient information is received, no price is shown.

Wholesale Extracted	Reporting Regions								Summary		
Sales of extracted, unprocessed honey to Packers, F.O.B. Producer. Containers Exchanged	1	2	3	4	5	6	7	8	R	A	L
60 lbs. (per can) White	42.50	41.13	30.09	24.00	34.95	36.00	37.25	39.90	24.00-43.00	37.11	38.22
60 lbs. (per can) Amber	41.50	35.63	29.00	21.60	32.00	32.75	36.00	40.00	21.60-43.00	34.30	35.61
55 gal. drum/lb. White	.56	.47	.39	.40	.49	.61	.60	.58	.39-.62	.53	.52
55 gal. drum/lb. Amber	.55	.38	.37	.36	.45	.55	.55	.42	.36-.60	.47	.46
Case lots — Wholesale											
1 lb. jar (case of 24)	28.55	30.65	26.00	20.48	22.95	23.82	25.00	27.00	18.00-34.80	25.77	26.59
2 lb. jar (case of 12)	26.85	29.30	24.50	20.38	22.00	25.25	31.15	26.75	18.00-33.00	25.66	25.09
5 lb. jar (case of 6)	30.60	26.25	24.00	23.23	24.91	24.25	25.30	25.50	22.50-31.20	25.65	25.48
Retail Honey Prices											
1/2 lb.	.90	1.14	.89	1.18	.85	.85	.95	.93	.85-1.50	.97	.94
12 oz. Squeeze Bottle	1.50	1.59	1.45	1.33	1.33	1.20	.99	1.27	.99-1.89	1.35	1.30
1 lb.	1.55	1.66	1.29	1.75	1.43	1.45	1.15	1.32	1.15-1.99	1.50	1.63
2 lb.	2.85	3.05	2.39	3.37	2.63	2.37	2.84	—	2.25-3.89	2.85	2.82
2-1/2 lb.	3.60	4.30	3.11	—	3.44	3.13	3.71	2.25	2.25-4.85	3.44	3.60
3 lb.	4.22	4.19	3.49	3.25	3.69	3.92	3.79	3.36	3.12-4.30	3.80	3.79
4 lb.	5.40	4.75	4.10	—	4.69	4.60	4.50	—	4.10-5.40	4.66	4.65
5 lb.	6.50	5.50	5.81	6.13	6.59	5.37	5.79	5.75	5.25-6.59	5.93	5.65
1 lb. Creamed	2.00	1.39	1.89	1.59	1.59	1.45	1.66	1.70	1.39-2.00	1.70	1.73
1 lb. Comb	2.63	1.87	1.99	2.25	2.19	1.97	2.70	2.25	1.75-2.70	2.21	2.38
Round Plastic Comb	2.13	1.49	2.00	1.85	1.85	1.85	1.85	1.75	1.49-2.50	1.88	1.97
Beeswax (Light)	1.08	1.19	.90	1.10	1.11	.85	.95	.95	.85-1.23	1.04	1.20
Beeswax (Dark)	.95	.95	.75	1.00	.90	.75	.85	.75	.75-1.10	.88	.90
Pollination (Avg/Col)	28.50	—	—	26.25	18.00	19.50	23.00	26.00	18.00-32.00	24.50	23.57

Honey Report *Features*

Summary Column: There are 3 parts. **R** — Range of *all* prices reported for the month, lowest and highest. **A** — Average price for each commodity across all regions. **L** — Average price of each commodity listed *last* month.

Comments Section. Price Index — A descriptive statistic that takes into consideration *all* commodity prices, and compares each region to the others. The region with 1.00 has the highest overall prices for the month. A region with Price Index .90 has prices, overall, at 90% those of the region with 1.00.

Region 1.

Price Index 1.00. Sales and prices steady to improving. Moisture adequate to excessive in some areas while isolated spots still dry. Generally, crop is average but fall flows may be down. Concern over mites growing but little to be done. CT considering complete or partial ban.

Region 2.

Price Index .95. Sales steady, prices steady to slowing a bit as seasonal push draws down. Region generally dry, slowing main flows and even late flows. Some crops fared well, but production down. Fall moisture questionable.

Region 3.

Price Index .79. Sales and prices steady to decreasing. Moisture erratic and difficult to generalize. Mites still a concern, as are honey prices.

Region 4.

Price Index .65. Sales and prices slow to dropping. Extremely hot summer probably responsible. IL doing well in quality and quantity of production. Fall flow uncertain due to heat and drought. IN having trouble with pesticides and varroa.

Region 5.

Price Index .82. Sales and prices steady. Drought fairly severe over all the region, with prediction ranging from 1/2 - 2/3 of normal. Fall outlook bleak so watch for feeding.

Region 6.

Price Index .84. Sales steady to just slightly increasing. Western areas experienced above-average rainfall in late Aug. Should help fall flow tremendously. Eastern areas still generally dry and hot with production lower than usual.

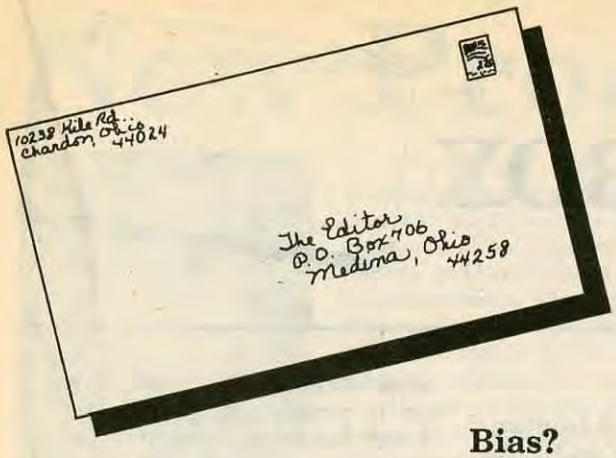
Region 7.

Price Index .91. Sales and prices steady to just a bit slower. Drought still prevalent in most of region and fires not helping the situation. Crop generally around 50% of last year with fall crop outlook poor, except in irrigated crop regions.

Region 8.

Price Index .88. Prices and sales steady to slow. Drought playing havoc over most of the region but it is spotty. Some crops gone while others (cotton) doing quite well. In WA, fireweed and berry crops good in W. region, while in CA many areas bust.

Anyone interested in becoming a "Honey Reporter" should contact the Editor.



MAILBOX

Kudos . . .

The New Starting Right With Bees (20th Edition) has many interesting new additions to previous editions. Congratulations to the editorial staff of *Gleanings*!

I like the new format; it is easy to follow for the novice beekeeper. The text is relatively free of explanations of complicated hive manipulations and wisely avoids profound expositions on scientific theories about beekeeping, both the bane of most initiates to beekeeping.

The subject matter of *The New Starting Right With Bees* is clearly defined by numbered chapters, subject titles and conveniently further divided into subtitles. Subjects follow a logical sequence as encountered by beginning beekeepers.

Information in *The New Starting Right With Bees* is of practical value, accurate and easy to follow by the reader. Illustrations are plentiful and I like the additions of the many new diagrams and line drawings.

Larry Goltz
Redding, CA
(former *Gleanings* Editor)

•

I'm really impressed with your efforts with *The New Starting Right With Bees*. The format is much better . . . and it invites you to continue on.

. . . I think you did a great job — it is a very good publication and one that should be more helpful to beginners and novices. I like what you've done

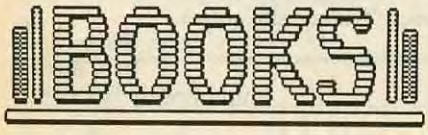
Dewey Caron
Professor, Univ. of Delaware

Bias?

I had the good fortune of learning to keep bees from a special person. He treated me as an equal, although I am a woman. My beekeeper friends and associates have carried this tradition on. I have never felt prejudgment or bias because of my gender.

Over the years I have found that the learning process is continuous. I have had to grapple with many problems — one of which has been how to lift and handle heavy supers. This problem "hit home" in a particularly meaningful way when a teenage girl approached me at our local 4-H Fair. She wanted to keep bees. Her mother, who was with her, had a number of questions about beekeeping. One of these had to do with the amount of weight involved in lifting supers. She did not expect that anyone in the family would be willing to help her if need be. This got me thinking about all the technical discussions I've had with fellow beekeepers concerning lifting supers as well as the articles presented in *Gleanings in Bee Culture* and other beekeeping publications.

When I first thought about writing this, I planned to suggest that you publish more articles by women beekeepers concerning their need for technical help specific to their problems. Perhaps, a column written by a woman, or a number of women, concerning beekeeping from their point of view would have special value. I find that I do have a special connection with women in beekeeping. I would like to see such a column appear in *Gleanings in Bee Culture* and would also like to correspond with other women. However, I have come to value and respect my fellow beekeepers as an unbiased lot



MAILBOX

who have struggled with and who have had to solve technical issues about lifting supers and the like.

I would appreciate letters from anyone who would like to write about their own special experiences and techniques in lifting and handling heavy supers, or any other aspect about this.

Kay Nathanson
P.O. Box 384
Putnam Valley, New York 10579

Editor's Note: Readers, is there this kind of interest?

Frost Bite?

Me thinks you credit Thoreau for more than he deserves when you stated "Thoreau said that good fences make good neighbors". Possibly he did, but my recollection is that "Good fences make good neighbors" is the last line of Robert Frost's (1874-1963) great poem, *Mending Walls*.

George Guertin
Longwood, FL 32779

Bee Beard Ban

I wish to comment on J. Iannuzzi's "Games Beekeepers Play" in the August 1988 issue of *Gleanings in Bee Culture*. He writes entertainingly and lucidly of five so-called games or contests but the most outstanding one which attracts the radio, press and television and which has been the premier event at the annual Eastern Apicultural meetings starting when John Root was president in 1978 and pursued by the EAS chairman of the board, Jack Matthenius during his sojourn, did not even rate an honorable mention. How you can publish an article with that title and not include bee beard contests is truly beyond my comprehension! Was the editor sleeping at the switch?

Frank Kovac
10901 Easterday Road
Myersvile, MD 21773

Editors Note: As you have said, Bee Beards do attract radio, press and television coverage when their attention is called to these events. In fact, the coverage is usually significant. And, although the basis, I presume, for this activity, is to demonstrate that bees are docile, gentle and easily handled, the feelings non-beekeepers are generally left with is "Those people are nuts!"

I say this after much consumer research, (probably 200-250 querries of non-beekeepers, over a 2 year period, while watching such an event).

Personaly, I agree, but that is not editorial policy. Our policy is that this activity, at best, produces a somewhat negative image of beekeeping, and at worst, is a dangerous and non-productive activity.

Bee Culture will not promote, at any level, nor will we actively oppose bee beard demonstrations.

As policy, bee beards do not exist here. However, we welcome comments from either persuasion.

Dear Postmaster,

I'm a retired postmaster and have been so for 8 years, after 34 years of Government service and 29 years as postmaster. I'm also a beekeeper and subscribe to *Gleanings in Bee Culture*. I'm sure you are aware of that publication. I reference the August issue of *Gleanings* page 437 an article entitled "Late Mail". I had my share of problems with editors. In most cases it was the fault of the printer not getting the publications entered into the mail on schedule or not labeled properly.

My copy of *Gleanings* arrived on Aug. 10th. For my part I'm not concerned about what date a monthly magazine arrives .

I've still a lot of faith in the Postal Service and would almost lay a good sized bet that the printer is not getting *Gleanings* in the mail stream in time to arrive here before the end of the month or anywhere else for that matter.

Am sure you are familiar with the old saying, "The check is in the mail".

Thought you might want to talk to your "friend" the editor.

John Humphreys
P.O. Box 68
Humphreys, MO 64646

New Products

In the fall of 1986, Don Jackson, a beekeeper from Pequot Lakes, Minnesota, started working on creating a new bee game. With nearly 20 years of beekeeping experience behind him, Don wanted to make a game that would portray both the good and the not-so-good of his enterprise. The final result was a large playing board with a giant honeycomb around the outside and bees crawling around the middle. Complete with 66 wooden pieces and played by up to six persons. The game stresses nature's great need for bee pollination, and there are honey crops and equipment sales; but Don's game also includes 20 years of mistakes which the players might fall into with the wrong throw of the dice. And, of course, no game like this would be complete without play money — everyone likes to handle money.

One of the intentions of the game was to be educational and informative. Geared for those ten years old and beyond, the game is fun for all ages, even grandparents. A few trips around the honey comb will go a goodly distance in acquainting beekeepers and novices alike with the joys and frustrations of the business. Referring to the glossary of terms will help to inform those unfamiliar with this most fascinating and complex of life forms.

Priced at only $13.95, plus $2.95 for U.S. postage and handling (MN residents must also pay 84¢ sales tax), the game is very reasonably priced when compared with what is on the market around the country today.

Meanwhile, occasionally Don can still be seen sitting at his desk in his room upstairs, playing SWARM with five other invisible players, working out the odds. "Every game has losers," Don says, "but the only game I know of that has more than one winner is four-hand bridge. So it is with SWARM: it'll eventually get all except one of you. That's what odds are all about."Δ

Book Review

Practical Queen Rearing written by Charles & Pauline Dublon, Published by Dublon & Sons, South Wales. Available in U.S. from Silver City Bee Supply, P.O. Box 2542, Meriden, CT 06450 for $14.95 plus postage.

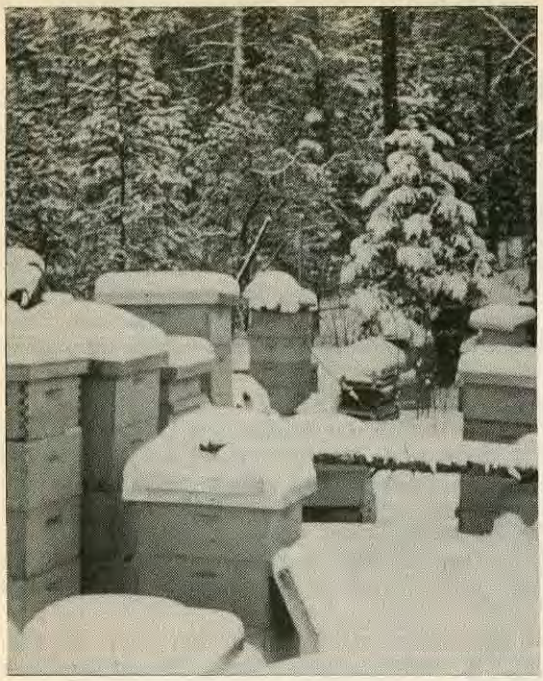
This 87 page over-sized book is an easy-to-use, and read, text explaining 2 methods of queen rearing. It is simply presented, on large type and with large easy-to-understand line drawing.

The first method involves raising queens when you have 10 or fewer colonies, and is the shorter of the two methods discussed. Using the cell punch method, a sideline or hobby beekeeper can produce enough queens each year, with perhaps a few extra to sell or save.

The second method, and certainly the strong suit of his tome is the program discussed for beekeepers with 20 or more hives.

Using the Jenter Queen Rearing System, it will enable you to produce a great number of queens each season. Though somewhat expensive initially, it is cost efficient for a medium sized beekeeper.

There are other topics covered here too, all relevant to queen rearing and basic bee biology.Δ



My apiary in winter

Me! With an armful of trouble.

A Letter From British Columbia

Dear Friends,

Brrrr! It's January 19th and sometime in the night our thermometer on the outside of the cow-stable wall returned to "normal" — about 0°F. For the last three weeks it has never gone *above* -40°F. We have twenty nine colonies so it figures that over breakfast, after the early chores, our thoughts should, in unison, turn to the plight of these little creatures. My wife just now reminded me of a similar cold spell a few years ago when two strong colonies succumbed — with, of course, plenty of stores around them. Thus reminded and feeling we weren't likely to experience such prolonged cold periods any more this year — I said, "Right you are missus and as soon as I finish chores I'll go 'round the hives and see how they're doing".

We live in a rather remote area of Central British Columbia, known as the Caribou Region. A high, windy plateau where, although this isn't anywhere near the Arctic — the same conditions can occur, with temperatures dropping, on occasion to -60°F, with 20 feet of snow on the near-by mountains. We don't insulate hives as we've found that strong colonies, with plenty of stores, take in their stride these cold spells of short duration. Now and then we get an exceptionally relentless spell of cold, like that we've just experienced, which always causes us concern over their well-being.

So it was that mid-morning found me wading through a couple of feet of snow aided somewhat by the endeavors of the old dog, who took the lead, anticipating my objective. The apiary is in a little field a half mile back, sheltered on the north by a thick stand of conifers. A veritable Garden of Eden in summer — this little super-fertile oasis; thick with all kinds of bee-pasture in season — dandelions, white and yellow sweet-clover, fireweed, etc., and through one corner a clear, cold brook hastens to the distant river. The great surrounding pine forests give off prodigious amounts of light green pollen, especially in the spring. To show a friend how much, my wife filled a bowl to over-flowing in a minute by inverting the cone-like buds of a six foot tree.

As we progress through the silent woods I note the many and different animal tracks; moose, fox, rabbit, deer, ruffed-grouse, squirrel. Wild creatures write their life stories with footprints in the snow. No bear sign however — which would have given me cause to panic; but then I didn't really expect any, since there are none this close to home, and the one I know about, several miles to the west, (and who keeps strictly to his own territory) would be deep in his winter sleep. We even know his den. Dead quiet as we reach the hives and without further ado (with a prayer on my mind) I kneel, roll up my toque and press an ear to the cold super (third one up, they all have four). My heart leapt at the steady contented 'purr' interspersed with excited 'peeps'. Rising I repeat these antics at the next hive — same thing — a pent-up throbbing life force obeying its intuitive wisdom. Hurrying along I was elated to discover as I came to the last colony — all had survived.

As I straighten, a pair of Ravens, almost indistinguishable in

Memories of the 'Year of the Big Snow'

the dense crown of a big fir, send the silence racing with their clarion calls; their sharp eyes miss nothing in the surrounding wilderness. Vivid splashes of scarlet, rose-hips on protruding stems make a colorful and attractive display; they're a trifle wizened so late in the season — but chock-full of goodness, nevertheless. I pick a small catch and touch certain memorable scars on the last hive but one, bringing back poignant memories which cause me to stop, kneel and let my thoughts drift back to that winter which is still spoken of as the 'year of the big snow'.

Due to a series of bungles on my part, this hive (which I reach out and touch) along with a quantity of supers, not a few of which contained comb honey, and a spare wheel (flat) which I had changed out there, had remained at my summer apiary site on the slopes of a mountain about 200 miles from home. My excuse was 'I hadn't any more room on the truck' when I returned with the main load of bees and honey that autumn; of course, as might be expected, I fully intended to 'hit the road' as soon as possible to pick up the rest of my equipment but then things kept cropping up — like finishing the new chicken house, cleaning the stove pipes and so on — these seemed more important just now in the unseasonably warm weather. So the days dragged on until there came a sudden and drastic change in temperature.

We woke one morning to the 'hiss' of fine snow eddying and swirling about the yard giving me the uneasy feeling I had left it too late. Coincidentally, my son and his family arrived for a visit during early chores the same day, and hearing of my predicament didn't hesitate in saying "What are we waiting for, both tanks in my truck are filled, we'll grab some gear and grub and head out".

That's just what we did, with several inches of snow splashing up from under hurrying wheels. We slept fitfully that night a hundred miles from home, in sleeping bags on the back deck, with gusty winds rattling the side racks and driving stinging snow pellets in every direction. We coaxed a fire to roaring life in the shelter of a downed tree in the pitch dark — long before dawn — using a small kerosene lamp for light. Anxious to get going, we drank several cups of tea, ate sandwiches and pressed on. About noon we came to a shuddering halt in a four foot drift that stretched interminably. I said, "it's at least two miles, what do you say?"

Quickly he answered "Let's go — the walk will do me good".

Picking our way round drifts as best we could, we eventually came to the snow-covered pile that constituted my supers and trappings and, still ascending, arrived in a few more minutes at my lonely hive. I pointed to the rugged mountain wall barely visible through the storm about 200 yards further on and said, "We've got to get the colony back there where there are some small caves which might give some protection. Out here it won't stand a chance once those winds get going. They'll blow it into the next county.

I've always appreciated the strong handles on my hives, but never more than that day bucking boisterous winds on the unstable slope. I called them caves — but they were simply indentations extending back for only a few feet — we selected the larger and, losing no time wriggled the 'heavy as lead' hive in as far as we could — due however, to the sloping roof it still protruded slightly. I closed the bottom entrance with a stick leaving an inch or so while John kicked around until he found a suitable granite slab which we wedged between the outer cover and the cave roof — took a last apprehensive look and bolted for the truck.

I'll draw a veil over the next few chapters (a story in itself) except to say the the 'year of the big snow' came within a hairs-breadth of forcing us to walk most of the way when we seemed unable to negotiate a particularly bad spot. However, with the aid of the winch and superhuman efforts we were finally able to extricate ourselves — and reached home (just barely) before Old Man Winter slammed the door.

Spring was well advanced, as I recall, before I could attempt the washouts, gumbo and frost heaves of back-country terrain. But the day came, as it always does, when I found myself driving once more through sun-dappled aspen and pine forests — bird song filling the cab. Water, with run-off in full spate, sparkled everywhere. I marveled at the ease with which I progressed in comparison to the agonizing, inch-by-inch nightmare of a few months ago. Wasting no time without taking chances, for the way is just a trace on the ground — finally — I pass the pile of supers — swing right and thread my way between boulders and other winter-deposited debris.

I began the steeper ascent above the canyon. Suddenly my heart leapt — there they were — the air over the void seemed full of little shining bodies hurtling back and forth in the sunlight. I could feel a lump come to my throat — they had survived. Too excited now to waste time with such slow progress, I switched off — burst out of the cab and ran, taking a short-cut. Breathless, I arrived and knelt to one side of the hive. Feverish activity greeted me at both entrances, (especially the lower where they had pushed aside the wooden stick), as they struggled with incredible loads of pollen from willows on the river bank. I felt my eyes moisten with admiration at the courage and perseverance of these little creatures. With a brain no bigger than a grain of sand they have collectively done what we human nit-wits could never do — they've made it through a winter on what must (for six dark, winter months) be the most awful place on Earth. I craned back my neck to better view the awesome heights above me — framed now in deepest

They have collectively done what we humans could never do.

blue — and in my minds eye a picture appeared of deep winter and this lonely little box containing a living entity bracing itself against an elemental onslaught of the most savage kind; two hundred mile an hour winds slashing those white peaks, -60°F and more, for days — stretching into weeks — then months, before the iron-hard grip of winter relinquishes reluctantly with the advent of spring. My gaze drops to watch again fascinated the self-sacrificing labors of this tiny creature — and friend. While the world turns, I'm convinced, there'll be honeybees — but I'm not so sure about us.

I don't know how long I sat thus, lost in time, but I recall the 'thud' of a truck door, bringing me back to the present and I straighten to welcome my son and grandson, whose arrival had been unnoticed due my complete preoccupation.

I remember John Jr. with a lop-sided grin saying — or words to the effect, "I thought this is where you'd be. For the last two weeks I've watched for the ground to clear-up at my place — knowing you were doing the same. When it did, I had the idea I might beat you to it, but when we saw your tracks at the turn-off and pulled in the yard and no truck — Mum didn't have to say where you were — I see they're doing just fine".

This is the road into our new cabin. Not exactly a 4-laner yet!

The old dog gave a short anxious bark — bringing the scarred hive back into focus. I rise and find myself saying "all for one and one for all in the honey bee family," but arrogant man, pulling every which way is beset by wars, famine, pollution — you name it — it makes me very humble to sit before a hive, and like Old Baldy said one time, "I sure am glad the good Lord saw fit to put me on the same World as the Honey Bee."

That's all for now.

The Old Timer

Testing Your Beekeeping Knowledge

By CLARENCE H. COLLISON
Pennsylvania State University • University Park, PA 16802

In recent years man has been responsible for the introduction and spread of several new bee diseases and pests into the United States. Specific examples include the varroa mite, tracheal mite, and chalkbrood. These problems along with the expected arrival of the Africanized honey bee within the next few years certainly have suppressed the positive attributes of the beekeeping industry. Other than the excellent promotional programs being developed by our National Honey Board, most inquiries by the press and non-beekeeping public are currently concerned with the Asian bee mite. Through the sale of queens, packages, nucs, and pollen and the migratory movement of established colonies, these beekeeping problems have been extensively distributed throughout much of the nation in an extremely short period of time. Differences in state laws and their respective apiary inspection services have also undoubtedly contributed in the spread of these pests, which supports the need for a uniform, national beekeeping policy.

Please take a few minutes and answer the following questions to determine how well you understand bee diseases and pests that plague the beekeeping industry. The first eight 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. ___ Dark colored wax combs are more susceptible to attack from wax moth than light colored combs or foundation.
2. ___ Mites that feed on flowers and plants and use honey bees for transport from one plant to another and arrive accidently in the beehive are known as phoretic mites.
3. ___ Varroa mite populations build up rapidly within the colony during winter confinement.
4. ___ Female skunks teach their offspring how to forage for bees in front of the hive.
5. ___ Bears attack honey bee colonies for brood, honey and adult bees.
6. ___ Adult bee lice (*Braula coeca*) feed on pollen packed within the cells of the comb.
7. ___ Male and female varroa mites are similar in size and coloration.
8. ___ Greater wax moth is capable of killing honey bee colonies.

Multiple Choice Question (1 point)

9. ___ Varroa mites were first found established in the United States in: A) Texas B) Maine C) Pennsylvania D) Wisconsin E) Illinois
10. ___ Name two ways in which beekeepers protect their colonies from bears. (2 points).

_____

_____

Most honey bee diseases and pests affect either the brood or adult honey bees. Please indicate which stage(s) are affected by the following diseases and enemies. (9 points).

A) Adults only B) Larvae only
C) Both adults and larvae
D) Adults, larvae and pupae
E) Eggs, larvae, pupae and adults

11. ___ Varroa mite
12. ___ Honey bee tracheal mite
13. ___ American foulbrood
14. ___ Nosema
15. ___ European foulbrood
16. ___ Paralysis
17. ___ Chalkbrood
18. ___ Sacbrood
19. ___ Skunks

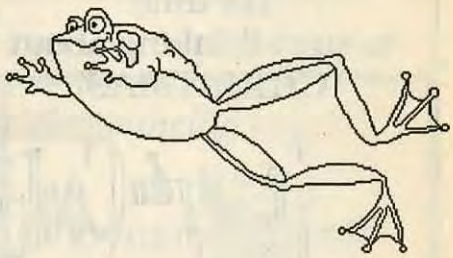
Extra Credit Questions

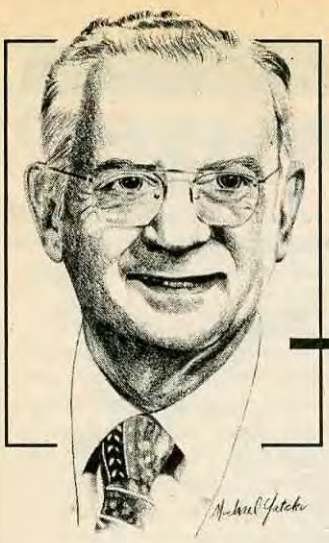
There are numerous other beekeeping pests found in the world that are not currently found in the United States. Listed below are the names of some of these beekeeping enemies. Please indicate what type of organism is named below.

A) Mite B) Bird C) Toad
D) Mammal E) Lizard

20. ___ *Tropilaelaps clareae*
21. ___ *Bufo vulgaris*
22. ___ Honey Badger
23. ___ European Bee-Eater
24. ___ *Euvarroa sinhai*

ANSWERS ON PAGE 588





RESEARCH REVIEW

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

"Queen song and apple trees — good news in research."

The Behavior of Workers and Queens in Afterswarming

In a honey bee colony that swarms there are several ripe queen cells left behind. Normally a queen emerges from one of these and kills any unemerged queens still in their cells. If two or more queens emerge at the same time they fight until only one is alive. However, if the colony is still strong after swarming, and produces an afterswarm (a second swarm), the situation is different. Under such circumstances the worker bees prevent the first queen to emerge from killing all the others so that at least one is left behind to head the parent colony. To do so the worker bees act aggressively toward the first queen to emerge and prevent her from killing her unemerged rivals. Futhermore, the workers may confine the unemerged rivals for several days.

All the above has been known for some time. The question: how do workers confine queens? Research undertaken recently in the Netherlands tells us what the bees do. How the bees know to do all this remains a mystery.

If the colony is to produce an afterswarm the first queen to emerge is attacked (balled) by the workers. This causes her to make piping sounds (called "tooting" in this paper). The piping sounds cause virgin queens in their cells to freeze and cease to move. This, in turn, causes them to stop cutting their way out of their cells. In this way the emergence of more queens may be delayed several hours. (Worker bees do not help virgin queens to emerge; they must cut their way out of their cells by themselves.)

It has also been observed that workers reseal the cuts made by virgins trying to emerge from their cells. This too will delay queen emergence by several hours.

What is new is that if there is a combination of tooting and resealing, the process of queen emergence may be delayed for days, not just hours. After the afterswarm has left, the process may be repeated to produce a third swarm. The whole thing is a rather remarkable process.

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Apple Orchard Intensification

Up until only a few years ago, apple growers planted about 27 trees per acre. These trees did not reach real production until they were about 15 years old and 15 to 20 feet tall. An orchard had a life of about 60 years.

Times have changed. Today apple growers are advised to plant 400 to 700 trees per acre. Early production from these trees is encouraged and this apparently reduces the growth of the tree, including the size of the tree's trunk. Each tree is still treated as an individual and the branches are not allowed to intertwine. These small trees are planted in three or four close rows with alleys for spray machinery and picking between the group of rows. The triple row system is the most popular. In this multiple row system two rows may be one variety and the other one or two rows a different variety. In this way there is excellent cross pollination. The life of an orchard planted in this manner may be only 15 years because planting systems, varieties and varietal strains become outdated rapidly.

An intense management system such as the above results in increased production and especially a higher quality apple. It is expected that income should exceed expenditures four years after planting apples at such an intense level.

I review this subject for two reasons. First, it is typical of the changes that are taking place in American agriculture. And, to keep ahead in our competitive marketplace one must keep up to date. Second, intensive orchard plantings may make it possible to get better fruit set because there are more pollinizers, that is trees to provide pollen for each other. To obtain a high quality apple one must have the seed cavity filled with seed and this requires good cross pollination. (A perfectly pollinated apple has *ten* seeds. About the same number of colonies of bees are used per acre. Placing colonies in a compact orchard is not difficult as there is adequate space for trucks carrying colonies to move between the rows.Δ

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What You Need To Know

STEVE TABER of Honey Bee Genetics

P. O. Box 1672 • Vacaville, CA 95688

"Don't expect everything you read about bees to be absolutely true."

There are thousands of things that are good to know about bees. Their dance, after a successful foraging trip and the interpretation of that dance is interesting. It's nice to know the honey bee's Latin name is ***Apis mellifera***, and that it used to be ***Apis mellifica***, which is a far more appropriate name. It's nice to know they have 6 legs and 5 eyes. I could go on and on; but, what I want to discuss are those things absolutely necessary to know if you are going to successfully manage your bees.

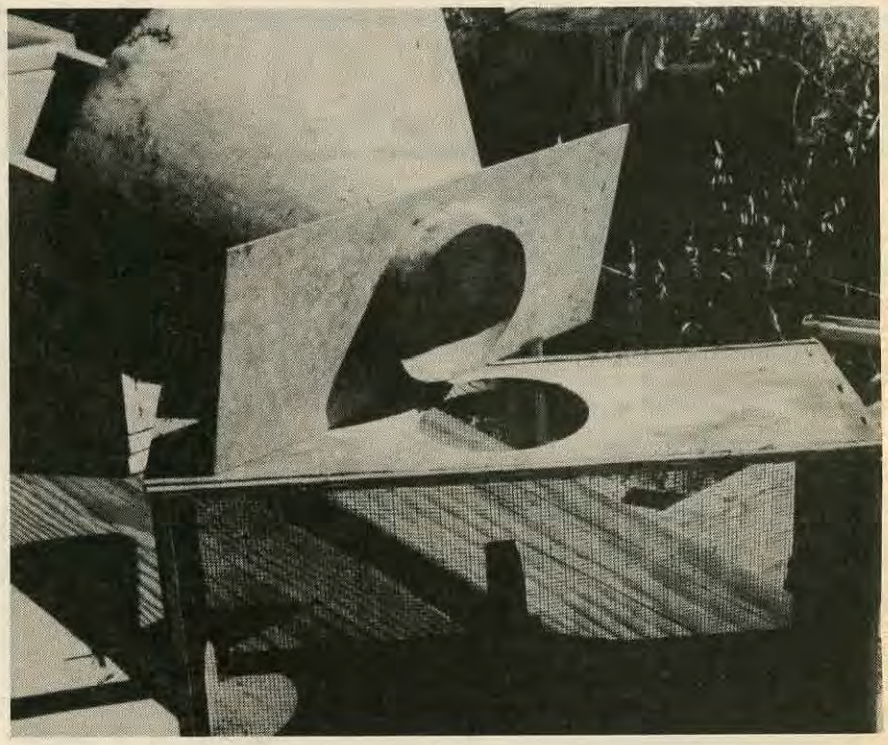
First, you need to know how long it takes *the bees* to raise a queen. Don't tell me the book says 16 days. Tell that to your bees and they'll laugh you out of the apiary. If you remove the queen today, July 2, a virgin will emerge on July 13—eleven days! But let's assume you don't want a virgin to emerge in that colony because you want to introduce a queen into it. The books say that when a larvae is 3 days old, or older, the bees can't raise a queen from it. Is that really so? Okay, I'll tell you how to decide. Do the following experiment in a good hive, where a good queen is laying well and bees are getting lots of pollen and nectar. Remove the queen. Now, according to the books, the eggs are supposed to hatch in 3 days, and then 3 days later the youngest larvae in the hive will be 3 days old. Six days after removing the queen, go through the colony and carefully remove all queen cells. And, about 8 days later, in that colony, you will have an emerged virgin queen.

To tell the absolute truth, nobody knows how long it takes for a bee egg to hatch because nobody has bothered to find out. I did some work on that once-upon-a-time, and most eggs hatched between 80 and 85 hours after being laid. There are several sources of possible variation in the time of hatching. One is genetic, where eggs from one race develop faster and hatch earlier than eggs from another race of bees. African bee races are supposed to have a faster development time than European races.

Biological variation will cause the eggs to vary in their development time even if they are all laid by the same queen. This could be by as much as 12 hours or more. Circadian rhythm, the biological 24 hour clock of every organism, could also be a factor. In other insects, like the fruit fly, eggs hatch 24 hours after being given a flash of light, thus their eggs hatch at dawn.

We know from work done long ago that bee eggs won't hatch unless the humidity around them is 95%; and, the time of day when the most moisture is available is usually dawn. But, if light *is* important, there is very little available inside a bee hive, but maybe there is enough. Biologists working with the effect of light on insects' biological clocks have learned that it is very difficult to build a room that is completely without light. I expect a beehive could be built that prevented any light from entering and still permit the bees to fly in and out, but it wouldn't be easy, and certainly not practical.

The next thing you have to know is how long after you hive a swarm or a package, will the colony reach peak population. The books state that it takes 21 days from the time an egg is laid until an adult worker bee emerges. If the swarm or package is hived, on



combs, and the queen released on July 2, look in on them on July 22 to see how many new bees have emerged.

Again, no one knows how long it takes a bee to develop from a just-laid egg to a complete adult. You should expect the same 3 sources of variation in the time required as with the queen. In fact, if you bother to get a comb full of eggs laid during a 10-hour day, and know *exactly* when the first egg was laid, and also when the last was laid, do this: When the developing bees are 17 days old, place the comb in an incubator. You will find that some bees emerge on the 19th day, more on the 20th and 21st and some on the 22nd and 23rd, too. Go ahead, try it; don't expect everything you read about bees to be absolutely true.

Now, let's assume you are hiving a 2-pound package, which contains about 7,500 young bees. About 150 to 200 will die every day, meaning that by July 23 you will have, maybe, 2,000 old bees left and several hundred young ones. If you have a good queen, she will have been laying somewhat less than a 1,000 eggs/day for the previous 3 weeks. So by July 31 you should have more bees than you started with.

If all goes well, this new unit will reach a *maximum* population by the *middle of September*. Remember, it takes a minimum of 11 weeks to develop a 2-pound package to full strength. There are ways to cheat of course, and when working with bees you should cheat in the bee's favor every chance possible. Queens really don't lay at a maximum rate of 1,400 eggs/day for some time after introduction. What you need to do is to get her laying at a maximum rate as soon as possible.

The best way to get your new units to top strength is to give them one or two frames of brood. Or, if you can't do that, a week after installation give them another pound or two of queenless bees. If you are hiving your bees on wax foundation instead of combs always start with a 3 lb. package and come back a week later with a two-pound helper.

When starting with swarms, dump additional swarms in with the first one hived. To prevent them from fighting when mixed, sprinkle a liberal amount of sugar syrup over all of them, or you can separate them with a newspaper if you like.

When I catch a swarm, I take an old empty shipping package and a small funnel. Most of the bees will go into one package, but I usually take two of them along and pick up the strays with the second package. Tack a piece of lightweight cardboard over the feeder can hole and you have them ready to place in your hive. Sugar them up first so they are all sticky, and feed all new units until they have at least 10 drawn-out combs, with at least 2 full frames of stored sugar syrup.

Do not depend on Mother Nature to get your bees in good shape. It can happen, but often new units will fail, for lots and lots of reasons. Don't let starvation be one of them. Cheat, give the bees all the help you can to make their living a success.

The final thing I'd like you to remember is that when hiving a swarm, assume the queen, (or queens), in the swarm are old and worn out. In almost every case they are not very young!

With bees, you always have to expect the worst, and the worst thing about the queen, as she gets older, is that she will fail at the worst possible moment — next March or April.

I suggest you buy or raise a new queen to place in your hived swarm during August, so the colony goes into winter with a new queen and comes out the next spring a boomer.Δ

Honey Bee Migration & Dispersal — Going, Going . . .

DEWEY CARON

Honey bees are social creatures who have a relatively long learning period before leaving the safety of their hive to face the hazards of foraging. They may exit before learning where home is located however, to disperse in the swarming process, or to migrate in absconding behavior. During these periods, they join with several thousand sisters and their queen mother so they have safety in numbers.

In their social system foraging behavior contributes to the welfare of the individual's home hive. Foragers bring nectar, pollen, water, or propolis home from outside sources. Individual foragers "know" these materials are needed from internal chemical cues, such as the brood or empty comb pheromones, or from previous experience as a hive bee.

A worker bee's flight outside her hive is a learning experience. She uses a sun compass with her polarized light-detecting compound eye, landmarks and scent cues to find her way from hive to forage source and back home, and they get better with experience. Some scout for food or water sources, or a new nesting cavity, but most spend their active two-plus weeks on a single, or at best only a few sources of forage.

Foraging behavior, like the queen laying fertilized eggs in worker cells, are behaviors that only contribute to the individual colony. Those are necessary behaviors, and are performed thousands of times with few mistakes. But, again, foraging only benefits the individual colony. Like other organisms, honey bees need to disperse.

DISPERSAL

Dispersal is the spreading, or scattering of a population. There are two basic types of dispersal behavior — migratory and non-migratory. Dispersal is really gene flow — a mixing of genetic material that serves to keep populations diverse, so natural selection has an opportunity to assist the evolutionary process.

Evolution results in populations of individuals prepared to compete in a constantly changing environment. It is basic to the continued existence of a species on our planet.

It is no accident that drones and queens disperse to mate outside the colony. Because there are several drone congregation areas near colonies, and a tendency to fly away from the hive, the chances of brother and sister matings are greatly reduced. But dispersal in the social honey bee is different than in non-social insects. To spread and develop new populations, the social unit must divide or split. In honey bees this is called swarming and, like other behaviors, swarming is beautifully adapted to accomplish it's objective — dispersal — in an efficient and almost orderly manner.

A swarm contains many young bees who have never left their hive, plus the old queen. They leave behind not only a third to a half of the adult workers, many who are older foragers, but the brood, the honey stores (after each taking an individual generous proportion), and the nest structure itself. They leave when their colony is growing rapidly and at a time when food resources are most readily available. And they move *away* from the parent colony location to start a new hive.

Swarming is risky. Only 24% of colonies founded from swarms survived the first winter in New York, but the subsequent winter survival rate was higher (78%). Swarms that emerge at times other than the major 4-6 week spring season have a further reduced survival chance, and afterswarms, with multiple virgin queens, fewer younger-age workers, less food stores and a smaller population are not usually very successful at dispersal either.

MIGRATION

Migration, which is another form of dispersal, also occurs in honey bees. This behavior is seldom seen in European-race bees, since they have adaptively evolved to fit in the temperate climate of Europe, where the active season is short. Through selection pressure they have developed the behavior of winter preparation by storing vast quantities of food reserves. This behavior is excellent for beekeepers, since they can remove the surplus honey. Of course, they must be careful to leave the bees enough to live on over winter.

Migratory behaviors are better known in the Africanized honey bee. When nectar and pollen resources decline or deteriorate, Africanized honey bees take off — a behavior called absconding. When a colony absconds *no* bees are left behind. Brood is non-existent or very greatly reduced, and the honey stores are similarly absent or minimal. The comb structure or a similar one can be found later when the bees return under more favorable forage conditions.

The beekeepers of Africa have adapted their colony management to this migratory behavior. They do not try to keep their resource — the living bee colony — in their possession year round. Rather, they prepare for their return, at the beginning of the active season, by hanging fixed comb hives in suitable locations. Later, they will harvest as much as they can following peak honey storage and allow the bees to leave. They know they will be back next season.

Gone!

Insect migratory behavior is a bit different than in populations of birds or land animals. Insect migration is sometimes termed *immigration* because the individual insect travels from one location to another, stays at the new location for awhile and then its *offspring* usually return to the former site. This is due in part to the short life span of insects, their high reproductive rate and their reduced learning capabilities (compared to birds or mammals). But the population does display a to-and-fro movement. With bees, for example, the workers and queen(s) that come back to the beekeeper's hives in Africa are all different individuals from those that left previously.

Other Migrants

Other insects migrate besides honey bees. In the US, we are familiar with the migratory behavior of the monarch butterfly. Each summer these beautiful orange and black butterflies appear and lay their eggs on milkweed plants. In the fall, the adults gather and

migrate south. Those in the Eastern and Central US go to Central America and Mexico while Monarchs in the west go to southern California. In their winter quarters large numbers of adults aggregate on specific butterfly trees — the same trees year after year — and pass the winter in a more favorable habitat. Those that survive start north in the spring, in concert with milkweed plant development, and their offspring, or the offspring of the offspring, arrive in the north and grace our meadows and fields during summer.

And ladybugs — along with monarchs the chief rival of honey bees as a "National" insect — also migrate. In California they go to the mountains — while in the East they go to the coast — after the summer season, and gather together in great masses to spend the winter. Both migrating ladybird beetles (ladybugs) and monarchs, like honey bees, survive because there is safety in numbers. Close relatives of these insects don't migrate. They have evolved different means of winter survival such as a life stage (egg or crysalis) that is sturdy and meant to survive low temperatures, snow and the lack of food resources.

For the Africanized honey bee, survival includes migration, just like the monarch butterfly. If we hope to mold the Africanized honey bee to our temperate-bee-management schemes we must: 1) understand their migratory behavior; and 2) either change the genetic base of the population so it is as manageable as the European race bees; or 3) adapt the management schemes of the African native beekeepers as our own to better utilize this bee to our advantage.

And — because the Africanized bee is defensive of its hive — the sooner we change the bee or change our skills — the better for both the safety of the general public, and for our industry.Δ

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PROFILE

BEAR HONEY FARMS

Success is measured in many ways . . . Self Respect • Recognition • Financial

Bear Honey Farms, owned by Cliff and Lois Sunflower, have achieved them all.

"We started out buying honey from other beekeepers who lived close-by, because we couldn't grow enough of our own, and it gave us a second flavor to sell. People would stop at our booth and say "Oh, look, honey. I didn't know there were two kinds of honey."

Then we'd say something like, "Oh yeah, wouldn't you like to taste them?" That's when we offered the hook.

They'd taste first one, then the other, and then we'd spring the trap. "Which one did you like best?" Sometimes they'd need another taste, but then it was either the first or second type — and we'd say "Yeah, that's my favorite too. Which size jar would you like?" The hook was set, and the sale made.

"We always sell 2 or 3 times as much honey at a fair when we have 2 kinds available, and let our customers taste and compare."

Of course, this isn't how Cliff and Lois Sunflower really started. Their story goes back a bit further, to when they started keeping bees, and making the decision that this was to be a way of life, not just a hobby.

Both spent time after college in the teaching profession at various levels and in several areas. But the pull to return to the natural world was strong and the obvious move was to use their already present teaching skills to educate children in the ways and whys of nature.

But competition for those positions was stiff in the '70's and these best laid plans were not fully realized. However, the real world of living didn't change just because they did, and using their new found hobby of beekeeping as a means of support was an easy choice.

Commercial beekeeping was not quite as easy, or as lucrative as the books made it out though, and there were several hurdles to jump before it was more business than disaster. From day one though, selling honey was easier than raising it.

One good business decision they made early on was to eliminate the middleman when selling their crop. The difference between packer price and retail price was significant even then, and it was felt they shouldn't have to give up that additional profit. That's when selling honey became more important than collecting it.

And, that's when they began to see, ever so slowly, that the more their customers knew about the product, the more they bought. The correlation was nearly perfect. And so was the lesson — *Educate The Customer.*

The education process too began slow. "It was 'on the job training', no doubt about it. There weren't references to read, schools to attend or professionals to talk with", said Cliff. "You did what worked, and about 2 out of 5 things we tried worked, so we kept doing those, and adding the new tricks that brought people in, and helped them buy honey."

Throughout, their background in education held them in good stead. The fact that Cliff was a natural entertainer, and Lois an organizer, with innate business skills didn't hurt the program either.

Their concept of 'Marketing through education' started slowly, but the flow went simultaneously in several directions. Children of all ages were a natural starting place for both Cliff and Lois, and it was here they began in earnest. Telling and showing, and having children help tell and show was an inspiration, and it worked. Cliff began his 'show for kids' at fairs and craft shows, mostly to get their parents' attention. But it worked two ways. Not only did he get their parents' attention (and sales) but those children would remember him the following year, or at a different event, and he automatically got repeat business.

Continued on Page 569

Honey Plants — A Word Game

Some flowers are self-pollinated, others are pollinated by the wind, by hand, or by insects. The early Americans didn't have honey bees until the European colonists brought them here to join the local insects for this important job. Now many bee farmers own their own colonies or rent them to insure vigorous crops.

Unused letters spell "_____ of Buzz", the word the poet Emily Dickinson gave the honey bee.

H	S	A	U	Q	S	C	L	O	V	E	R	S
A	F	L	A	F	L	A	N	U	T	S	Y	T
N	E	Y	N	T	H	C	T	E	V	L	N	O
A	G	R	R	O	A	T	B	E	L	O	M	C
E	A	E	U	R	L	E	R	O	L	C	U	I
B	B	L	C	A	E	E	H	E	R	P	L	R
A	B	E	N	G	B	H	M	W	F	A	P	P
M	A	C	N	M	S	K	C	R	K	O	E	A
I	C	A	U	I	S	O	E	T	E	C	I	P
L	R	C	L	U	T	S	A	G	E	T	U	L
O	U	G	M	T	U	R	N	I	P	E	A	B
C	N	T	O	R	R	A	C	E	S	R	W	W
E	O	N	I	O	~~N~~	~~I~~	~~K~~	~~P~~	~~M~~	~~U~~	~~P~~	S

Alfalfa
Apple
Apricot
Buckwheat
Cabbage
Carrot
Celery
Clovers:
(Alsike, Ladino, Sweet, White)
Cotton
Cucumber
English Holly
Lima Bean
Muskmelon
Nuts (Some)
Onion
Orange
Pear
Plum
* Pumpkin
Squash
Trefoil (Birdsfoot)
Turnip
Sage
Sweet Cherry
Vetch
Watermelon

Answers on Page 580

Bear Honey . . . Cont. from Page 566

When someone asked him to take his show on the road to local schools, he naturally worked with children to help educate the rest of the audience. This increased his recognition at fairs and shows and brought in those parents.

Meanwhile, adults were watching, and those few 'who had always wanted to try beekeeping' began to ask questions.

"How do I get started?"
"Where can I get equipment?"
"Who will teach me?"

With this kind of incentive, starting an annual beekeeping class was a natural. Selling supplies and individual and group service fell right into place. Also, speaking and working with associations and groups was another natural move.

Meanwhile, Lois was experimenting in different directions. After a rather inauspicious beginning, making candles and other wax items became as lucrative as the honey business. And, like Cliff, teaching people 'how-to', increased sales in that area also. Working as the R & D person, she had tried many new products and new methods for producing existing products. Her statement 'Buying the Magic' 'from beehive to candle' really captures her thoughts.

It was at this point that the concept of 'Marketing Through Education' really began to take off, and the focus of Bear Honey Farms changed. The financial aspects (and troubles) of commercial beekeeping, coupled with the demands of 4 children and 9 months of fairs, shows and festivals began to wear thin.

Next time, the continuing saga of Bear Honey Farms — The How's and Why's of this success story.Δ

HOME HARMONY

By ANN HARMAN
6511 Griffith Road
Laytonsville, MD 20879

October is a nice month. Hot sections of the country are cooling off and cold sections of the country are enjoying warm autumn days. The hot, and sometimes crazy, weather of summer is gone. Cooking seems to be more fun. Since the weather is cooperating, you can certainly have some outdoor barbeques. This recipe is delicious for lamb or for chicken.

Teriyaki Marinade

1/2 cup unsweetened pineapple juice
1/3 cup soy sauce
1 Tbl honey
1 clove garlic, crushed or pressed
1/2 tsp ground ginger OR
1 tsp chopped fresh ginger
2 Tbl sherry

Combine all ingredients and stir well. Pour over meat. Marinate at least 2 hours or overnight. Baste meat with sauce during cooking.

Cooperative Farmer
July/August 1988

With frosts threatening many parts of the country, tomatoes tend to stay green and stubbornly refuse to ripen. Although a number of those green tomatoes can be coaxed into turning bright red and ripe, why not make use of some green tomatoes. You can do things with them that cannot be done with fully ripe tomatoes.

Green Mountain Green Tomato Bread

2-1/4 cups flour
1-1/2 tsp baking powder
1 tsp baking soda
1/2 tsp salt
3/4 tsp ground cinnamon
1/2 tsp ground ginger
1/4 c. minced crystallized ginger (opt.)
2 eggs
1/3 cup honey
1/3 cup melted butter
2/3 cup fresh apple cider
1 to 1-1/4 cups diced green tomatoes
3/4 cup chopped walnuts

Sift together the flour and spices. Toss in the crystallized ginger, if using, and separate the pieces. In a large mixing bowl beat the eggs until they are light and slightly thickened. Add the honey and beat, then add the butter and cider, beating to mix. Stir in the tomatoes and nuts. Add the dry ingredients and fold in gently until just combined. Pour the batter into a greased large loaf pan. Bake at 325° F for 55 to 60 minutes or until the top feels springy and the edges are browning. Let sit in the pan for about 10 minutes before removing to cool on a rack. Makes one loaf.

The Garden Way Bread Book
Ellen Foscue Johnson

Late autumn vegetables include both acorn and Hubbard squash. Pieces of good cooking pumpkin can be substituted into winter squash recipes. Home gardeners may be raising other unusual winter squash. Honey enhances the flavor of these squashes and can even change the mind of a confirmed squash-hater.

Honey Squash

3 acorn squash (or any winter squash)
1/2 cup honey
1/2 cup butter, melted
1/2 tsp salt
1/3 tsp cinnamon
1/4 tsp ginger

If using acorn squash, cut in half, remove seeds and fibers. Put in shallow baking dish, cut side down. Add water, about 1/2 inch deep. Bake in 375°F oven for 30 minutes. Turn squash upright and drain off liquid. Combine remaining ingredients and pour into squash hollows. Bake 15 minutes more, or until tender. You baste squash with sauce during final baking. Serves 6.

Cooking With Honey
by Judy Powers

Fruit and cookies make excellent lunch box treats, after school snacks, and television-time refreshments. The fruit part is easy — whatever is in season. But the search for the "something different" cookie is perpetual. These sweet potato cookies are "something different" and are particularly good with a nice crisp autumn apple.

Honey Sweet Potato Cookies

1/2 cup butter or margarine
1-1/4 cups honey (1 pound), divided
2 eggs
1-1/2 c. cooked, mshd. sweet potatoes
2-1/2 cups flour
4 tsp baking powder
1 tsp salt
2 tsp cinnamon
1 tsp nutmeg
1-1/2 cup raisins
1-1/2 cup chopped pecans

Cream butter and 3/4 cup of honey. Add eggs, beat well. Mix sweet potatoes and remaining honey together, combin with creamed mixture. Blend in sift dry ingredients. Fold in raisins and pecans. Chill for 30 minutes. Drop by tablespoonsful onto cookie sheet. Bake at 375°F for 15-20 minutes. Can be frosted with a powdered sugar glaze if desired. Makes 6 dozen cookies.

Honey Of A Cookbook
Texas Department of Agriculture

Recipes that can serve several purposes are always useful. Although this sausage recipe may be best for breakfast or a brunch, it also is excellent for a light supper. I recommend serving hot homemade biscuits with it.

Glazed Sausages With Apples

1 pound link pork sausages
8 slices apples, cut 1/2-inch thick
1/2 cup orange juice
1 Tbl grated orange peel
1/2 cup honey
1/4 tsp cinnamon

Lightly brown sausages. Place apple slices in skillet. Mix remaining ingredients and pour over sausages and apples. Cover and cook slowly for 1 minutes or until apples are tender.

From Mama's Honey Jar Cookbook
Catharine P. Smith

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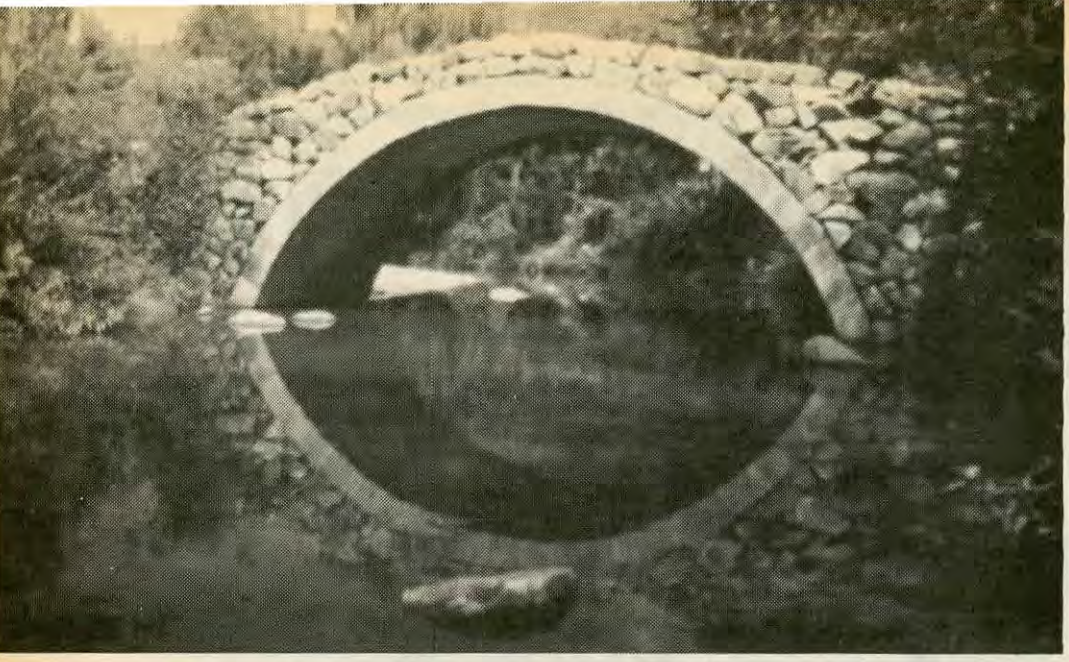


LESLIE BUNNELL

Beekeeping in Korea

The sights and sounds of Seoul, and the rest of Korea we've been watching during the slower parts of the recent olympics, got us to thinking — What's Beekeeping like, why don't we see some of this not-quite-olympic sport? Leslie Bunnell gives us a peek at how they do it there and it comes as only a little surprise that beekeeping and beekeepers vary little, no matter where they live.

This is definately "Gold Medal" reading.

As a professional photographer, and with a strong avocation in beekeeping, I recently had an opportunity to observe and study the beekeeping techniques used in the Republic of Korea (South Korea).

Korean beekeepers are quite in tune with the times, relative to modern beekeeping practices, but with some significant local variations. They are an itinerant lot, moving with the seasons to locations that afford the greatest nectar flows and provide maximum returns from operations of limited size. There is an abundance of nectar sources from the yellow rape on the lowlands of Cheju island to the acacia and sumac on the slopes of Mt. Sorak on the eastern shore.

Typically, Korean beekeepers spend most of the productive season living in tents along side their apiaries. On the peninsula of Korea proper, beekeepers locate their operations from the cherry orchards near Puson in the south, to the extensive apple and pear orchards near Taegu, and on the mountain slopes for acacia, sumac, and wild flower nectar.

Hives are basically of Dadant design with movable frames standard. Hive bodies and supers I observed were always of a local standard size. Supering was limited and honey was harvested and extracted several times a year. Although not confirmed, I concluded this was necessary because of the frequent moves and obviously limited facilities and supplies. Frequent movement, and conducting the entire operation from a tent placed severe restrictions on available storage and equipment.

Most of the apiaries I observed ranged from 20 to 40 hives. They were always placed on the ground, with only rice straw or plastic waterproof materials underneath. Beekeepers located their sites in areas that provided easy access from existing roads, and offered open flyways for the workers. In fact, hives were always situated immediately adjacent to a road, again because of the need to move frequently, as nectar sources shifted and relocation was required.

Mr. Yi, Jae Sun, a beekeeper I spoke to at some length through an interpreter, had located his hives near the shoulder of a provincial highway, adjacent to a mountain slope covered with acacia. The acacia growth was heavy, with trees covered with blossoms, creating a shimmering white mantle on the sun-covered slopes. Yi had positioned approximately 20 hives at the base of the slope, in a neat straight row, parallel to the road bed. Acacia grows extensively at all elevations on the mountains in Korea, usually providing abundant nectar flow for several weeks. Blossoms appear first on the slopes near the valley floors, and progress upward as the season advances. Yi was at the lower elevation when I talked to him, but was planning to move to a more remote location at a higher elevation in a few days. He was not entirely satisfied with the site he had chosen, near a frequently traveled provincial highway. It seemed to him that the noise of the traffic disturbed the bees.

Yi did not use a solid inner cover like ours. Rather, he used rice straw mats. placing them as a standard inner cover.

He believed the bees preferred this type of environment. To make an inspection, he would peel the mat back across the top of the hive exposing the frames. While we talked, his wife demonstrated the technique. Except for the rice straw inner cover, Yi's equipment was identical to any you would use.

His tent provided all of the necessities required for his nomadic lifestyle. The fabric was bright green, in the Korean cultural penchant for the colorful. Typically, every inch was utilized for living and storage — cots, cookware, and utensils were placed in an orderly, accessible fashion. The essentials of the trade, the smoker, one helmet with a net, and hand tools were near the entrance. A few hive bodies and frames were stacked inside and outside the tent. He kept a manually-operated extractor with his operation for the frequent harvesting that was required.

His wife accompanied him and assisted with the operation. In fact, in every operation I observed, both husband and wife shared the work. When working with the hives, the men normally wore no protection, indicating the local strain was easy to manage. Yi told me the strain used by all Korean beekeepers was indigenous to the Orient. They appeared darker and a bit smaller than the Italians I have kept. Although the strain was easily managed, the women, in concession to the universal problem experienced with bees and long hair, nearly always wore a helmet and net of some kind.

Yi is a retired teacher, maintaining a permanent residence in a small farming village in the winter, and engaging in his beekeeping lifestyle during the spring and summer months to supplement his retirement income. No doubt the remaining members of the family maintained the residence and practiced farming during his absence. Yi had not yet reached the stage in life where he could enjoy the leisure of a senior Korean man, wearing the traditional garb and horsehair hat still used in the countryside, as in centuries past.

On another occasion, I met a beekeeping couple in the early springtime, preparing their hives at an orchard site, just outside the wall of an enclosed village. I mention this particular encounter because of its uniqueness. The man and wife were working together. He used no protection at all, and would sit on one hive while opening the adjacent one for inspection, using smoke very sparingly. His wife wore a close-fitting, black horsehair helmet, contoured to fit the shape of her head. It was shaped very much like a jumbo garlic bulb, coming to a peak at the top. They had no problem at all with aggressiveness.

Beekeeping remains profitable in Korea. Imports of foreign honey are restricted and honey prices are high, the equivalent of $10.00 a liter in Korean currency. Packaging is always attractive, in glass jars of various sizes and shapes, frequently in decorative gift boxes. The market is strong, even at these high prices. Honey is prized as a health food, and with the strong national economy, the average family is willing, and able, to pay the price.

Beekeeping thrives in Korea. All operations are on a small scale, conducted by family units. It is consistent with the cultural heritage of the people, who have practiced many forms of agriculture for thousands of years. And the national policy of reforestation, the extensive orchards, and the independent spirit of the people are factors that insure the practice will continue far into the future.Δ

NEED TO FEED?

STEVE BURT

Feeding honey bee colonies is a subject most beekeepers will pursue sooner or later. Bees are fed artificial diets for a variety of reasons: they are fed various refined sugars, usually dissolved in water, to avoid starvation or to aid new colonies starting without stores; they are fed protein-rich substitutes of natural pollen to aid in brood rearing; and medications are occasionally administered by combining the medicant with an attractive food such as dry, powdered sugar or in a sugar syrup solution. To build peak populations of healthy bees, queen breeders and package bee producers often use stimulative feeding for population buildup, and they feed medications in syrup too. For most beekeepers though, the need to feed bees only occurs when an otherwise sound colony lacks ample honey reserves to survive the winter.

Feeding bees to prevent winter starvation is occasionally a necessity, but it can be a frequent problem in certain locations. Beekeepers who overwinter colonies without adequate stores will sooner or later pay a frightful price in spring "dead outs". Probably no sight is sadder than when a colony is opened in the spring and has comb after comb of clustered bees, perfectly preserved in their moment of death. This tragedy is all the greater because starvation in managed bees is completely unnecessary.

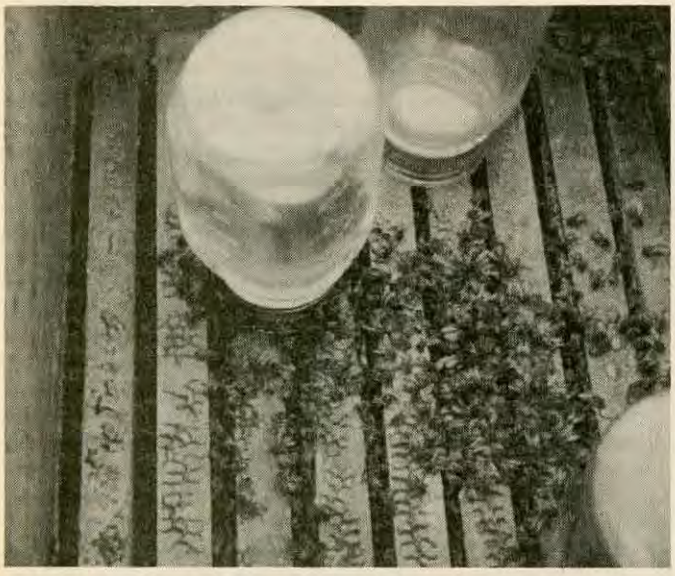
A post-harvest inspection of each colony should be a mandatory element in every beekeeper's management scheme. Not only is it necessary to assay the overall health, population, and queen performance, but also the amount and location of winter stores. It is crucial that the top super remaining on the colony be rock solid with capped honey. A glance at one or two combs from this "food chamber" super, and hefting the entire colony from the rear bottom board will give a quick *estimate* of the colony larder. Lifting, though controversial is adequate to gauge the colony's weight. A hive scale or other mechanism is also an ideal method to determine the weight of a colony's stores. While hefting, the colony should feel as if a sixty-pound can of honey was concealed inside since this is a general 'rule of thumb' for required overwintering stores. If your bees experience protracted periods of winter cold and confinement, and they are not in possession of ample stores, supplemental feeding should be seriously contemplated.

For colonies with real potential for the upcoming year but lacking these required stores, a feeding regimen must be considered. Feeding colonies can involve persistent effort and considerable expense. Several gallons of feed per colony may be required if it is truly barren of honey. The usual menu is a mixture of two parts granulated (NEVER use brown) sugar to one part water, by volume, mixed over low heat, or in very, very hot water to thoroughly dissolve the sugar.

The feeder design is a matter of preference, with many models available in bee supply catalogs and even more designs representing pet creations of inventive, and frugal, beekeepers. One caution: *any* feeder designed to feed bees at the hive entrance (such as a boardman feeder) will be valueless when cold weather sets in, as the bees will not leave their warm cluster to eat at a cold feeder, even if starving. Feeders above the bees serve syrup to the top of the cluster, and can be used day and night in any weather. If there was an ideal feeder, it would have most or all of the following qualities: easy to install; easy to refill; few or no drowned bees; useful in any weather; no robbing stimulation; and compatibility with medications when needed. Experience and preference are the best teachers, and after some of each it becomes obvious that some designs work far better than others.

Recently, we have had excellent success in our apiaries using ordinary Mason jars as feeders, incorporating only a few simple modifications. We punch about seven small nail holes in the flat part of the two-part lid. This is attached to a quart jar of feed using a standard Mason ring. Then, an extra ring is placed, threaded opening down, directly on the top bars over the cluster. The jar of feed is then inverted and balanced on this ring. The extra ring gives a bee space under the feeder jar, and the bees can crawl up and feed with ease. By centering several feeders over the cluster, consumption can be up to a quart or more per day. Of course the stronger the colony, the more, and faster this will be consumed. It is necessary to use an empty super to provide room for the feeders, and the hive is then covered with a normal outer and inner cover. This feeding system has been equally successful for feeding in the fall, and saving colonies in the spring found to be at the verge of starvation. Further, Mason jar feeding requires no pouring at the apiary site, avoiding the threat of robbing. Replenishing the feeders requires nothing more than the exchange of containers previously filled at home. This method of feeding is suggested for anyone having difficulties feeding syrup to bees.

Having to feed honey bees may be viewed as evidence of poor or negligent management. But to my way of thinking, the real measure of failure is winter loss. Every success in the apiary begins with healthy, thriving colonies. Feeding bees is an expensive, and less than ideal, method of preparing colonies for winter. It is, however, the last and best hope for colonies which would not survive otherwise.Δ



Steve Burt is a letter carrier, microgardener and beekeeper in Roseville, MI. He has been keeping bees for about 15 years and contributes to Bee Culture *regularly.*

What Else?

You might logically ask what other factors have a bearing on colony survival. A novice might find colony diagnosis confusing, but experience will teach you to not just see bees, but whether the brood pattern and quantity are sufficient, whether bees and brood are healthy, and whether the colony has that intangible, but vital quality of 'good morale'. Even for the inexperienced though, any hive in real trouble is obvious by comparison. While the best colonies proceed through the season and into the winter with high populations and good stores, problem colonies show obvious deficiencies — both outside and inside.

The most obvious distress clue is reduced flight at the entrance. Reduced pollen collection, when compared to nearby healthy colonies, is another good clue that something inside is amiss. Colonies noticeably abnormal in this respect should be inspected further, especially when noticed in the autumn, when swarming or slow colony development would not explain this reduction. A colony with numerous queen cells in late autumn may be queenless, and the danger is that a new queen may not successfully mate late in the season. Bees with end-stage American foulbrood (AFB) disease will have few young bees, so an examination of capped and uncapped brood is in order. Less serious brood diseases are associated with stress and spring development. AFB, however, develops throughout the entire brood-rearing period, building to it's culmination in the fall when the colony is usually too weak to survive.

Another distinguishing factor between colonies in distress and not is gross colony weight. When hefting colonies throughout the apiary, those in trouble will be obvious, and will feel empty and unoccupied. The lighter the colony, the graver the danger. In the occasional year when fall nectar flows are scant or fail completely, all the colonies may be seriously underweight.

The next decision — is the colony in difficulty worth saving? Is it headed by a quality queen? Does it have at least three or four pounds of healthy worker bees? Does the colony have at least a few combs of good winter food, meaning capped honey and some cells packed with pollen? In terms of morale, is the colony gamely trying to make honey and rear brood, or has it just given up? To save or not to save the bees? That is the question.

If a colony is a poor risk but free of disease, the best choice is to unite it with a stronger colony. Separating their point of union with a sheet of newspaper is recommended — commonly called *The Newspaper Method.* A recommended modification would be to place the weak unit on the bottom, lay a sheet of newspaper on top, and position the strong unit on top without disturbing the normal arrangement of the previously-stored honey. The colonies should be placed so that the field forces of both colonies, can be used, or at least the field force of the stronger unit. To do this you must combine adjacent colonies or locate the union where the stronger colony stood.

If one queen is superior, the other must be found and destroyed. However, they will resolve this problem themselves, and the more vigorous queen will dispatch her rival quickly.

PROFILE

The *Real* Steve Taber

LARRY CONNOR

Outrageous, unconventional, destroyer of myths, innovative, well-read, a maverick, critic, and a pain in the neck.

These are just a few terms I've heard used to describe Steve Taber — California queen geneticist/breeder and former USDA scientist. You might not like Steve Taber and Steve Taber might not like you either.

Taber is well-known to readers because of his monthly column here. He writes frequently, and he knows what he writes about. He currently owns **Honey Bee Genetics** of Vacaville, CA but since his retirement from USDA, he has started, and sold, another business, **Taber Apiaries**. These businesses were similar but **Taber Apiaries** also produced naturally mated queens. **Honey Bee Genetics**, however, concentrates nearly 100% on producing instrumentally inseminated queens. In many ways, Taber is doing exactly what he wants to do — trying to produce and market a better queen. Or, as he puts it, Super Bees.

Getting to know Taber

Like many of you, my first exposure to Steve Taber was while reading — in my case, a number of scientific and popular articles he wrote. I was a graduate student at the time, and his ideas impressed me. He challenged the established way of looking at things, destroyed myths, and was often unpopular for doing this.

As a graduate student I worked on crop pollination, and Taber wrote about factors which affected my area. He wrote about the importance of feeding bees, and stressed the need of understanding the biology of bees taking food from the comb to feed brood. He wrote one paper which I remember well. It dealt with feeding pollen in the hive, and how the placement of that pollen determined the consumption rate by the bees[1]. This was a paper which made a lasting impression and I applied it to my research; later to my extension work and beekeeper education.

The work was clear, the conclusions sound. He had discovered a little bit of science, and yet still contributed to the knowledge of beekeeping with a useful recommendation. In my own case, feeding pollen for queen and drone production became important when I tried the same thing in Florida a few years later.

But Taber is not always well-respected among scientists. He can be both a strong advocate and a blunt critic of the beekeeping industry in the United States, and not everyone is ready to hear what he has to say. If he thinks something will work, he tells you. If it turns out it didn't, he will tell you that he was wrong.

One little-known fact is his personal support of beekeeping. In the mid-60's when the International Bee Research Association was attempting to buy Hill House, Taber made a significant donation — one far larger than most beekeepers or scientists would have been able to make.

Visiting Vacaville

During 1987 I had time before the Western Apicultural Society meeting in Reno, so I drove to Vacaville. I phoned Steve and finagled an invitation for dinner, and a place to stay the night.

When I drove up, I was met by a tall, bearded man wearing familiar work clothes and a hat. We sat on the patio and talked in the late California afternoon. Taber had just completed a workshop on instrumental insemination and was full of stories about the events of the program. He was most amazed by the amount of food the students ate.

Taber cooked dinner that night for both his step-son and me. He and second wife, Bonnie (both of whom had visited me in CT the previous summer), were now divorced, but clearly remained friends. He is an involved and concerned parent to his children and step-children. With 8 children from two marriages, he has had plenty of practice. One suspects that he might embarrass his children from time to time, but I didn't see any sign of it. Instead, Taber was full of praise for his computer-oriented college-aged son, and bragged of him constantly regarding the work he had done for **Honey Bee Genetics** on programming and related chores.

The Business

Honey Bee Genetics was set up to produce breeder queens selected for traits Taber feels are both important and have commercial value. He does this because he wants to, not because he makes a great deal of money. We both agreed the economics are not good — there are too few potential buyers for these queens in our industry. I saw this when I was associated with *Genetic Systems, Inc.*, a breeding program designed to continue the Midnite and Starline program, as well as mass-produce instrumentally inseminated queens. Too few commercial beekeepers are willing to take the extra trouble to work with a queen not naturally mated. But more important, it seems that beekeepers lack a good understanding of the importance of top-quality breeder queens, and how they pay back many times the expense in both increased production and reduced management costs.

In some ways, Steve is doing now what *Genetic Systems* should have done — using a small staff to produce breeder queens for other beekeepers to use to improve their stocks. At GSI we became embroiled in the problems of producing hundreds of instrumentally inseminated queens weekly. Taber is only concerned with discovering better selection methods to produce a few hundred breeder queens each year. This means, of course, that there is a great deal riding on each queen he ships out.

Taber's staff is small, consisting only of himself and Tom Parrisian. Tom is a partner and was recently 'promoted' to marketing director.

Steve advertises his queens in the trade publications in two ways — he runs paid ads and he writes articles, lots of them. This is, after all, a form of advertising. He also irritates me to no end by 'consulting for free' when he delivers his famous b.s. lecture (for "bee sweet", of course) on the work he does at **Honey Bee Genetics**. He enjoys visiting bee meetings and will usually participate for the price of travel. He considers this excellent advertising.

Steve has a relaxed and direct delivery. He may sit in a chair with his feet on a table while lecturing, working without notes, and usually without slides. If you even start to nod off he is on you like a mad bee. I know from personal experience.

This style does not seem to put off most beekeepers and he will usually receive a flock of questions after his lecture. He stimulates thought, provokes and challenges an audience in his particular style, and beekeepers remember him.

Work at **Honey Bee Genetics** is seasonal, starting with drone production in the winter. Steve wants drones ready for insemination in January and February, so the breeder queen will have been tested in a nuc before it is sent to the customer. He likes to use lots of 'Taber' comb — those with drone cells along with worker cells — so the colonies are able to produce drones with greater ease during these normally 'off' periods.

> **"You might not like Steve Taber, but he might not like you either."**

Over the past several years, Taber has developed a number of simple and apparently effective ways of making evaluations for certain genetic traits. He started with work developed by OSU's Walter Rothenbuhler, on resistance to American foulbrood. This information has been available for over 20 years and he used it to develop a disease resistant bee. He developed a simple test using frozen brood, and measured the time it took for the brood to be uncapped and cleaned out of the cells.

Lately, he has been seeking selection methods for gentleness, and employs a method of opening and inspecting colonies while simultaneously making estimates of certain behaviors. Each colony is then 'scored' and given a place in the selection program. Using the gentlest queens for each generation, Taber feels that he is developing a group of bees which are much less likely to sting.

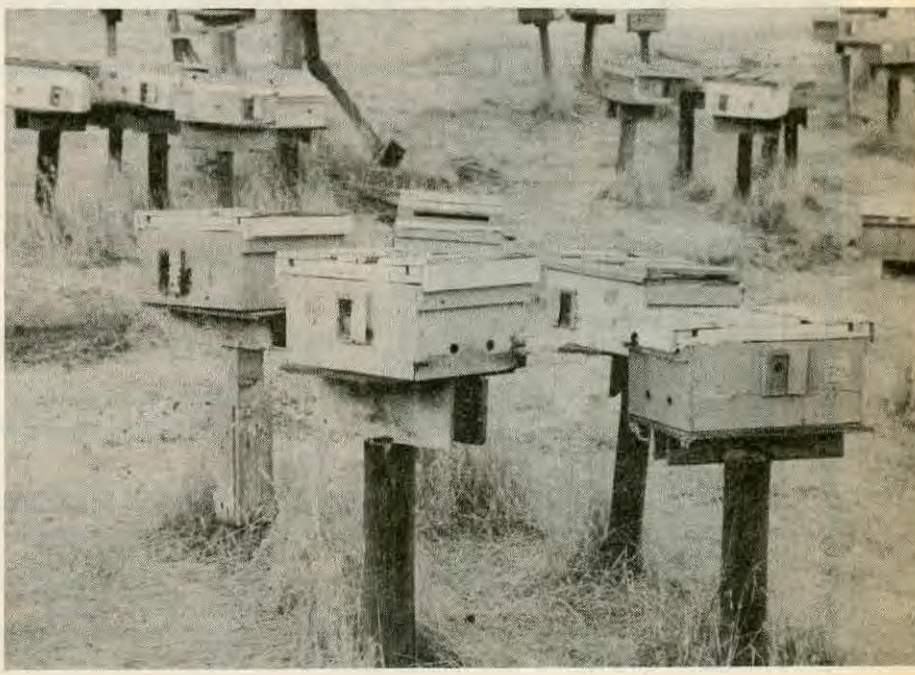
He has also selected for color of bees, and has worked on resistance to chalkbrood. Unintentionally, he feels he has selected for resistance to honey bee tracheal mites.

How can one person do all this, when bee labs labor for years to develop particular traits? Simply, he knows the research literature well enough to know what has already been done, and sets a course for a simple method which will generate results at a minimum of expense or time. Subjective measurements are repeated by various people on different days to give a more accurate reading of the true characteristics shown.

What makes Taber tick?

While not everyone would say they like Steve, I suspect many who know him will admit he fills a needed role in the beekeeping trade. He serves as a source of meaningful research — both

Continued on Page 579



Interview . . . Cont. from page 577

his own and the work of others — presented in a clear and understandable fashion. He has left unpublished more personal research than most of us will ever do.

To me, one of the most impressive facts about him is his thorough knowledge of beekeeping and scientific literature. Every morning he reads in his easy chair — before breakfast. Beside the chair is a pile of bee journals, genetic journals, Sc*ience*, and other publications. He reads constantly and retains what he reads. I think he has the best command of the literature dealing with general apiculture of anyone I know.

Nor is he a one-dimensional scientist, which reflects his family background. His grandfather was a geologist who studied the 1904 San Franciso earthquake, and contributed to a book on the subject. Taber grew up in South Carolina where his father was also a geologist, and has worked in New York, Wisconsin, Louisiana and Arizona. He lives in California by choice to take advantage of the beekeeping oppurtunites present there.

"He has the best command of the Bee Literature of anyone I know."

Taber uses his skills and experience to challenge and question the accepted norm for both the beekeeper and the bee scientists. He is not afraid to challenge a speaker in a clear and composed manner. If a speaker reacts strongly, Taber can too.

Knowing Steve Taber has held both rewards and surprises for me Writing about him and his work has not been easy, since he is multifaceted and must be approached from more than one level. I must admit I do not know the 'Real' Steve Taber, as the headline of this article might suggest, but perhaps I have seen one side of his personality and work that others may not know that well.

In many ways, he speaks for several issues I also champion. Or perhaps I have seen the same things he has seen, and realize he says what I would say — if I took the time. His work on pollen feeding, drones and other issues are cases in point.

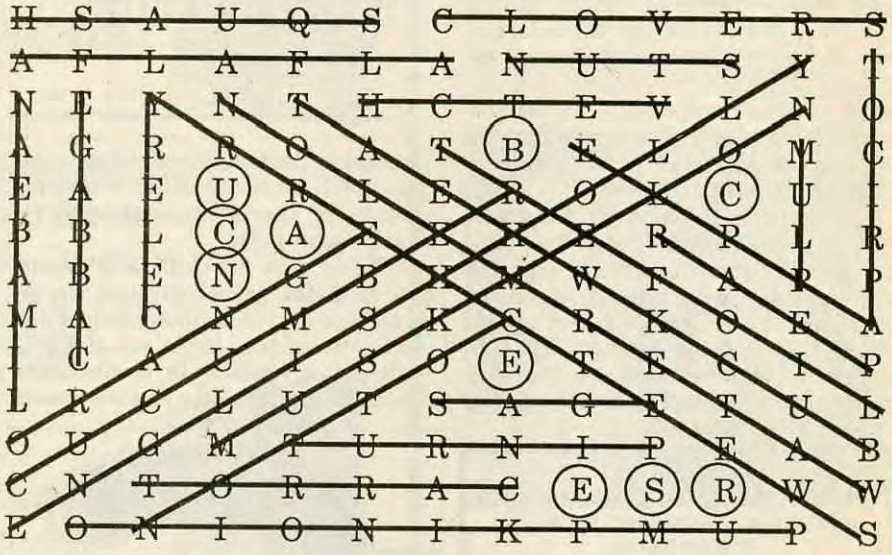
Most people don't know Steve. But getting to know him is an enlightening experience.Δ

1. Taber, S. 1973. Influence of pollen location in the hive on its utilization by the honeybee colony. *Journal. Apic. Res.* 12(1):17-20.

Answers to Honey Plants — A Word Game

From Page 569

Unused letters spell "BUCCANEERS of Buzz", the word the poet Emily Dickinson gave the honey bee.



Try Christmas COUPONS!

R. T. EDWARDS

Christmas is almost here. And, chances are you're pondering ways to acquire more business during the holidays, as well as into the new year.

There are, of course, many ways you can improve the market potential of honey and other products. You may not, however, have thought of the potential couponing may have for your business.

Couponing is big business for the big buck commercial food industry. In fact, it has become such a big business that many large food chains have manufacturer's coupons on computer. This provides the customer with the choice of matching coupon with product — coupons or discounts the customer may not have been aware of prior to going shopping. It is convenient, valuable and a service the customer appreciates. So why should you try couponing your products?

Well, couponing on a small scale is valuable for a variety of reasons. Handled properly, it can be a valued customer appreciation tool. It can be used as a way your present customers can introduce new customers to your products.

Carrying that thought to the Christmas Season, you can use the coupons to thank steady customers for their patronage, as well as just simply being a good friend and neighbor.

Another way coupons can be of value to your business is by using them at the place where coupons are thought of the most. That's right, at the local grocery store.

Most major food stores allow you to place a notice on a community bulletin board. You can use a flier the size of 8-1/2" x 11" on white bond and attach it to your coupons. The coupons could be made of the same stock, three on each sheet. They can be printed over and over again by simply making up a stamp in the size · format of the coupon — approximately 2-1/2" x 10".

Or, if you own a computer, you can simply place the data on it and make as many coupons as you think you are going to need. Also, having a printer make up an original, and then reproducing as needed works well.

Tie Them Into Christmas

Of course you can use coupons any time, but if you are going to use them for the Christmas Season, something like "Share Nature's Sweetest Gift with a Friend"; "Nothing like honey and hot tea"; "Spread the goodness around and earn a discount in the process"; or "Honey, a treat for every occasion, every season" are good grabbers.

"You can use coupons to thank steady customers for past business."

From that point you will want to explain what you mean. If your intention is to generate business by word of mouth advertising, then you need to explain yourself. You entice with the discount. You can, as well, leave a lined space where the customer can place his or her name and another space for a second name and use this as a gift certificate.

Remember, the idea behind the coupon is to offer your customers and potential customers with a coupon which entices them to buy more.

Therefore, you may choose to use different formats during Christmas. Go with gift type coupons for customers and introductory coupons at the food stores. These could include free samples or initial discount incentives. Here, too, your goal is to entice the customer to come to your home or place of business and be satisfied with the product initially. You hope to see a profit from ongoing sales thereafter.

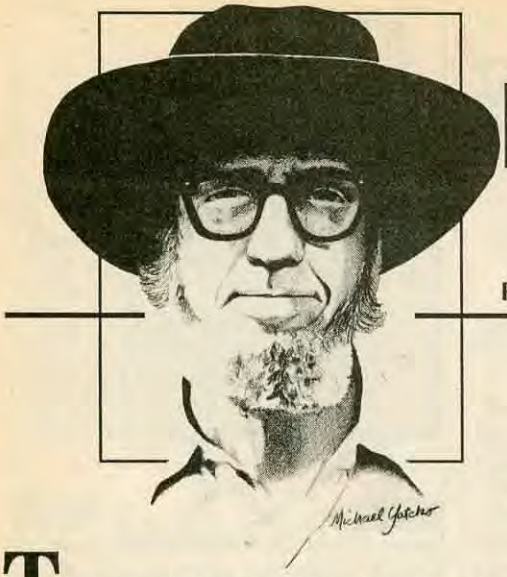
If the customer is already a steady customer, giving a discount defeats the purpose of the discount. If you sell a year's supply, you certainly do not want to offer a discount. That cuts into your profits.

Your goal is to offer coupons to those who buy limited quantities and who may purchase more with an incentive. Give a steady customer extra honey when you have a surplus, and when the slow selling season is knocking at your door.

If you introduce honey to potential customers, and to your steady customers' friends and neighbors through coupons this Christmas, Santa will probably be good to you in 1989.

But, if nothing else happens, a lot more people are going to know there is a beekeeper in the local area offering nature's finest natural sweetener and thinking about his customers.Δ

R. T. Edwards is a free lance business writer, who has contributed to Bee Culture *several times in the past. He distributes coupons and writes in Tucson, AZ.*



BEE TALK

RICHARD TAYLOR

9374 Route 89, Trumansburg, NY 14886

"Observations on the season, and the season's end."

There are quite a few things I want to talk about this time. Trouble is, they don't have much connection with each other. I had a very hard time passing the course in English composition when I started college, but one thing I do remember is that an essay is supposed to have a central theme, and all the parts are supposed to fit together into a continuous whole. Well, that was a long time ago, so I'll pretend I've forgotten that.

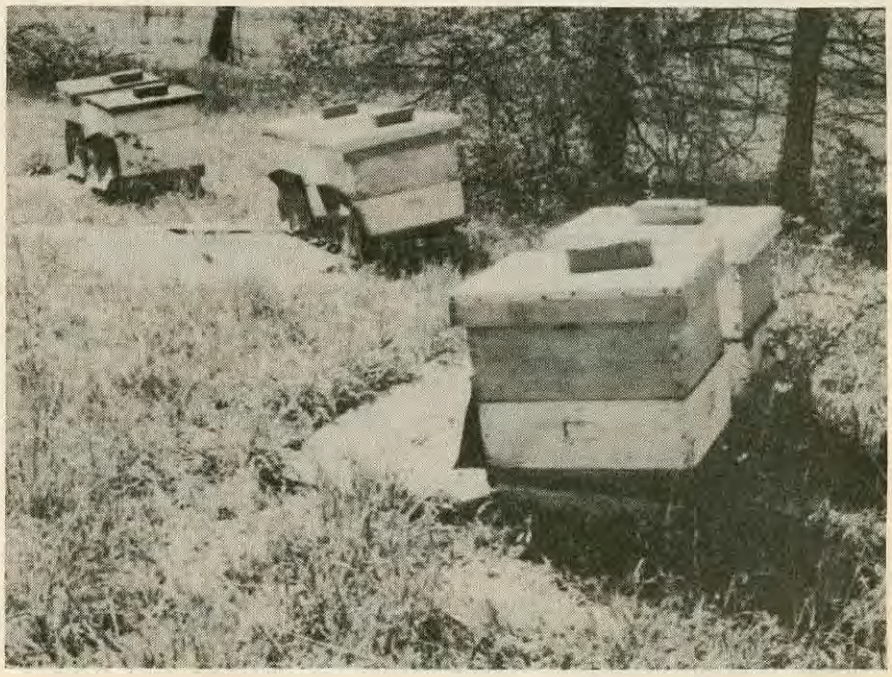
As with every year, I learned quite a lot this year. A beekeeper never stops learning new things, provided he keeps his eyes open and tries to notice what's going on. I learned that a prolonged dry spell, approaching drought, is not at all bad for bees, at least not here. It was the best season for honey I have ever seen, and it's not over yet. Actually, I've seen that before. About thirty years ago, back in Rhode Island, we had a very dry summer, and the bees did just fine. I believe it has something to do with the abundance of sunshine, which stimulates nectar secretion, but there are doubtless other factors as well.

The farmers around here were slow getting the alfalfa mowed, to my delight. Maybe they thought it was just too hot. One good field is about midway between two of my apiaries, and I kept a close watch on that as the bloom developed. The owner never did get around to mowing it. On one particularly hot day I stopped to find lots of bees on the blooms. So I naturally looked forward to checking my bees, to see whether the supers were filling up fast with nice white alfalfa honey. I looked, about a week later, and couldn't see that the bees had gotten a bit of honey since the last time I'd checked them. Actually, that didn't surprise me very much, because I've seen it happen before. You think, judging by the bloom, that the bees must be making lots of honey, only to be disappointed, and then another time, when you think they haven't been doing anything, you go and find the supers loaded with new honey.

I think I also learned something about buckwheat. This is a very fickle honey plant. You can have fields of it right next to your bees, and then find not a drop in the hives, and then you go to another apiary, where you haven't seen any buckwheat fields, and find your hives full of it. Comparing notes with a friend of mine, we decided it's got to be the soil. Over on the western side of the county, where the soil is very poor and most farming is marginal, we often get great buckwheat flows, while over here on the eastern side, where the soil is rich and fertile, we hardly ever get buckwheat, even when lots of it is planted. Many honey plants are like that. They yield beautifully in one area, then don't amount to anything somewhere else, so far as honey goes, even though they seem to thrive. It's got to be the soil. Different plants need different kinds of soil to make nectar.

I also learned something about how bees repair old combs. I probably shouldn't say I learned this, for I more or less knew it already, but I nevertheless was impressed. I had a hive body of extremely dirty combs. I'd picked them up at a derelict apiary that I had acquired. This hive body had been sitting there empty for several years, and the combs were all dried up and brittle, which is probably why the wax worms hadn't eaten them up. Some were really dirty, and there was no way to clean them up.

I set this hive body on a colony from which I had harvested all the honey I was going to get from it, to let the bees



clean up the combs. Maybe I should have just burned them up, but I hate to throw anything away if I can help it. Anyway, by the next day there was a considerable accumulation of dirt and refuse in front of that hive, as the bees, undaunted, set to work cleaning up the combs. A week or so later I opened the hive to have a look. I saw that where the combs were so dirty and encrusted that the bees couldn't clean them out, they just cut out those parts of the comb, dirt and all, thus getting rid of the problem, and were starting to build new comb to fill up the holes thus created. It may seem odd to admire an insect, but I don't see how one could fail to, seeing this sort of thing.

Now, finally, I should say something about wintering. Here is a picture of some of my hives, all ready for winter last year. They look pretty funny, tipped forward like that, but that's an important part of wintering. Dead bees do not accumulate on the bottom board or at the entrance. So every fall, on my last visit to the apiaries, I slip a brick or piece of wood under the back of each hive, tipping it forward. Besides that, all I do is stuff a piece of hardware cloth in the entrance and slap a scrap of tar paper across the front. I don't know why it is called hardware cloth. It's wire mesh, with quarter or half-inch holes. That's for keeping mice out. It is held there with a couple of quarter-inch staples, and it's apt to be left there right through the summer and the following winter, since the bees pass through the holes easily enough. The scrap of tar paper is also held more or less in place by two or three staples. That's to keep the wind out. It goes across the whole entrance, but the bees get in and out with no trouble around the edges. That, of course, is pulled off first thing in the spring, and the scraps of tar paper are piled on one of my hives, under a brick, most of them good enough to use again. That's all I do for wintering — no feeding, no wrapping — and the bees almost always come through fine. That's because they are heavy with stores, from the late flows, since I don't put any supers on after the first of August. And they are only one and a half stories, as shown in the picture. That's big enough, provided they are heavy with honey.

(Comments and questions are welcomed. Please use Trumansburg address, above, and enclose stamped envelope for a prompt response.)

QUESTIONS?

-Q- *After extracting my shallow supers I replace them on the hives for winter and let the bees take care of them. Can I use Fumidil-B and Terramycin on the top bars of these supers?*

J. M. Henderson, Big Spring, TX

-A- No, such substances should never come in contact with combs from which honey will be extracted. I think it would be better to keep the supers off the hives until they are needed.

-Q- *What is the best way to let the bees clean extracted combs without causing robbing?*

Earl Croisant, Omro, WI

-A- I believe extracted combs should be stored away sticky, but protected from mice. But if you want to store them dry you can put them over hives on top of inner covers with the inner cover hole reduced to the size of a bee, then remove them on a cold day. If the inner cover hole is left larger then the bees will cluster in the supers and it will be hard to get them out.

-Q- *If you winter bees in a single hive body plus one shallow super, is it necessary to feed them in March?*

Wayne Emerick, Hyndman, PA

-A- Not if you are raising comb honey and you get all your honey harvested by mid-August, leaving all the late-flow honey for the bees to winter on. If you produce extracted honey and harvest the fall flow, then you will very likely need to feed them, both fall and spring. But comb honey should never be produced on fall flows in your latitude.

-Q- *Is it all right to store combs containing honey and pollen with paradichlorobenzene/moth crystals until I use them again?*

Albert L. Hilty, Bowling Green, MO

-A- Honey absorbs the odor of PDB crystals, and while this is not *toxic* to bees, they do not like the residual odor. It is sometimes difficult to hive a swarm on combs that have this odor. Sticky supers that have been exposed to PDB cause no harm, however, for the bees soon clean them dry. Comb honey that is to be marketed should never be stored with PDB crystals.

-Q- *How far do drones fly in search of virgin queens? I have heard reports from Germany of marked drones found thirty miles from their hives.*

Ernie Fuhr, Fort St. John, B.C.

-A- I believe the answer to this is not known. Until recently it was thought that drones go to drone "congregating areas," but it now seems more likely that these congregating areas are determined by topography rather than by selection. In any case, such concentrations of drones have been found where there were no *known* colonies of bees nearby. As for finding a marked drone thirty miles from his hive, bear in mind that drones, unlike workers, have little hive fidelity, drifting from hive to hive and even from one apiary to another. I suspect that wind had a lot to do with that drone ending up thirty miles away.

-Q- *I intend to leave the honey from the fall flow on the hives for the bees to winter on. Should I reduce the hives to one and a half stories prior to the fall flow? Will the bees run out of storage space and stop gathering nectar? Or will they reduce brood rearing?*

Todd Farmer, Hagerstown, MD

-A- If you plan to use one and a half story hives, then you should keep them to that size the year 'round, rather than reducing them to that size in the fall, and if you plan to produce extracted honey on that size hive, use a queen excluder. Such a hive is ample for brood rearing and for winter stores, as brood rearing is naturally reduced in the fall.

-Q- *My apiary is in a very shady lot, and I have been told that the shade will make them cross. They are very defensive right now, but that could be due to the honey flow. Does shade make bees cross or cause other complications?*

Boice Burns, Houston, TX

-A- I have always preferred shaded spots for my apiaries, and have never thought that this had the slightest tendency to make the bees cross, although very deep shade, amounting to perpetual near darkness, should be avoided. A honey flow does not make bees cross, but the very opposite.

-Q- *How can I find out what colleges teach apiculture?*

John Byers, South Haven, MI

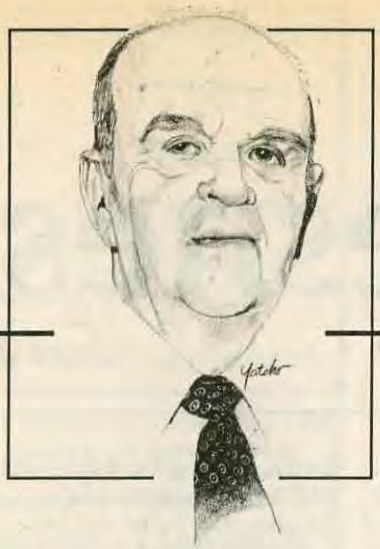
-A- *Bee Culture* periodically publishes a list of such colleges and one can be found in the Annual Who's Who in Apiculture published each April. Some colleges will offer advanced degrees. Among the outstanding apicultural programs are those of Cornell, the Univ. of California at Davis, Wisconsin and Minnesota.

Editor's Note: Other institutions exist that will teach beekeeping if a degree is not required. Further, campuses such as ATI in Wooster, OH, and Fairview College in Canada offer 2 year assocaiate degrees. Generally, nearly every Land Grant University (and many private and State Colleges) teach apiculture on an occasional basis, meeting local demand.

Questions are welcomed. Address Dr. Richard Taylor, 9374 Route 89, Trumansburg, NY 14886, enclosing a stamped envelope. No phone calls, please.

ANSWERS!

Richard Taylor



KOOVER'S KORNER

CHARLES KOOVER

1434 Punahou St. #709• Honolulu, Hawaii 96822

"When Misfortune Strikes."

The Hoosier State has a Health Spa with water that has a purgatory quality. They also have a jingle. "If Nature won't, Pluto will, and if Pluto won't, make your will". I want to apply that to what happened to our farmers and beekeepers. "If Nature won't, Uncle Sam will", and so it will be and make sure that you let the powers in Washington know that you are suffering just as much as the farmers do.

For the forty some years I kept bees in Southern California only 2 or 3 were bumper crop years. Our rains came down from the North from November till March as winter storms, and that was the end of it for the rest of the year. Most of them dropped their precious loads of water in Oregon and Northern California because the Cascades and the Tehachapi mountains would cause them to veer eastward, and we would go without. Luckily the mountain shrubs could produce a crop of honey but it usually was of poor quality. The orange and sages, like black button sage, would lose out, and so did we.

But strange as it may seem, this year (not withstanding Varroa and loss of foreign markets for our honey) the interest in beekeeping is on the rise.

What is sweeter than the contented hum of bees in a garden in bloom?

One dealer wrote me that he has a class of way over a hundred beginners who wanted to learn how to get started. It's the same in England, for not withstanding two bad crop years, interest in beekeeping is on the rise there too.

But that's not what I want to talk about. I have kept bees for over 40 years, but now I have no place to keep them, in this retirement home, and I miss them. My bees were an inspiration to me. Things didn't always go right for me but their tenacity to search for nectar, no matter how short the supply, gave me the strength to carry on. They search from sunrise till sunset to bring food to their young. And they taught me something else. To be thrifty and save for a rainy day. I was not always that way.

Bees in the wild seldom die of starvation. When you cut down a bee-tree there is always a hoard of well ripened honey in it. And even in a bad year like this you will find they have stored enough to see them through the winter. So I implore you beginners, *don't touch their money in the bank and cause them to starve for lack of food.*

Feeding them in winter with sugar syrup is a poor substitute for well ripened honey. Be generous and kind, and you'll sleep better when winter storms swirl around your hives. I have said it before and I say it again; "Bees are the most abused animals man keeps for his exploitation. Housed in uncomfortable small boxes, they are hauled around to pollinate crops, are subjected to diseases, and for all their efforts to garner a crop of winter food they may be robbed of it and fed a substitute which is never as good as the real thing."

They deserve better, for like all of us they are the children of Him who is the Creator of us all.Δ

Funny Beesness

ROGER WELSCH

My intention when I started this column was to publish the best humor about the bee business, but you folks keep sending me stories that you insist are true. I suppose that about the best thing for me to do is to pass along the material and let you readers decide whether we should send the contributors a prize or a free pass to Sunday School.

A while back, for example, I got this letter from Jim Lowe over at Red Hook, New York. For his trouble, I'll send him ten rods of bee fence and a copy of *Shingling the Fog*, and, well, here goes:

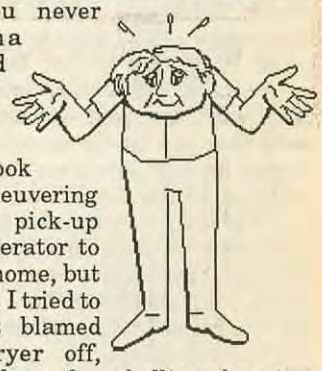
"The facts as I'm about to present them are, I confess, so bizarre that I've been reluctant to share them with anyone for fear of being taken for cracked, or worse, a liar. But after reading about you and little lame Phoebe in the May *Gleanings in Bee Culture,* I've decided you, at least, might realize that strange things *do* happen — although to tell you the truth, calling your column "Funny Beesness" might make some more cynical folk think you're pulling *their* leg, not just little Phoebe's bent one.

"Anyway, some years back I was called about a swarm that was causing some consternation at a local amusement park. It seems it had settled in on their carrousel and turned it into a not so merry-go-round. In fact, those bees had it all to themselves.

"Well, I got there with my hive-box and brushed that big swarm right in, to great applause, but within seconds that swarm spiralled right up and out of the box and back onto the carrousel. So I tried again, made real sure I had the queen in the box, but no matter — right back to the carrousel.

"That's when inspiration struck. Those bees were addicted to going around in a circle. That explained the spiral flight and their unhappiness with my boring, motionless hive-box. I told the distraught manager not to give up hope, that I'd be right back.

"And I was too, with an old washer-dryer we'd kept, figuring it would come in handy some day. I set it up next to the carrousel, plugged it in, and set it on spin-dry. When I put that swarm in there, you never heard such a contented buzzing and humming.



"It took some maneuvering with the pick-up and a generator to get them home, but every time I tried to turn that blamed washer-dryer off, you could hear the rebellious buzzing start up in there and their little steering committee drawing up exit plans.

"So, I've just left it running ever since. Well, except for stopping it quickly once to drill a hole in the side, down near the bottom. You've probably been saying to yourself, now this guy is the biggest liar since the last political campaign: there's no way he could get any honey out of that swarm.

"Well, that's what that hole is for: that old washer-dryer spins the honey out through the hole into jars I attach there, just as fast as the bees make it.

"By the way if you notice any bees whose bee-lines look more like a spiral, point them back to Red Hook, will you?"

Sure, Jim, sure.

As for the rest of you, send along your bee stories, anecdotes, jokes, tall tales, wisecracks, or whatever, and when we use it, we'll send you a book of even worse stories. That should keep you popular at the coffee table in the local cafe!Δ

That's Roger Welsch, Primrose Farm, Dannebrog NE 68831. Don't wait! Do it now!

TESTING ANSWERS

From Page 556

1. **True.** Wax moth larvae seldom attack new combs and foundation, or combs that have not been previously used for brood rearing, as they cannot survive on pure beeswax. They devour old, dark brood combs for the protein contained in the pollen, cocoons and other materials in the comb.
2. **True.** The phenomenon of one insect attaching itself to another for transportation is called phoresy. Numerous species of mites, that are normally associated with plants, often attach themselves to foragers and are accidently introduced into the hive. Since they use the bee as a means of transportation, they are referred to as phoretic mites.
3. **False.** Varroa mites begin to reproduce with the onset of brood rearing in the spring and continue until autumn. Reproduction of mites is limited only by the availability of brood. During winter confinement, female mites survive by attaching themselves to adult bees in the cluster.
4. **True.** Skunks are insectivorous (insect-eating) and often raid the bee yards nightly, consuming large numbers of bees. They approach the hive, scratch on the entrance and devour the bees as they emerge. Mother skunks have been observed teaching their young to feed at colony entrances.
5. **True.** The bear is an omnivorous animal which means they will eat almost anything. Bears cause severe damage to hives as they feed on honey, adult bees and larvae.
6. **False.** Adult bee lice spend their lives on the bodies of workers and queens. *Braula* move rapidly over the body surface, settling on the dorsal surface at the junction of the bee's thorax and abdomen. They remain there until a hunger response causes them to crawl up to the bee's head near its mouthparts. This movement seems to irritate the bee, causing it to regurgitate a drop of nectar. *Braula* then inserts its mouthparts into those of its benefactor and takes its food.
7. **False.** The female varroa mite is brown to reddish brown in color, measuring 1.1 to 1.2 mm in length and 1.5 to 1.6 mm in width. Males are about 0.7 by 0.7mm and yellow to grayish white in color.
8. **False.** Wax moths are not a threat to strong, normal colonies. They are secondary invaders, entering weakened or dead colonies destroying unused or unprotected combs. Wax moths are unable to kill colonies.
9. D) Wisconsin
10. Beekeepers typically protect their colonies from bears by constructing an electric fence around the apiary, placing their colonies on raised platforms or placing their colonies in an old school bus or livestock trailer. When these approaches are not practical, then moving the colonies out of the area is the best solution.
11. D) Adults, larvae and pupae (Varroa mite)
12. A) Adults only (Honey bee tracheal mite)
13. B) Larvae only (American foulbrood)
14. A) Adults only (Nosema)
15. B) Larvae only (European foulbrood)
16. A) Adults only (Paralysis)
17. B) Larvae only (Chalkbrood)
18. B) Larvae only (Sacbrood)
19. A) Adults only (Skunks)

ANSWERS TO EXTRA CREDIT QUESTIONS

20. A) Mite
21. C) Toad
22. D) Mammal
23. B) Bird
24. A) Mite

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

Number Of Points Correct

25-18 Excellent
17-15 Good
14-12 Fair

INNER COVER . . . From Page 547

Well friends, read on, because we've got it all (well almost all of it) right here! Actually, we're not going to get through all of it this time, there's just too much. But there's a lot here now, so let's get going.

Before you ever meet with a reporter, be it TV, newspaper, radio or magazine, there are some basic things you should know.

1. BE PREPARED

There are many things about beekeeping that should be said at every opportunity — the value of pollination, honey, wax, wild life, etc., etc., etc. Every time you have the chance you should get this stuff out to the folks who are going to hear (see) it. So, know what you want to say, and know how you are going to say it. Use whatever questions you are asked to say these things.

To do this you must do some homework first. Anticipate the questions you will be asked. Most you already know, have already been asked, or have heard others answer on TV. They're pretty standard. But, if something new is in the offing, if something broke this morning, or yesterday, then the rules may change. And, you have to change with them. Know what's happening in the world, or at least in your state or city. If you know as much as the reporter, chances are you won't be terribly surprised at any of their questions. (This does not, however, have anything to do with a crisis. That terrible disaster that just happened down the block, or in another city, but could happen here. This is a whole different ballgame, and we'll deal with that a bit later.)

Once you have anticipated the questions, you have to come up with the answers. These answers have to be right, and they have to be convincing. They must be specific so that they are remembered, and they must be accurate, backed up with facts, statistics and/or personal experiences. They must be correct, because if you're caught in an error your credibility is shot. They must be interesting too, so that your listeners don't fall asleep during the talk.

And finally, NEVER lose your temper. Gandhi once said, "If you are right you can afford to keep your temper, and if you're wrong you can't afford to lose it."

2. STYLE

There is a golden rule here: Impressions will always outweigh substance — manner over matter.

You can call me whatever names you want, disagree all you want, but at the end of an article or TV interview it's the *impression* that the viewer or reader remembers — emotions win over intellect every time. Sad perhaps, but true.

With TV this is fairly easy to see — good appearance, clean clothes (if appropriate) or work clothes, an 'at-ease' posture (but not too relaxed), or a smile (frown, grimace or wink) at the right time. All these tend to make people 'like' you, help them relate to you as a person, show them that you are somebody like them — somebody they'll remember. They may not remember what you said past supper, but they'll remember that 'nice beekeeper' forever. You tell me, which is more important?

With a newspaper or magazine this isn't quite as easy, but there is the "Q" factor to keep in mind. "Q" = *quotability*. That fantastic one liner, or at most, two liner, that makes a good headline. An example — Killer Bees. This phrase fits ever so much easier at the top of a column of print than Africanized honey bees; somebody came up with an even better one — the "K" word. You may not like it but the press does, and so will the readers. It's memorable, and it fits in a headline.

3. BACK TO BASICS

PR — generally considered Public Relation, also stands for *Press Relations*. And it is these relations that need special attention. Let's take a look.

Right now is the best time to start 'good' press relations. There is no emergency, no panic, nobody dying in the streets or the like. Now, both you and the press can deal with each other in a far more relaxed manner. You can get a chance to know one another, not only professionally, but personally, too.

If you play straight with your local press now, when an emergency arises, the inclination will be that you always play straight. But if you are hesitant, or blatantly ignore these folks, on judgement day there will be a strong feeling of distrust toward you. So, no matter how good a person you are, if you haven't been in the game in the past you will automatically be viewed with mistrust. Instantly you are fighting an uphill battle — notice those two words — fighting and battle. Life is hard enough without making it worse intentionally. This may not seem fair, but what is, really?

Another advantage to this relationship is that when there is an emergency, these media types will already know the 'who, what and where' of you. They'll be able to save a lot of time, when time is important. The only things they'll need to know is the 'when and how' of the particular incident in question.

"Ah, but how do I get this relationship going?" A good question, and it is vitally important that you do, now!

To garner the attention of the media, and we'll focus on your local TV and/or newspaper for the moment, you must demonstrate that what you have to say is not only of interest, but will benefit the public at large. And, the more visual, the better, and the newer (or the old made new in a better way), the better.

I'm not talking about motive here. You may be as selfish as you wish (for goodness sakes don't get caught). But honesty is *never* an alternative. It is the only choice.

I'll give one example here, but there are thousands that beekeepers can use. The drought this summer posed serious problems for everyone in agriculture. Probably every TV and newspaper carried several stories about how it affected the corn, soybeans, wheat, alfalfa, etc. But bees? Now there's something different.

Bees make good visuals; hives in rows, bees on landing boards, and frames of honey (or maybe empty frames — remember, this is a drought). Even visuals of you, talking about how this severe drought is not only affecting your bees, but because of the poor conditions, plants are not getting pollinated (and here is a good side bar on the value of pollination). Comment on how this will raise havoc next year with your bees, the indigenous wildlife and maybe even the farmers who depend on your (now reduced) bees.

The story is visual, it will benefit the public to know it, and it's certainly more interesting than rows and rows of stunted corn and brown soybeans.

But once you have gained the media's attention, and respect, there are many pitfalls still to come —

- Irrelevant questions
- Inconsistency (yours)
- Attack!
- Attacked!
- Crisis!

. . . and even more.

You can handle all of these. But it takes practice, and you'll need to read this article next month, when we finish with — the media and you.Δ

NEWS. . .

Who'll be the New AG Secretary?

COLUMBUS, OH. Who will Michael Dukakis or George Bush pick to be Secretary of Agriculture?

Agricultural policy specialists at Ohio State University aren't predicting who the new secretary will be but say the choice will fit the party line as well as the new president's personal management style.

"I would guess that the new president would not want a highly independent secretary of agriculture because agriculture funding will be continually constrained by other national priorities," Luther Tweeten says. "The president doesn't want someone going off on his own creating an agenda when there is a bigger picture to consider."

The economic philosophy of the agriculture secretary will depend on which candidate is elected, Carl Zulauf says. He expects a Bush administration to choose someone more oriented toward a free-market philosophy. A Dukakis administration, on the other hand, is likely to choose someone more oriented toward managing supply. Exactly who is chosen will depend on what the new president expects the secretary to do.

"Does the president want someone to oversee the policy development process or someone to run the machinery of government? We've seen both types and generally, it takes a different kind of person to do each job," Zulauf says.

Tweeten and Zulauf say the following will also help decide who's chosen:

- Personality — the secretary must get along with the president and his chief advisers.
- Roots — either the secretary or the deputy secretary must know the farm community and relate well to it.
- Administrative background — the USDA is a large organization.
- International experience — critical if trade is a major agenda item.
- Political experience — the secretary has to work in both the political and agricultural arenas to set policy.

UC Division of Agriculture and Natural Resources Releases First Volume in Pesticide Application Series

DAVIS. "The Safe and Effective Use of Pesticides", a comprehensive guide for selecting, using, handling and disposing of pesticides, is now available from the University of California's Division of Agriculture and Natural Resources.

The 400-page book is the first of a six-volume compendium on pesticide applications. Subsequent volumes will focus in more detail on specific pesticide uses — agricultural, structural, landscape maintenance, greenhouse and nursery, right-of-way, forest, aquatic, demonstration and research, public health and regulatory.

Volume 1 is the required study guide for persons preparing to take state exams for a Qualified Pesticide Applicator license or certificate. Additionally, it will prove a valuable reference for pest control operators, pesticide applicators, pest control advisers, growers, pest management students and anyone using or supervising the use of pesticides.

The manual covers general aspects of pesticide safety, effective ways to use pesticides, methods of pesticide application and calibration of application equipment. It also provides information on pest identification and management, with a special emphasis on integrated pest management. Pest identification, selection of appropriate pesticides and proper timing of pesticide applications are emphasized throughout the text.

The kinds of pesticides and their uses are fully described. Formulation types are explained and compared with tables to help the reader select pesticide formulations that best meet the specific situations. Descriptions and uses of adjuvants, which can be combined with pesticides, are provided. Incompatible pesticide mixtures and their prevention are also illustrated.

A significant section of the book is devoted to techniques that avoid injury to people and the environment — preventing spills, groundwater contamination, and spray drift, as well as protecting endangered species and other wildlife.

Text is illustrated with hundreds of photographs, drawings and tables created especially for this volume. The photos show "real life" application and handling of pesticides, while drawings illustrate application techniques, equipment and pest identification.

To order a copy of *The safe and Effective Use of Pesticides*, request publication number 3324 with a $30 check or money order payable to UC Regents. (Visa or MasterCard orders can be placed by phone.) Send to ANR Publications, dept. NR, University of California, 6701 San Pablo Ave., Oakland, CA 94608-1239. Discounts are offered on orders of 10 or more and to commercial customers. For more information call (415) 652-2431.

Varroa Found in Rhode Island

On July 12, 1988, the Rhode Island State Bee Inspector reported the discovery of *Varroa jacobsoni* in six honey bee colonies located in Kent County. The six colonies were part of a 170 colony migratory operation and were destroyed by state regulatory authorities as per Rhode Island Division of Agriculture regulations.

Reprinted from *Apiculture Awareness*

Africanized Honey Bee Movement Within Mexico

The most recent Africanized Honey Bee find in Operational Unit #1 was a swarm captured at Rio Grande near Puerto Escondido. This find puts the most northern edge of the Africanized Honey Bee migration at roughly 250 miles south of Acapulco on the Pacific Coast. On the Atlantic Coast (Operational Unit #2), three Africanized Honey Bee swarms were collected at Actopan, Veracruz, approximately 40 miles northwest of Veracruz city. These reported finds represent the most northward advance of the Africanized Honey Bee in Mexico as of July 18, 1988.

Reprinted from *Apiculture Awareness*

New Beekeeping Laboratory Under Construction at the Ohio State University

A honey bee research laboratory is being constructed at the Ohio State University, Columbus, OH. The 6500 square foot research facility will have a conference room, offices, laboratory space, and equipment storage space and is costing more than $400,000 to construct. Dr. Robert Page, Department of Entomology, will use the facility to conduct funded research and teach beekeeping classes. Additionally, the facility will

provide work space for graduate and post doctoral students. The completion of the new laboratory represents years of persistent support of concerned state beekeepers and university administration.

Reprinted from *Apiculture Awareness*

Sweet things happen when you mix a natural pair . . . Honey and Lipton Herbal Tea.

The National Honey board's cooperative ad with Lipton Herbal Tea will appear in the October and/or November issues of leading consumer magazines.

Watch for the ad to appear in *Better Homes and Gardens, Good Housekeeping, Good Food, Ladies Home Journal, Woman's Day, Modern Maturity, Redbook* and *Reader's Digest.*

The ads will be complemented by honey coupons in specially marked Lipton Herbal Tea packages and on Lipton tea displays.

In addition, the Honey Board and Lipton Herbal Tea are sponsoring a retail contest.

American Beekeeping Federation Names Troy Fore as new secretary

A new secretary-treasurer has been named for the 2,000-member American Beekeeping Federation.

Meeting in Fargo, ND, in July, the Federation's executive committee selected Troy Fore of Jesup, GA, to succeed the retiring secretary, Frank Robinson. Robinson has served in the post since 1978.

The Federation office has been moved from Robinson's home in Gainesville, FL to Jesup, where Fore also publishes *The Speedy Bee*, a monthly trade journal. He will continue to publish it separately from his function as Federation secretary; the *ABF Newsletter* will also continue publication.

Fore, 43, is a second-generation beekeeper with experience in all phases of beekeeping — from queen breeder to producer/packer to migratory beekeeper. He maintains a small honey-production outfit. He has been editor/publisher of *The Speedy Bee* since he started it in 1972.

An ABF director from Georgia since 1975, Fore served four years on the Federation executive committee. He was chairman of the Georgia committee which organized the 1982 Federation convention in Savannah and served as chairman of the 1986 convention in Phoenix.

After the new secretary was selected from among three finalists, ABF President Reg Wilbanks said, "I feel we have made an excellent choice. Troy has the experience and the capability to do a good job for us."

Fore has been working as editor of *The Press-Sentinel*, Jesup's twice-weekly newspaper, since June 1986. He has resigned that position to accept the Federation post and have more time to devote to *The Speedy Bee.*

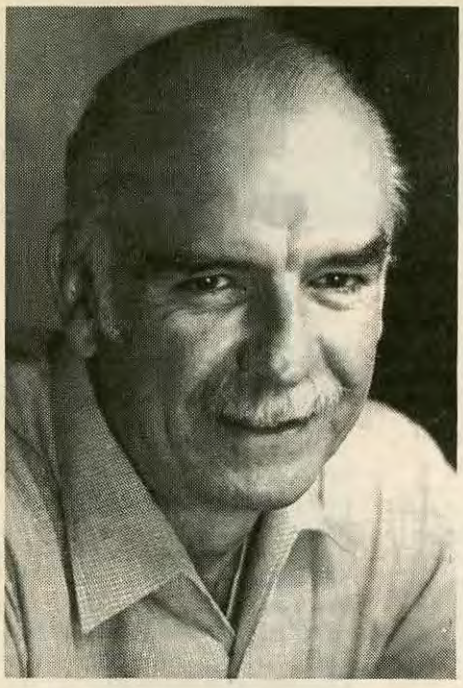
"I enjoyed working at the community paper," he said,"but I look forward to getting back full time into beekeeping affairs. Frank and Sarah Robinson have brought high standards to the Federation office — with much help from bookkeeper Marilyn Butler. I will attempt, with the help of the officers and membership, to continue in their tradition."

Fore's wife, Mary, is involved in the family business, as have been their two sons. Howard is a junior at the University of Georgia; Andy is a junior in high school.

Robinson retired in 1985 from the University of Florida where he was a professor of Entomology. He said he and his wife, Sarah (who has been Federation assistant secretary) plan to have time again to go fishing and visit their family. Frank plans to set up his woodworking equipment in what has been the Federation office.

"We have enjoyed our association with the beekeeping industry over the years," Frank said. "We plan to keep up the many friendships we have developed, but we look forward to passing the secretary's job on to Troy. We feel it will be in capable hands."

The new address of the organization is American Beekeeping Federation, P. O. Box 1038, Jesup, GA. Telephone (912) 427-8447.



Elbert Jaycox Honored:

WAS Outstanding Service to Beekeeping Award, 1988

Elbert R. Jaycox beccame involved with honey bees when he was looking for an elective class as an undergraduate at the University of California at Davis in 1947. The choice lay between viticulture (grape growing) and apiculture. The decision was simple . . . viticulture was taught at 8 a.m., apiculture at 1 p.m.

Since those days, Jaycox has worked as supervisor of apiary inspection for the California Department of Agriculture, research entomologist for the U. S. Department of Agriculture, and as beekeeping specialist for the Univeristy of Illinois. At New Mexico State University he has taught two international beekeeping classes and worked with Yemeni students on campus and in the Yemen Arab Republic. He has written more than 210 publications of all kinds, including two books. Nine are in the Arabic language. He has published beekeeping newsletters for many years and is currently editing *The Newsletter on Beekeeping*, an exchange publication.

Of his research efforts, Jaycox feels his work with the effects of juvenile hormone levels on adult honey bees was probably the most important. This work, done in part with Swiss colleagues, showed that the behavioral sequence of honey bee workers is largely governed by the level of juvenile hormone in their blood. His work with pheromones and worker foraging behavior also increased our knowledge of important relationships in the honey bee colony.

Other subjects investigated by Jaycox include the pollination of apples, soybeans, and pumpkins, the sexual maturity of drone bees, the taxonomy of a genus of wild bees, Nosema disease, homesite selection by swarms, and the effect of carbon dioxide on queens and workers. He was fortunate to have the collaboration of Wojciech Skowronek, Steve Parise, Godfrey Guynn, W. S. Sheppard, and others.

Teaching has been an important part of Jaycox's career. He taught Insect Ecology at Utah State University and began a new course on the Behavior of Honey Bees at the University of Illinois. He taught beekeeping classes both on and off campus, and gave the insect portion of a class on the Ecology and Evolution of Social Structure. His teaching was also evident in his extension activities in which he worked with beekeepers, fruit and vegetable growers, and other groups interested in honey bees. Many of his publications and a column in *American Fruit Grower* have been directed toward helping growers as well as beekeepers. He has been writing a column for *Gleanings in Bee Culture* since February, 1986.

Jaycox is now working with Mexican friends to establish a center of apiculutral information in Mexico. It will be a reference library and source of support for the amateur and commercial beekeepers of that country. If you are interested in helping with this project, he would like to hear from you.

. . . & Events

☆ INTERNATIONAL ☆

In June, 1988, a Board Meeting of **APIMONDIA** was held at The International Beekeeping Technology and Economy Institute (IITEA) in Bucarest, Romania.

Activities during the last two years have enabled this institute to grow rapidly, expanding it's communication, printing and editorial facilities and capabilities.

Because of this new ability, the Board has decided to release several monographs on such subjects as wax, pollen, royal jelly, bee venom, propolis and apitherapy.

Mention was made of the exceptional cooperation IITEA has received from the Ministry of Agriculture, The Beekeepers Association of Romania and the local Chamber of Commerce in accomplishing this goal.

With this new equipment, the IITEA will be able to publish the latest in the areas of Apicultural economy, biology, pathology, flora and pollination, as well as continue the publication of *Apicata* (5 languages).

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The next **TRI-COUNTRY ANNUAL MEETING** will be held on Oct. 21-23, 1988, in the city of Oaxaca, Mexico. For more information contact: Union Nacional De Apicultores, Av. Uruguay No. 42 101, 06000 Mexico, D.F., Tels. 512 88 01 = 512 29 81 or Wagons Lits Viajes, Balderas No. 33 6o. Piso, 06000 Mexico, D.F., Tels. 512 49 68 = 518 11 80, Telex 1775839 WDANME.

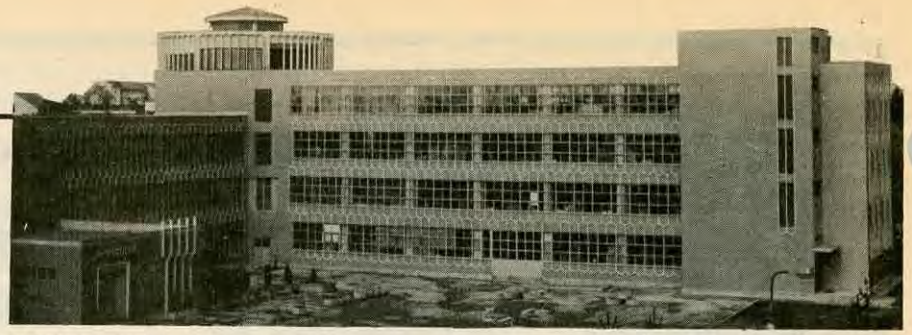
☆ ARIZONA ☆

The **ARIZONA BEEKEEPERS ASSOCIATION** invites all members and non-members, both in-state and out-of-state, to join us this year on December 10-11, 1988 in Tucson, Arizona at our annual meeting. The meeting will be held at the Days Inn, downtown Tucson, 88 East Broadway, formerly called the Santa Rita Hotel.

A dinner party on Friday, December 9, will be for early arriving participants to honor Dr. Harry Laidlaw. It will start the convention and have door prizes. Equipment displays and outstanding Arizona hospitality throughout the rest of the meeting will spice up the program.

Friday, December 9

7:00 Dinner honoring Dr. Harry Laidlaw



Building which houses Apimondia.

Saturday, December 10

7:00 Registration
8:00 Call to Order followed by Invocation. Welcome address by Dr. Marshall Levin, Research Collaborator, USDA/ARS, Tucson, AZ. Presidents address by Dee A. Lusby, ABA.
9:00 Dr. Barbara Erickson
9:45 Paul Baker, ST. Pesticide Coordinator
10:30 Les Davis, Div. Director, Ag. Chemical and Envir. Svcs. Div.
11:00 Pennwalt Chemical, speaker
11:30 Panel Discussion
12:30 Buffet Lunch
2:00 M. Delfinado-Baker, Beneficial Insects Lab., Beltsville. A special pre-taped video taken at the USDA/ARS Tucson Lab during a seminar with additional comments by Dr. Eric Erickson.
2:45 Dr Marilyn Houck, Dept. of Ecology and Evolutionary Biology
3:30 Speaker to be announced
4:00 Panel Discussion
6:00 Honey Queen Auction
7:00 Buffet Supper
8:00 Honey Queen Night

Sunday, December 11

7:00 Registration
9:25 Call to Order followed by Invocation
9:30 Dr. Harry Laidlaw, Univ. of CA, Davis
10:45 Dr. Eric Erickson, Director, Carl Hayden Bee Research Center
12:00 Buffet Lunch
1:30 Dr. Elbert Jaycox, The Bee Specialist
2:15 Dr. Gerald Loper, Research Plant Physiologist, Carl Hayden Bee Research Center, Tucson
2:45 Panel Discussion
4:00 Business Meeting

For those beekeepers who wish to stay at the convention site at the Days Inn, reservations should be made by November 15th to obtain reduced rates.

For more information call or write: Dee A. Lusby, Pres., Arizona Beekeepers Assoc., 3832 E. Golflinks Road, Tucson, AZ 85713, 1-602-748-0542 or Lynn Bushnell, Editor Newsletter, Arizona Beekeepers Assoc., 321 E. Cornell, Tempe, AZ 85283, 1-602-839-9891 or Days Inn Tucson - Downtown, Olivia Gonzalez, Exec. Hotel Coordinator, 88 East Broadway, Tucson, AZ 85701, 1-602-791-7581.

☆ CALIFORNIA ☆

THE CALIFORNIA STATE BEEKEEPERS ASSOCIATION'S 99th Annual Convention is slated for November 14th - 18th at the Hilton Hotel in Concord, CA. Located about 30 miles east of San Francisco and conveniently located for those interested in the night life of San Francisco and wine tasting in Napa Valley. There are two unique shopping malls and over ten restaurants within easy walking distance of the hotel. US AIR flies directly into Concord and the hotel is only a five minute drive from the airport.

This is an opportunity for our members and guests to renew old acquaintances, make important business contacts and learn more about the bee industry and the world of apiculture. The CSBA invites all beekeepers, family members and interested friends to join us in Concord this November.

November 14th

2:00 Apiary Board Meeting
4:00 CSBA Board of Directors Meeting
8:00 Honey Queen Reception

November 15

8:00 Registration
9:00 Opening Ceremonies
10:30 Reports
1:30 Dan Hall, National Honey Board
2:00 Thomas Payne, Marketing Honey
2:30 Ria de Grassi, CA Farm Bureau and the Bee Industry.
3:15 Art Eggman, Honey and Pollen Plants of the Sierra
3:45 Mike Rosso, Unit Pollination Pricing

November 16

9:00 Beekeepers Panel, The colony decline of 1987. What Happened?
9:45 Eric Mussen, A scientific look at colony decline
10:15 Christine Peng, New Antibiotics for AFB control
11:00 Wayne Getz, Sibling rivalry in the honey bee colony
11:45 Research Lunch, Bill Wilson, Menthol and Tracheal Mites
1:30 Wine tasting tour of Napa Valley followed by SF dinner.

November 17

9:00 Ladies Auxiliary breakfast and business meeting
9:00 UAP, Zoecon & Nor-Am representatives will explain products for mite control

10:00 APHIS will discuss the federal quarantine decision
10:45 Ann Sorenson, Current research on honey bees
1:00 Bill Chaney, Effects of synthetic pyrethroids on honey bees
1:40 Bill Wilson, The USDA african bee project
2:20 David Fletcher, African bees, a unique opinion
3:00 Annual Auction
3:30 Annual Business Meeting
6:00 No Host Cocktail Hour
7:30 Annual Banquet/Dance

November 18th

7:30 CSBA Board of Directors Meeting

For information and registration contact: Carol Penner, 19980 Pine Creek Rd., Red Bluff, CA 96080, 916-527-0941.

☆ ILLINOIS ☆

GENE KILLION and the late **CARL KILLION** were honored the opening day of the IL State Fair on Aug. 11th. Governor Thompson and his wife, Jayne, awarded Killion with a plaque commemorating their *50 years* of dedicated service as superintendents of the State Fair Bee and Honey Department. Killion will be retiring at the end of this year's Fair.

The Killions have served as superintendents under 10 Governors, 12 Directors, and 16 State Fair Managers. Their outstanding service began in 1938 and continues still today.

Pictured from L to R: Mark Killion, Katy Killion, Governor James R. Thompson, Gene Killion, and Jane Thompson.

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THE COOK-DUPAGE BEEKEEPERS' ASSOCIATION will hold its annual banquet on Saturday, October 15, 1988 at 7:00 at the Plantation Restaurant, 201 E. Ogden Ave., Westmont, IL. Walter "Bud" Diehnelt, of Ashippun, Wisconsin, will show slides and speak about his Honey Acres Museum. Three entrees will be served for dinner, so that none shall go unfed. A large number of door prizes will be awarded.

For additional information or reservations contact Dorothy Buckley, 6525 S. Western, Clarendon Hills, IL 60514, 312-654-1867. She can arrange seating for larger parties if early reservations are made: 8-at-a-table seating will be used.

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The fall convention of the **ILLINOIS STATE BEEKEEPERS' ASSOCIATION** will take place on Saturday, Nov. 5, 1988 at the Department of Ag. Bldg., IL State Fair Grounds, Springfield, IL.

9:00 Registration
9:30 Welcome, Lloyd A. Lindenfelser, Pres., ISBA. Secretary's report by Rita Taylor and Treasurer's report by Udell Meyer
10:00 Apiary inspection report, Eugene E. Killion, Super. of Apiary Protection, Paris, IL
10:15 Election of officers
10:30 Break
11:00 *Anticipated impact of Africanized bees and honey bee mites on IL Agriculture*, Don Rawlins, Assoc. Dir. of Am. Farm Bureau Resources, Park Ridge, IL
12:00 Lunch
1:00 Installation of Officers
1:15 *Labeling, packaging and marketing honey*, Jerry Hayes, Jr., Credit Manager, Dadant & Sons, Inc., Hamilton, IL
2:15 Ladies; Auxiliary report, Sharon Heinzl, President, Belleville, IL
3:00 *Some spin-offs in IL apiculture from the Great Drought of 1988*, Lloyd A. Lindenfelser, President, ISBA, Tremont, IL
3:25 Local Chapter reports
4:00 Adjournment

Complete dinner with turkey and dressing will be available at the Agriculture Building cafeteria. Price of the meal will be $6.75 each. Reservations must be received no later than October 22. Make check payable to: Illinois State Beekeepers' Association and mail to: Mr. Udell Meyer, R. R. #3, Box 308, Edwardsville, IL 62025.

☆ KANSAS ☆

The Fall meeting of the **KANSAS HONEY PRODUCERS ASSOCIATION** will be held at the Best Western Holiday Manor Motel, Junction I-135 and U.S. 56 Highways, McPherson, Kansas 67460, 316-241-5343 on Friday, October 14, and Saturday, October 15, 1988. Registration begins on Friday at 9 and Saturday at 8. Registration fees are $3.00 for members of the KHPA and $5.00 for non-members.

The featured speaker will be Richard F. Trump, former adjunct instructor, Department of Entomology, Iowa State Univ., and award-winning biology teacher as well as author of biological publications. Ken Embers of the American Institute of Baking, Manhattan, Kansas, will tell about the advancement of Kansas Sunny Wheat Bread since the 1988 Spring Meeting. The Kansas Honey Producers will be asked to give their endorsement of this Kansas bread. A Kansas State Univ. student will speak about his research paper in Agriculture Economics on Production of Honey in Kansas. Other speakers on the program will include Kansas Honey producers and packers. Queen candidates will be speaking and a 1989 Kansas Honey Queen will be chosen.

Anyone desiring further information is invited to contact Robert Brown, 1st Vice-President, RFD 1, Box 96, Haddam, KS 66944, 913-778-2954.

☆ MASSACHUSETTS ☆

The October meeting of the **MIDDLESEX COUNTY BEEKEEPERS ASSOCIATION** is Saturday, October

29 at 7:30 at the Middlesex County Extension Service Schoolhouse, which is behind the Middlesex County Extension Service on Everett Street in Concord (next to the Armory).

Bill Maxant, builder of those fine extractors, will give a program to be announced later.

Novices may get answers to their questions. All are welcome at our meetings. Contact Linda Boucher, 276 Salem Street, Wakefield, MA 01880, 245-8443.

☆ NEBRASKA ☆

The **1988 NEBRASKA HONEY QUEEN** is Rita Bodlak of Emerson. Rita is a sophomore at the University of Nebraska majoring in broadcasting

and English. Her hobbies include sewing, biking, aerobics, and music. Rita has been promoting honey at the county and state fairs and will be representing Nebraska at the American Beekeeping Federation meeting in January in Indianapolis, IN.

☆ NORTH DAKOTA ☆

The **NORTH DAKOTA BEEKEEPERS ASSOCIATION** will be having their convention on October 7th and 8th at the Doublewood Ramada Inn, 1400 E. Interchange and I-94, Bismarck, ND. Registration begins at 8:00 a.m. on Friday. Some of the topics that will be covered are: finding and treatment of mites, chalkbrood, an ASCS rep on past and current events, and much more.

☆ OREGON / WASHINGTON ☆

The **OREGON / WASHINGTON JOINT MEETING** will take place at Greenwood Inn, Beverton, OR on November 3-5. Speakers include James Tew, Tom Rinderer, Charles Milne, Dan Meyer, Mark Winston, Sharon Collman, James Bach, Dave Turner and Mike Burgett. Topics covered include AHB, Overwintering, Educational Programs, Inspectors Report, Mites, Queen Rearing Emergencies and more.

For more information contact Bill Rufener, Rt. 2, Box 157, Banks, OR 97106, (503) 324-2571.

☆ TENNESSEE ☆

The **TENNESSEE STATE BEEKEEPER ASSOCIATION, INC.** will meet in Convention, October 20-22, 1988 at the Ramada Inn, Morristown, TN. Location is at Exit 8 on I-81.

Thursday, October 20

6:00 Honey Show set-up, Commercial set-up and Registration
7:00 Board of Directors/Executive Board Meets

Friday, October 21

8:00 Registration ($6.00 per person)
9:00 Call to order by Pres. Palmer Smith; Invocation; Introduction by John Hankins; Welcome by Senator J. B. Shockley; President Address by Palmer Smith; *The Role of Federal Extension Apiculturist* by Dr. James Tew; *Tracheal Mite Studies* by Dr. John T. Ambrose
12:00 Queen's Luncheon — Jennie Cowell
1:30 *Solutions for State Beekeeping Association Problems* by Dr. John T. Ambrose
2:15 Introduction of Honey Queens, Jennie Cowell
2;30 Free time or workshops on: Mite Identification by Gary Haun and New Queen Rearing Idea by Steve Forrest
3:0 Diseases and Pests by Harry Williams, U.T. and Marketing by Imogene Farmer
7:00 Fun Time: Honey Queen Reception by Jennie Cowell and Auction by Chas Cowell

Saturday, October 22

8:00 Registration
8:30 *How to Sample Bees* by Tom Hart, TDA
9:00 Questions for Queen Candidates, Jennie Cowell
9:15 Report - Survey, Mike Cooper, TDA
10:30 TN Honey Queen Report, Stacey Greene
11:00 Biology of Bees, Dr. John Woods
1:00 General Assembly, Palmer Smith
6:30 Banquet, M.C. Joe Lockhart

For reservations and information contact Linda Johnson (615) 587-2400.

☆ TEXAS ☆

BEE RESEARCHERS, APIARY INSPECTORS, AAPA TO MEET OCT. 11-14, IN WESLACO. The American Bee Research Conference, the Apiary Inspectors of America, and the American Association of Professional Apiculturists will all hold meetings in Weslaco, Texas during the week of October 11-14.

The Apiary Inspectors meeting starts the morning of October 11th and runs through October 14th. Its primary emphasis is on what affects the apiary inspectors and on the inspection laws.

The American Bee Research Conference will be held on October 12th and 13th. Presentations at this meeting are limited to short research papers. Abstracts of these papers are published.

For more details concerning this meeting, please contact John Harbo, Honey Bee Breeding, Genetics and Physiology Laboratory, 1157 Ben Hur Road, Baton Rouge, LA 70820 or Joseph O. Moffett, Rt. 3, Box 1760, Cushing, OK 74023.

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THE TEXAS BEEKEEPERS CONVENTION will be on November 3, 4 and 5 at the Inn of the Hills, Kerrville, TX. There will be a Beekeepers Short Course on Thursday followed by meetings, A Queen Luncheon and non-commercial programs on Friday. Saturday will host a General Session, Business Meetings and a Country Barbeque.

Make plans now to be in lovely Kerrville, enjoying your beekeeping friends, and stimulating your intellect. This is a wonderful vacation opportunity and golf is available.

For registration contact Diane Chancey, (409) 258-3034 and Jim Braden, Bus. (512) 769-2031 or Res. (512) 769-2148 for General Convention Information.

☆ Classified Corner ☆

Classified rates: 55¢ 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. Copy or cancellation orders **MUST** be in by the 1st of the month preceding publication (Example: January 1 for February publication). If your order has missed the cut-off date, your ad will appear in the following issue. Proof sheets available on request for an additional 2-word charge.

Send classified ads to:
The A.I. Root Co., Attention: Cyndi Stephens, Class. Ad. Mgr., P. O. Box 706, Medina, Ohio 44258-0706.
For more information call (216) 725-6677, ext. 213.

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ALMOND POLLINATION NEEDS YOUR BEES — If you can provide strong colonies, **Pollination Contracting** now arranging contracts. Offering reliable service in central CA for 1989 season. L. Hicken (209) 823-5141 or C. Carroll (209) 823-1386. (12/88)

OPPORTUNITY WANTED for European beekeeper, 31. Seek job assisting at a bee farm to increase skills in queens, nucs and honey production from January to April. Prefer Florida. Carl Treskman, Sonnenhalde 2, 7766- Gaienhofen 1, West Germany. (10/88)

BEES FOR ALMOND POLLINATION. We are interested in discussing 1989 almond pollination with beekeepers that can supply colonies of 8 frame or better strength. Contact Joe Traynor, Scientific Ag Co., P.O. Box 2144, Bakersfield, CA 93303. (805) 327-2631. (10/88)

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DIE NEUE BIENENZUCHT the monthly magazine for beekeepers interested in all aspects of German beekeeping. Hamburger Str. 109-D, 2360 Bad Segeberg, West Germany.

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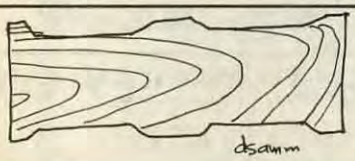
CORNUCOPIA. Quarterly newsletter for developmental beekeepers. Articles on low technology beekeeping, honey trees for agroforestry and marketing bee products. Rates $10/year to IAAD, D. Sammataro editor, 7011 Spieth Rd., Medina, OH 44245. (216) 722-2021.



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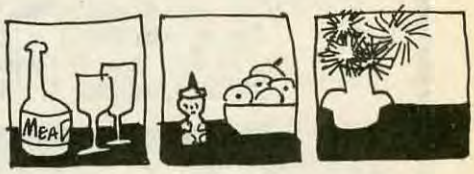

FOOD CHAMBER

I once took a helping of pie at a pot luck supper and found myself wondering, along with others, what the pie was. It tasted, we decided, like "Nothing" with a hint of spices. We finally discovered that it was "fresh pumpkin pie", unfortunately made from a Jack-O'-Lantern pumpkin. These may be big and beautiful but the flesh is generally tasteless. If you have a garden and grow your own, choose seed that the catalog proclaims as "excellent for pies". These will have the best pumpkin flavor. The skin may not be as bright orange as carving pumpkins, but they do make nice Jack-O'-Lanterns. If you buy pumpkins from a roadside stand, ask for "cooking pumpkins" to get best flavor.

— Ann Harman

Display Index

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