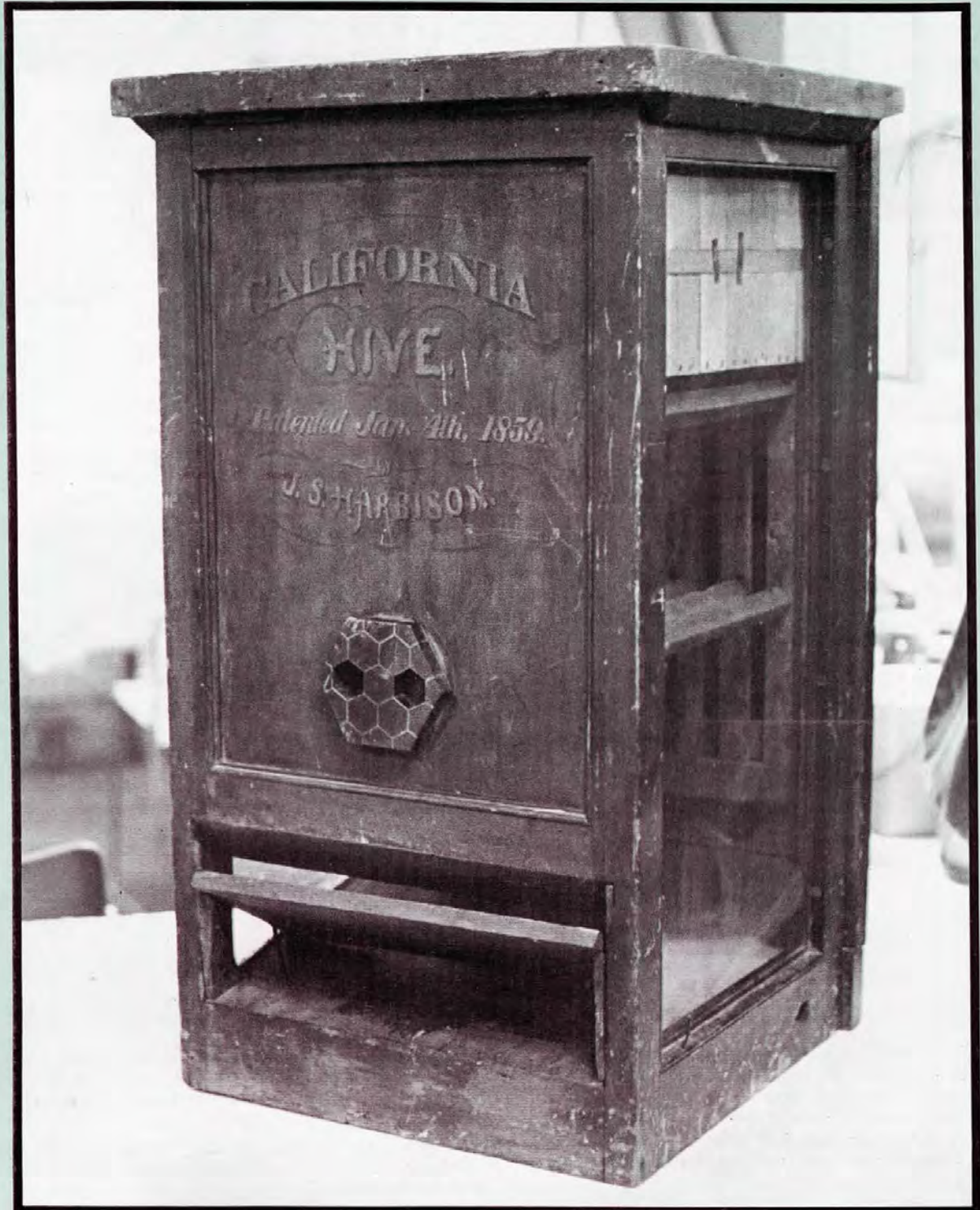


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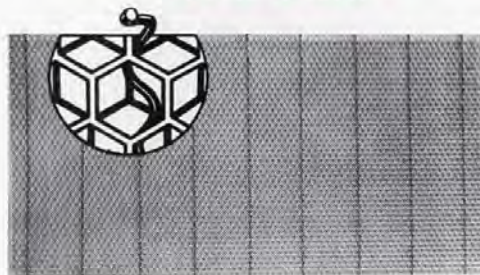
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Subscription Rates; United States subscribers, one year, \$9.85; two years, \$19.50. Single copy \$1.20. Other countries including Canada, Pan American countries and Spain (U.S. Currency only). \$3.25 per year additional for postage. Published monthly. Discontinuance: Subscription stopped on expiration. Change of Address: Give your old as well as the new and print the name to which the journal has heretofore been addressed. Remittance should be sent by post office money order, bank draft, express money order or check.

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

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Cover Story

This photo of an antique bee hive was taken at the E.A.S. meeting in Morgantown, W.V. in 1982. The early California-style hive was patented in 1859 by J.S. Harbison who introduced the four piece honey section in 1857.



Gleanings in Bee Culture

March 1983

(ISSN 0017-114X)

Vol. 111, No. 3

Created to Help Beekeepers Succeed

111 Years Continuous Publication by the Same Organization

CONTENTS

Gleanings Mail Box.....	114
Siftings.....	116
Monthly Honey Report..... Lawrence Goltz	119
How To Load & Move Bees..... Thurber	122
Questions & Answers.....	126
Do We Need A Tariff On Honey..... Grant D. Morse	128
Hive Top Feeder With Float..... I. Fryo	131
Cook & Bake With Honey..... Amos Arbee	132
Research Review..... Dr. Roger A. Morse	134
Educating The Public About Bees..... W.L. Gojmerac	136
Bees & Gardens..... L. Goltz	139
Capping The News..... The Editors	142
County Associations And The 4-H..... Bernie Hayes	143
But Bumblebees Don't Eat Honeybees Stephen B. Bambara	143
Bee Talk..... Dr. Richard Taylor	145
Bees & Beekeeping 1608:..... Joe Klofas	147
Using Bee Catalogues To Advantage..... Patricia Yunkes	148
Reflections Of A Novice Beekeeper..... Jeff Edelman	149
Beekeeping "Down Under"..... Bruce C. Otte	154
Some Maine Bees Have It Made..... Betsy Mitchell	156
News & Events.....	158
Obituaries.....	158

Gleanings Mail Box



Visit Planned

Dear Editor,

I am writing on behalf of a group of professional beekeepers subscribing to the French National Beekeeping Association Magazine. We are contemplating a trip to North-America starting in April, 1983.

We intend to travel through Canada, the U.S.A. and visit some large beekeeping estates, supply manufacturers and traders.

We would greatly appreciate if you could give us some hints as to the places we could go and the route we should take.

We intend to travel as far south as Louisiana, visiting the beekeeping experimental laboratory in Baton Rouge.

The different calls on this tour could be altered or shuffled around according to schedule and any invitations received.

J.P. Bonimond, Editor
Gerant de La Revue
Francaise d'Apiculture
9, rue Saint-Jean
33230 Coutras (France)
Tel. (57) 490464

Brick Signals

In response to a reader from Tennessee, (Questions and Answers '83) we have a simple "brick code" system we would like to share.

As you state in your answer, anyone can devise their own system and as long as they are consistent, it should work. My neighbor down the road, a retired "gentleman farmer" who keeps bees for his arthritis, explained his "brick code" system when he got me interested in having some bees on my own.

Basically any brick on its edge means attention is needed as soon as possible. The brick laying flat means the colony condition is satisfactory for the present.

The code gets more detailed by different positioning of the brick on the

hive roof. The brick long ways, front to back, would indicate everything is OK, but on the edge would mean an inspection is needed. Across the top, flat means the hive is being fed; on edge would mean it needs to be fed. The brick on a diagonal with top corners would mean the colony was re-queened, but on edge at a diagonal means that the colony needs to be re-queening.

My neighbor recollects he picked up this code from a bee publication about ten years ago and if the reader needs a system to get him started or to use as a guide, this is simple, but covers most major conditions to be watched.

Art Halstead
Chesapeake, VA

Liquefying Honey

I am a small beekeeper who at times has to liquefy my small one pound and three pound jars of honey. I've found that if you place a crystalized jar in the automatic dishwasher that when the cycle is ended the honey is liquefied.

Ron Ross
Ronsonville, NY

Editors Note:

Since the cap must be on tightly, if there is very much air in the bottles, the expansion of the air due to heating could cause an explosion. We have heard of an instance of an explosion resulting from heating honey in a microwave oven. We would therefore recommend the tried and true method of placing the open jar in a pan of hot water.

Information On Mini Hives

Dear Editor,

I am trying to locate either someone that manufactures or sells model wood box bee hives of the present design. While visiting a fellow beekeeper he showed me this model hive which was purchased as a kit about 8 to 10 years ago. The kit included the bottom board, hive body, frames, honey supers, inner cover,

and top cover. The overall height is less than six inches.

On the inside of the top cover was the the name "Hel-Le Bee Farm", P.O. Box 95, Hampton, FL 32044. My letter to this address was returned today as being undeliverable.

I would appreciate hearing from anyone that might be able to help me find one of these kits.

Ken Greene
409 Broadview Dr.
Dickson, TN 37055

Gleanings Survey

On a smaller scale than other nationwide surveys, the one recently made by *Gleanings In Bee Culture* did, however, yield some interesting results about our readers' activities. The average number of colonies owned by subscribers who answered the survey was 28. This is up from the average reported on prior surveys. The trend may indicate that while there are possibly fewer beekeepers the average number of colonies owned by reader-beekeepers has increased in recent years. The average number of years engaged in beekeeping was reported as 5.8 years. A surprising 83% are gardeners as well as beekeepers. No means of differentiation was included in the survey questions to determine the extent or type of gardening practiced.

Sixty-four percent of those answering the survey were members of a beekeeper's association; 83% sell at least some honey and 75% have attended some form of bee classes, seminars or other type of instruction on beekeeping. Most of those responding were in the age brackets of 45 and older. None were under 18 years of age and only one was in the 18-25 year old range. This age breakdown on the survey suggests that our younger subscribers are absent or are less inclined to answer surveys. Perhaps the mobility and urban upbringing of most of the younger age group increases the likelihood of their becoming involved in activities outside the home, in the local com-

(Continued on page 117)

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Siftings

By CHARLES MRAZ
Box 127
Middlebury, VT 05753

ON NOVEMBER 13th, 1982, the 5th annual meeting of the North American Apitherapy Society meeting was held at the International Hotel, Wash. — Baltimore Airport. There is no question that interest in Apitherapy is growing, even in the medical profession. Apiotherapy appears to promote its activity by stimulating the immune system of the body. Immuno-therapy is now a new field of research in medicine for its possible importance in the treatment of degenerative diseases for which at present there is no satisfactory treatment.

Dr. Anton Terc of Marburg, Austria, father of bee venom therapy, observed over 100 years ago that bee venom was most effective when it produced strong, local reactions of swelling, heat and redness through the immune system. In the 1960's, Prof. Artemov of the University of Gorki, Russia was one of the first to observe in experimental animals that bee venom increased the level of blood plasma cortisol, a hormone known to have potent anti-inflammatory activity.

With the financial aid and guidance of Glenn B. Warren and his Foundation for Arthritis Research, Lt. Col. James A. Vick and his associates accurately measured this cortisol stimulation in many animal studies. Dr. Gerald Weissman of New York University Hospital did further research sponsored by the Warren Foundation to demonstrate on rats with adjuvant arthritis, that this cortisol stimulation was through the pituitary-adrenal axis. Dr. Weissman believed, as did many of us, that there was much more going on in the immune system that we as yet, know nothing about.

Another new field of immune research that can be related to bee venom stimulation is that of the endorphins. These endogenous hormone-like agents are nature's "pain-killers". Unlike Exogenic (out-

side the body) agents such as narcotics, endorphins have no adverse side effects, and can produce relief from pain that may last for years, rather than just for a few hours. Dr. Daniel C. Carr of Harvard Medical School is doing research in this field, that may turn out to be more important than even research in prostaglandins, for which three Nobel prizes were recently awarded. Bee Venom may also stimulate prostaglandin production in the body in similar manner that it produces cortisols and endorphins.

Bee venom may also stimulate interferon, produced by the immune system and seems to be effective against virus infections and perhaps malignant diseases. We have seen a number of cases where bee venom therapy relieved cases of shingles in a very short time. Shingles is a virus, caused by herpes zooster.

Some "new" disease problems have recently developed, perhaps due to permissive "modern" life style. One is herpes simplex that causes painful lesions of the sex organ and considered incurable at the present time.

Another even more serious affliction is called Acquired Immuno-Depressive Syndrome, or AIDS. It appears to affect mostly male homosexuals. For some unknown reason, those following this life style, lose their immunity and become victims of weird and unusual diseases and a form of sarcoma (cancer) that normally is not a problem in healthy individuals. There appears to be over 50% mortality in two years, and 95% in five years.

What has all this to do with bees? For the above afflictions, herpes simplex and AIDS, there is no known cure or control. No drug treatment so far appears to have any beneficial effects. Nor does there seem to be any hope that drugs based on their activity to depress the immune system, can ever help any disease caused by a Depressed Immune System.

The only treatment that makes any sense is one that can stimulate the immune system of the body to help it

produce the endogenous hormones, anti-bodies, etc., that are usually specific to control these afflictions. They have no suppressive, adverse side effects as do exogenic (outside) agents. It may be possible these hormones and other agents are "host specific", that is, they are accepted and adapted by your own body, but if introduced into another body, it may produce rejection or allergic reactions.

Agents that stimulate the immune system are called "Immuno-potentiators". The problem is that there are not many such agents available. Most common are endotoxins, from various diseases that can stimulate the immune system. They are not always safe, and often they are not effective. Bee venom, I believe, is one of the best immuno-potentiating agents available today. It is safer, effective, and can be produced at low cost. In time, with research, no doubt other such agents may be developed, but so far, almost no research has been done in this field. The study of Immunology is hardly 10 years old, it is easy to understand that we as yet know so little about it.

Perhaps it may be these "sin diseases" will open the door to this whole new field of Immunotherapy. Bee venom, propolis, pollen, honey, royal jelly, etc., separately or in combination may become a valuable part of this new field of research. If apitherapy does prove to be helpful to control these incurable afflictions, as Dr. Terc expressed it almost 100 years ago, "Apitherapy will find its rightful place in medicine".

There are many people who look down their noses at our friends, the honey bees, and consider them to be nothing more than a bunch of "dirty bugs" and might even like to see them exterminated. Through pollination, we know they are important to our food supply. What most people do not know, is that they may also be as important to keep us in good health.

More beekeepers should become interested in this work; it is only we beekeepers that can promote this type of research, especially by hobby beekeepers. Many beekeepers are their own worst enemy; they neither believe in nor have faith in the therapeutic possibilities of bee products. If we do not have it, no one else will promote the use of these bee products for good health.

A good example of what interested beekeepers can do, is the activity of

(Continued on page 133)

Gleanings Survey

(Continued from page 114)

munity or school rather than the activities of generation's youth. It is easy to become philosophical or even pessimistic about the future of beekeeping from too liberal interpretation of these scanty returns. Judgement is best left until more valid surveys can be made of who participates in the various levels of beekeeping activity.

The problems considered to be the principal threats to beekeeping is that of pesticide use, lack of bee forage, the problem of honey imports and bee diseases in that order. Of interest is the rather low placement among the problems listed of the African (killer) bee threat, honey adulteration and the high cost of bee equipment (inflation). Significant about the survey was the great disparity among the answers as to exactly what constitutes the major problem(s) of the beekeepers at the moment.

Most beekeepers want straightforward, easy-to-understand information on bee management, the building and

use of hives and bee equipment within the price range and skills of the home workshop, how to raise a few queens, how to manipulate bees and information of a general nature in order to better manage their own colonies.

Some subjects of future articles suggested were: Swarm prevention and control (up from other surveys in importance), brood nest management, beekeeping equipment, diseases and treatments, queen management, bee behavior, honey handling, wintering, making divisions, controlling bee pests, honey plants and articles pertaining to beekeeping in specific areas of the United States, particularly their own state. Least requested were articles on beekeeping in foreign countries, write-ups of conventions without detailing the substance of some of the important presentations and the formal science papers.

Writers and contributors may be interested in noting the above listing of subjects which are not listed in the exact order of preference nor does this list represent a clearly large percentage of our readers, only a sampling.

Our thanks goes to all who returned the completed forms to the *Gleanings* office from the August, 1982 issue. Many respondents objected to placing the survey page where it was, preferring not to remove a page from their magazine. Some comments were extraordinarily well thought out, some provocative and some were funny; often contradictory and generally courteous and many complimentary. Thank you readers. □

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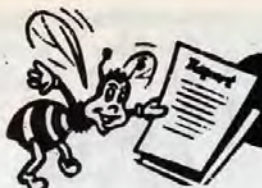
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Monthly HONEY Report

LAWRENCE GOLTZ
February 10, 1983

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

Wholesale Extracted

Reporting Regions

Sales of extracted, unprocessed
honey to Packers, F.O.B. Producer.
Containers Exchanged

	1	2	3	4	5	6	7	8	9
60 lbs. (per can) White	42.00	33.60	33.50	33.60	35.50	37.50	33.00	36.00	34.00
60 lbs. (per can) Amber	42.00	28.80	32.40		34.00	35.00	31.00	36.00	33.50
55 gal. drum (per lb.) White	.62	.56	.58		.58		.52	.58	.54
55 gal. drum (per lb.) Amber		.48	.52		.54		.49	.56	.47
Case lots — Wholesale									
1 lb. jar (case of 24)	30.50	24.90	25.80	25.90	27.50	24.50	27.90	27.00	24.00
2 lb. jar (case of 12)	31.00	23.30	24.20	23.75	26.20	23.00	25.10	25.70	23.40
5 lb. jar (case of 6)	33.00	27.80	26.25	26.90	28.00	26.50	28.50	28.40	26.00
Retail Honey Prices									
½ lb.	.90		.90	.85	.89	.85	.87	.90	.97
12 oz. Squeeze Bottle	1.35	1.19	1.50	1.17	1.27	1.35	1.49	1.40	1.39
1 lb.	1.60	1.39	1.50	1.43	1.55	1.50	1.59	1.45	1.59
2 lb.	2.70	2.59	2.95	2.59	2.90	2.45	2.79	2.59	2.67
2½ lb.	3.45				3.19	3.25			
3 lb.	4.00	3.80			3.99	3.85	3.80	3.85	3.90
4 lb.	5.00	4.95		4.99	4.89	4.90	4.49	4.89	4.89
5 lb.	6.00		6.00		5.79	5.80	5.69	5.98	6.00
1 lb. Creamed			1.55		1.59		1.57	1.59	1.69
1 lb. Comb	2.25		2.25		2.19	1.85	1.60		
Round Plastic Comb			1.85	1.39	1.69				
Beeswax (Light)	2.00		1.25	1.25	1.60	1.25	1.30	1.65	1.75
Beeswax (Dark)	1.75		1.20		1.50	1.20	1.25	1.60	1.70
Pollination Fee (Ave. Per Colony)	22.50		27.50		18.00		15.50		19.50

Misc. Comments

Region 1

A warm Fall with no heavy snowfall during early winter. Weather turned colder after middle of January. Honey consumption by bees higher due to warm weather but most colonies appear to be in good condition. Sales of honey is fair to slow. Large lot sales very slow. High price of domestic, quality honey very high to packers. What is going to happen to all the honey is storage by the government is of considerable concern.

Region 2

Bees are reported in good condition in most areas, fair in others. Most reports are that bees are heavy with honey and should make it through the winter in good condition. Retail honey sales reported as slow in Maryland, steady in Pennsylvania and no price changes in New York State. Some bee flights in West Virginia and New York State reported



in January. Honey seems to be crystalizing more this year. Interest in beekeeping at state meetings is very good in Maryland.

Region 3

Winter in Ohio has been comparatively mild with only moderate snowfall. Bees wintering well and remain heavy with honey. Honey sales steady in Indiana with no great upturn, but things look a little better. Bees wintering well. Bees reported wintering well in Illinois. Colonies have had several flights during winter, and there has been some need of feeding due to increased activity.

Very little snow cover in Wisconsin in January.

Region 4

Sporadic moisture in small amounts in North Dakota during January, less than one inch. Only 10 bitterly cold days during winter up until end of January. A mild open winter. Producers are moving good amounts of white honey, but sunflower honey sales are weak due to continuing imports. January was mild in Minnesota. Bees seem to be wintering well. Snow cover is adequate for clovers but little additional in January. Honey sales fairly good in Minnesota. Falling beeswax prices, the honey surplus with Commodity Credit Corporation, the depressed economy and honey imports make it hard to keep from being depressed according to one reporter.

Region 5

In North Carolina the reports say honey is moving well at retail,

(Continued on page 122)

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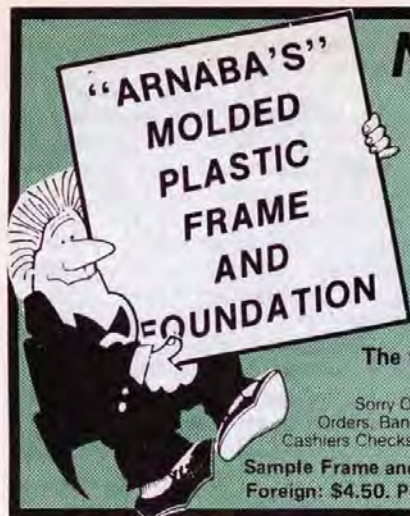
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(Continued from page 119)

although some reports indicate slower sales. January was above average in temperature but heavy snow and ice with colder weather has moved in during early February. Bees in good condition but food stores should be watched because of the unusual amount of bee activity. Bee colony condition is normal in Florida. Vegetation is in good condition in general, considering the damage sustained in the past three years. If the citrus bloom is delayed, as is evidently the trend, there may be some overly strong hives before the work begins.

Region 6

Winter has been mild in Kentucky and bees are in good condition. Enough warm days have been available for feeding any light colonies. Consumption of stores will have to be watched. Honey sales normal but stocks getting low. Mild

temperatures in Tennessee. Stores running low and feeding to start soon. Honey sales holding steady with little changes in prices. Package bee business should be good.

Region 7

Cold weather has set in in Oklahoma. Most colonies will need feeding by March as there has been much warm weather and bees have been using stores very fast. Very little local honey left. Demand for honey is slow. Bees in good condition in Texas with little feeding required. Ground moisture excellent. Orange trees in Rio Grande Valley looking very good at end of January. Most of east and south Texas have had a mild winter so far. Retail sales of honey is steady with about 40% of last years crop still on hand.

Region 8

January was a month of extremes in Colorado. The early part was colder than normal with heavy snows and the latter part was warmer than

average with little precipitation. Bees have had excellent flying days. Bees beginning to rear brood. Stores appear adequate. Honey prices variable. consumer demand had been steady and packers have sufficient honey in stock. Mild, unseasonable weather in January has permitted bees to fly considerably in Montana, resulting in heavy use of stored honey. Feeding will be necessary in the spring. Snow is needed in the mountains for water storage and on the plains to stimulate plant growth. Honey purchases have slowed down from grocery shelves since holidays. Some feeding has been done.

Region 9

Honey moving about the same as last year in Oregon at this time. Local producers have honey on hand and are advertising in local papers. Heavy rains in California hampering placement of bees in Almond orchards. Seasonal rainfall totals are nearly double for this time of year. Colonies have been inactive. Heavy rains from Red Bluff to Bakersfield make movement of bees a problem.



How to . . . Load and Move Bees

By THURBER

Part III

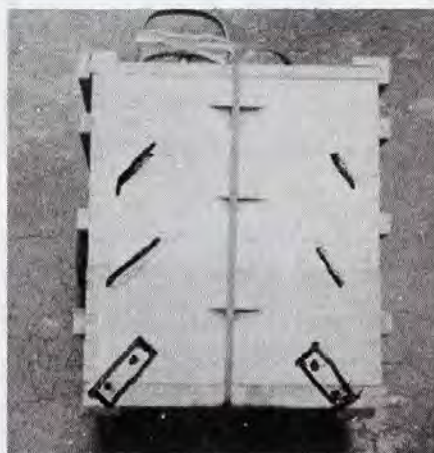
Fastening Hives Together for Moving

LET'S AGREE THAT if you plan only to move hives in order to escape from pesticides or you move to mollify your neighbors who are mad and threaten to sue because you have bad tempered bees, the standard hive staples you buy at the bee supply are OK. You must remember the staples are used only on the sides of the hives, and each staple is nailed so it slants upward and inward. See photo 1.

If you do not have staples on hand, one by four inches of quarter inch

plywood can be cut and drilled. Then you install the strips just like staples. You do not use nails to hold the strips. You use seven eights or three quarter inch roofing tacks. Again, see photo 1.

On the other hand anyone who moves his bees on a regular basis is stark raving mad if he uses staples. Say you move to the blueberries for pollination — then to blackberries then to the thistle or fireweed and then home. Every time you check the hives you have to remove the staples and when you move you have to restaple. The constant nailing and removing of the staples shortly demolishes good supers which are not cheap even if you make your own. So staples are out.



Strips or staples are angled inward and upward on sides only. Wire banded with plastic strapping.

Your alternatives to staples are steel strapping, plastic strapping or nylon-dacron webbing with some kind of tensioning buckle. I do not think steel strapping is appreciated or welcome in the forests or on farms. Deer and domestic livestock have been crippled or killed when they get their feet entangled in steel strapping, and so I think anyone who uses steel strapping is ill advised even if it does not endanger animals. When it gets tangled in farm equipment, your welcome is instantly worn out. So the clear choice as I see it is plastic strapping with metal buckles or the webbing and tensioning buckles.

(Continued on page 124)

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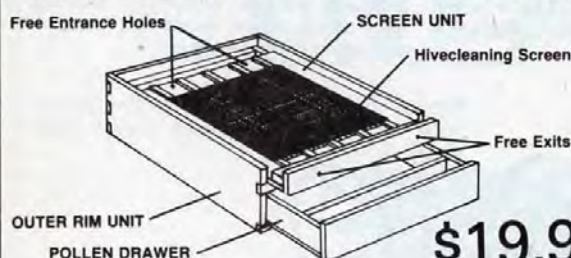


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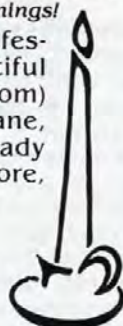
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How To Load and Move Bees

(Continued from page 122)

Plastic strapping is a good choice, and there are a number of tensioning gadgets to tighten the strapping at varying prices. One relatively inexpensive very good tensioner is the Signode Model DLT which is sort of a pair of pliers which has not only a tensioning function but also is a cutter. See photo 3. It cost \$45. Look up Signode in the yellow pages of the phone book.

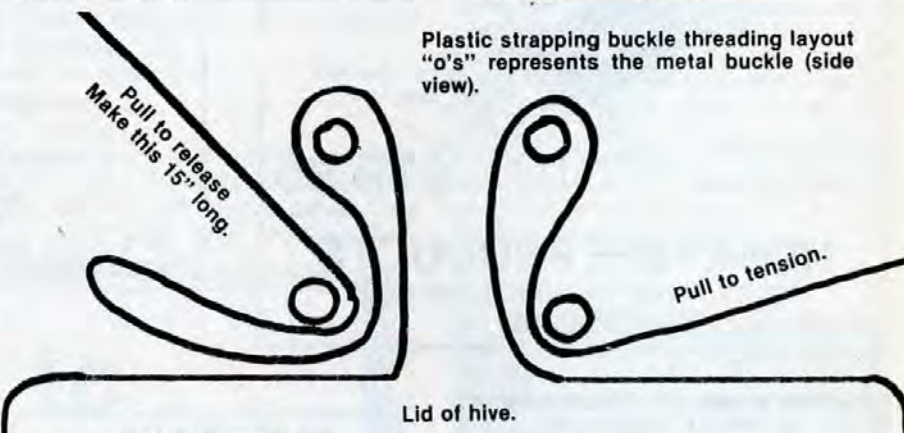
Not as convenient but very cheap is the Adams Tensioner. It costs about \$2 American money plus postage and of course the bank will take a four dollar bit out of you for a check in English money. So I guess by the time you get an Adams tensioner, it will cost you about \$10, but five or six would cost only \$20. They can be ordered from Thornes (Beehive) Ltd., Wragby, Linc., England Zip Code LN3-5LA. If you decide on plastic strapping, I urge you to have Adams tensioners in your glove compartment and in your work box. If you want to use plastic strapping you must use metal buckles. The plastic one will not stand high leverage tensioning. You should also tell the supplier you want the plastic that does not loosen up in time. You should also know that there is a way of threading the buckles so that you pull a free end and the strapping becomes undone. That is real handy — you do not have to cut the strapping to say check the hive, and you can reuse the strapping probably six times. Unfortunately, however, everyone does not know that trick. An acquaintance had his bees in California for almond pollination, and he had his strapping threaded for "pull to release" and reuse. Well, a bee inspector checked his hives and cut the strapping. Since the beekeeper did not anticipate something like that happening, he had not brought but only a very little spare strapping down from the Pacific Northwest. Frankly, he almost had a fit. He still has steam coming out of his ears when he thinks of the incident. You could also guess he discovered the cut straps on a Saturday night when he went to load the hives for the long run home. Obviously he could not buy strapping on a Sunday and on Monday he had to drive, he said, several hundred miles to get new strapping because just any hardware store does not stock plastic strapping. If you decide on plastic strapping and want to use the "pull to release" trick, leave a long tail so you can wrap it around your waist when you have to pull on it. It is



Hive ready to strap. Measures 21-3/8" top and bottom. Screens in place. Screen before strapping.



Signode plastic strapping, cutting and tensioning pliers, model DLT and Adams tensioner (on carton).



a good idea to practice till you can thread the buckles quickly and with ease. I also suggest that on hives taller than three deeps, you should use 2 bands. See sketch showing how the plastic is threaded.

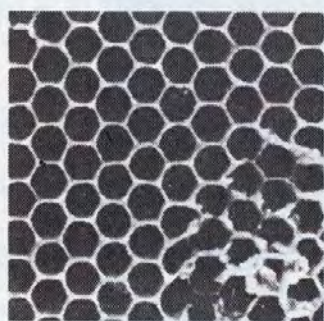
If you are rich, the ultimate means of holding a hive together is either one and three quarters or two inch wide nylon-dacron webbing. It has a breaking strength in excess of three tons. Unfortunately 14 feet of the webbing and the ratcheting buckley assembly costs, I believe, upwards of thirty dollars each. The heavy duty one inch wide webbing is strong enough but I personally know of only one ratcheting buckle using one inch webbing that is made sturdy enough for long term repeated use. That one is made by "Airequip". A large truck supply normally has ratcheting buckles and the webbing in 1, 1-3/4 and 2 inch widths. You need probably 13 feet of webbing on each buckle. A local auto supply here has a real bargain ...one inch ratcheting buckles and I think 15 feet of nylon webbing. I admit the assembly could never be called heavy duty equipment, but at \$4.99 each one could afford to use two on each hive and that might be a solution.

There is one other product that I can fully endorse. A company called, I believe, Bee'z-R-Buz'n advertises in the bee press the AGM Cargo tie assemblies. I am informed one assembly of buckle and strap costs about \$10 including postage, but if you need say 10 or more or twenty-five or more, I think, the price per each is less. I will also tell you it is impossible to satisfactorily tension the AGM Cargo Tie without a cheater bar. The dealer mentioned above has instructions on how to make them and may have had some made up for sale. Ask him if you are interested.

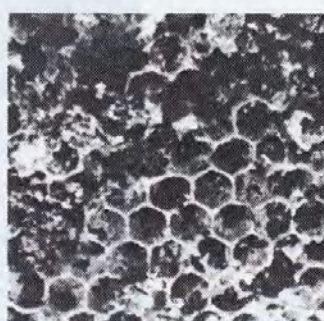
Now, no matter what you use to strap the hive together excepting wood strips or staples, I think you must provide a means of preventing the hive from slipping around or off its bottom. I discussed how to grind double headed nails and how to set them in the rails of the bottom boards in the second part of this series, or you can nail the bottom to a deep super, then for sure you won't have it slide. As a matter of fact that just might be a darn good idea because then you have to incorporate comb rotation in your management prac-

(Continued on page 126)

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How To Load And Move Bees

(Continued from page 124)

tice, and that is very desirable when accompanied by a good preventive medication program.

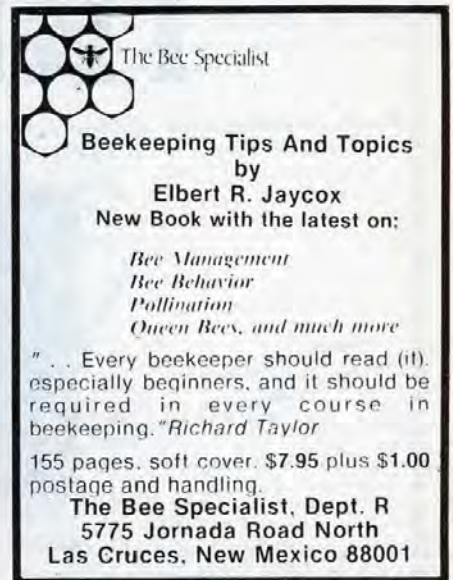
As a matter of interest I have obtained and tried using the following:

1. The Emlock fastener which works on either plastic or metal strapping. It is much used in Australia, but hard to obtain and not very quickly adjustable to various height hives.
2. Hollywood Accessories Ratchet Tie Down #133c. These are on sale as mentioned earlier in the auto supply store. Used in pairs they might be OK if you can buy them for \$4.99.
3. Hercules Tie Down — In my opinion not suitable because it does not seem sturdy enough for hives and not very well made. I do not know where they can be found.
4. The Pony Band Clamp — awkward to use and the release lever sticks up too high. Any hardware store can get them but never discounted. The same goes for the Stanley below.
5. The Stanley Band Clamp — sturdier than the Pony but awkward to use.
6. The Mity-tite (banding) System — more expensive than the Adams Tensioner, but you cannot thread it in the dark, and I often run out of daylight. They have been advertised in the bee press.

In closing I personally recommend ratcheting buckles or tensioning buckles with nylon-dacron or similar webbing because despite their cost they are easily adjustable from 2 to 5 story hives. They are expensive, but last indefinitely. Also, people remove the assemblies and take them home. That means the hives, since they are not fastened together, are harder to steal. The plastic banding is much cheaper even if you do not reuse the banding. If you do not release the bands the hives are all ready for a thief to toss on his truck. I think more hives are plastic strapped by commercial beekeepers than are steel strapped and only hobbyists or sideliners use the webbing assemblies despite their convenience. I wonder why commercial beekeepers do not use them. I suppose it is a matter of cost.

do not use them. I suppose it is a matter of cost.

Now do not reject hive staples or strips of plywood and roofing tacks for moving bees if you only plan to move in case of an emergency. Buy them now and have them available, and have your moving screens too. Sure they take a little time to build and cost a few bucks, but if you can save \$200 worth of hives from being killed by pesticides, the investment is worth making. Call the on-hand equipment cheap, single premium insurance. □

Questions and Answers

Q. I have four hives of bees and would like to move them backward about 30 or 40 feet. As it is cold now, around 20° above. What is the procedure? Also could you give me directions for making candy for bees? Do you recommend feeding Fumidil-B? R.M. New York.

A. There should be no problem moving bees thirty or forty feet from the present location. I would suggest waiting until the weather moderates some, such as in March. This is so as to avoid disturbing the winter cluster. Even if the bees are flying they should have no trouble finding their way back to their hives this short distance away. With the first flight from the new location most of the foraging bees will return to the new location without any problem of being lost.

Here are two alternative methods for preparing candy for bee feeding.

1) Take one measure (cup, pint, quart, etc.) of water and place in a pan on the burner or hot plate. Add at once one measure (same size) of granulated sugar. Bring to boil, adding one measure of sugar after the other until 5 measures of sugar are dissolved in the one measure of water. When the syrup boils, keep it going for three minutes (or until bubbles merge to larger ones the size of a dime.) Stir constantly. Take off of the burner and allow to cool, stirring all the while. When the mixture turns milky, pour it quickly into prepared moulds. This preparation should consist of slightly greasing a shallow pan or lining it with paper. Shallow boxes may be filled for late inverting over

the cluster of bees. Never add flour or other material to the boiling mixture.

2) Ingredients; 1 quart of honey (from a disease-free source), 10 lbs. of granulated sugar and one quart of water. Mix the honey and water and place on the stove and heat. Slowly mix in the sugar until all is dissolved. Bring the mixture to a 300°F. boil by using a candy thermometer. When the mixture reaches 300 degrees turn off the heat and pour the candy into flat tin foil or lightweight aluminum pans.

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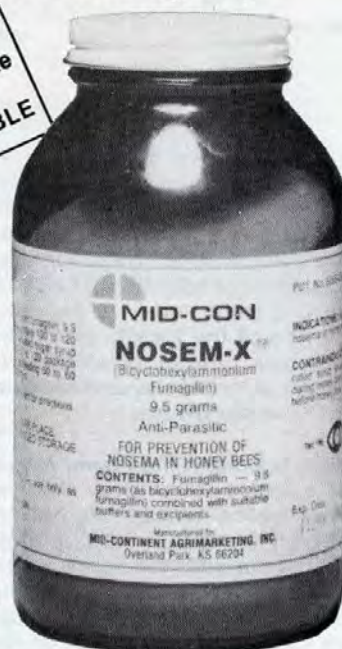
(Continued on page 137)

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Do We Need A Tariff On Honey?

Beekeepers in the United States face severe financial problems. Chief among them is the importation of honey from some foreign countries that sell their product here for less than our cost of production. The price of much imported honey is depressing the price of the locally produced honey. These foreign countries include China, Argentina, and Mexico, chiefly. There are others.

A recent article in the *Miami Herald* reports a price condition that is somewhat typical across the nation, though high yield per colony may alleviate the condition in some areas. The Florida newspaper says: "A mysterious drop in tree nectar has resulted in one of the worst honey production years in modern history for most of Florida's 600 full-time beekeepers."

"The last three or four years in Florida have been extremely poor — and it's (1982) been a disastrous year," said Lawrence Cutts, a North Florida beekeeper.

"Trees throughout the state did not yield much of the sweetish nectar that bees gather to make honey in the spring, say industry leaders. Experts are not sure why, but most blame it on extremely cold winter weather."

"If the plants don't bloom, the bees just don't collect honey," said Cutts.

He and others speculate that no more than 7 million pounds of honey were produced this year. That would make it the worst year since 1947, when 8 million pounds were reported.

"The Florida Crop and Livestock Reporting Service said 24.1 million pounds of honey were produced last year, worth \$13 million."

"I don't know if anyone can give a definitive answer," said Frank Robinson, a University of Florida bee expert, speculating on why nectar production was down this year.

"I suppose the fact that the trees were so stressed by the freezes the past two years somehow affected their physiology."

"Along with a short honey supply, Florida beekeepers were hurt by

By GRANT MORSE, Ph.D.
Saugerties, NY

foreign imports. They claim cheaply produced imports are keeping domestic prices artificially low.

"China is flooding the market and our people are suffering," said J.B. Strickland, a Florida Farm Bureau specialist. "Cutts said the best price he has received is 48 cents per pound. Tampa beekeeper Bill Shearman said he has received as much as 52 cents a pound, depending on quality."

Of course, all of the above was said before the time of the normal Florida honey flows which begin with the citrus flow which usually starting about February first.

Free Trade

The problem of competition with honey producers in foreign countries is not one peculiar to the beekeeping field. Other producers have a similar problem. Auto makers in Japan, West Germany, Italy, and France have been making trouble for U.S. car makers for the past several years.

Singapore is next to the U.S. in its production of oil rigs. Hong Kong and Taiwan are moving out of textiles and light electronic assembly into complicated computer technology. South Korea is giving both Japan and the United States competition in home electronics. China with its work force of staggering dimensions is moving into light industry — textiles, baskets, bicycles, radios and television assembly.

In the U.S. markets, China has edged out other third world countries such as the Philippines, Mexico, and India. Manufacturers in the U.S. no longer enjoy monopoly on the ability to produce any commodity used by consumers of the world.

Fair Competition

Many producers of U.S. goods — autos, aluminum baseball bats, computers, even fruit and vegetables — declare that some foreign countries with which we trade, particularly Japan and the Common Market of Europe, do not deal fairly. They point out the restrictions that Japan, for ex-

ample, places on admitting goods from our producers. These restrictions are said to include the taking apart of a package of items and inspecting each one before the package will be admitted. It includes taking a motor apart and reassembling it; also repainting a car before it will be admitted.

Such restrictions, and their counterparts, are obvious attempts to discourage the importation of foreign goods in a fashion that is not applied here to materials imported from Japan.

The fact that last year we bought, from Japan, 17 billion more dollars of goods than we sold them is rather good proof that something is wrong in our trade relationship.

Why Free Trade?

Why should the U.S. admit, duty free, honey from foreign markets at prices that are putting American producers out of business — or at least compelling them to sell honey at prices that yield little or no profit?

The reason, of course, is that the leaders of this country for some time now have believed that our national interest lies in free trade. There does not appear to be any strong belief by the more prominent leaders of the major political parties that we should abandon our largely free-trade policy.

The theory of our best national thinkers is that if trade barriers are erected here, other countries will be forced to retaliate to a degree that would make it very difficult for our producers and manufacturers to sell our products abroad. More than one quarter of our manufactured goods go into foreign markets.

Also, if an international policy of trade barriers is practiced by each country, a slow-down or reduction in some markets of some countries might make it impossible for them to exchange products.

Further, the theory is that in the interest of all mankind, it is better for each country to produce and sell the commodities that it is most effective in producing.

(Continued on page 130)

SWEET CLOVER SEED

White sweet clover seed has become very scarce the past few years but we have a good stock of 65% white and 35% yellow seed in stock. Yellow blooms the first year and a bit earlier than white and white blooms the second year. May require inoculation if clover has not been grown on the land previously. Ask your county agent. This is the best honey plant north of the MASON-DIXON Line. 10 to 15 lbs. required per acre. Sow Jan. 1st. to April 1st.

MIXED SWEET CLOVER SEED

Cat. No. 66

10 lbs. Ship. Wt. 11 lbs. \$7.50

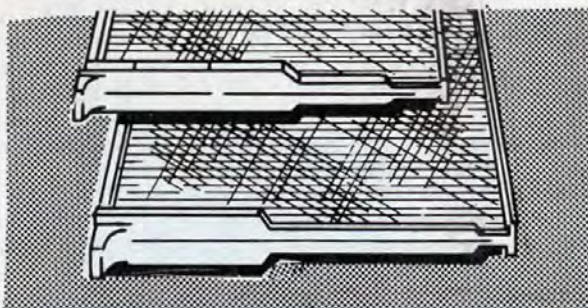
44 1/2 lbs. Ship. Wt. 48 lbs. \$33.50

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MAXANT INDUSTRIES, INC.
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Do We Need A Tariff On Honey?

(Continued from page 128)

Where Do We Stand

How does this work out in the honey business? It would appear that it places U.S. honey producers at a disadvantage because: 1. some other countries have nectar sources that are more abundant than ours, on the average. 2. Labor costs are higher here. 3. Our standard of living is higher than most people in the countries that are competing with us in the honey market.

Do we have any advantages? Obviously we have a long backlog of experience in producing honey. We have the benefit of large scale production of equipment. Our researchers supply us with their latest findings. Our producers are close to their markets. We are experts at packaging. Many honey producers enjoy the benefits of the pollination market — a field that yields better than is true in most foreign pollination markets; in short, added income.

Should We Strive for a Tariff?

To begin with, we shall get comparatively little sympathy from the consumer, or from our national policy makers.

The economists of the world are rather fully indoctrinated with the belief that free trade is good for the peoples of the world — and we are beginning to realize that we are part of a world economy; that our country's policy makers can no longer base their policies on local conditions alone.

We do have one unique leverage. It is the importance that honey bee pollination plays in our country's economy. The consumers of honey in our country may be able to buy it from other countries more cheaply than here, but they can't simultaneously secure pollination for this country's crops.

The researchers who have studied this question tell us that at least one third of the food on our tables comes from sources that would yield far less, or almost not at all, were it not for pollinators, but they do not exist in most areas in adequate numbers to care for the pollination needs of large scale plantings such as we have today in the fruit, nut, and vegetable producing fields.

Today, in addition to the pollinating service provided by honey bees rented for the purpose, much free pollinating work is furnished, and largely without awareness on the part of the beneficiaries, by the large numbers of colonies maintained and well distributed across the land by small scale beekeepers.

There are other social benefits enjoyed by our general population through the pollination work performed by honeybees without much notice by those who benefit. These benefits include considerable advantages in the prevention of wasteful soil erosion; the benefit to wild animals through pollinating plants that supply food to them; and a contribution to the beauty of the landscape which all of us enjoy.

Perhaps the unique leverage to which I have referred balances our lack of leverage in the fact that we are a distinct minority, and are not too well endowed with dollars with which to lobby or exert legislative influence in the ways that are currently practiced by more powerful interests.

For the Love of Life

and the
hope of
tomorrow



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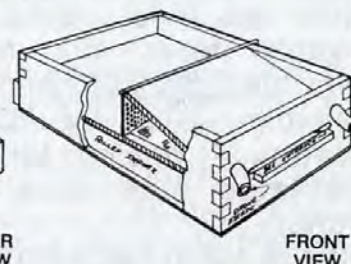
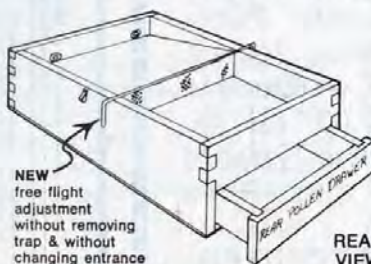
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Henrik Hansen



A 32 page booklet with 26 colored pictures designed to aid beekeepers in identifying the common honey bee brood diseases.

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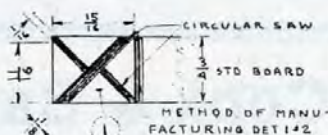
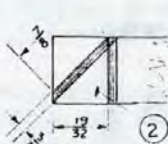
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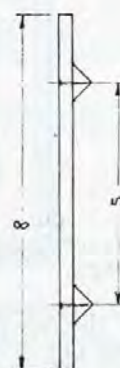
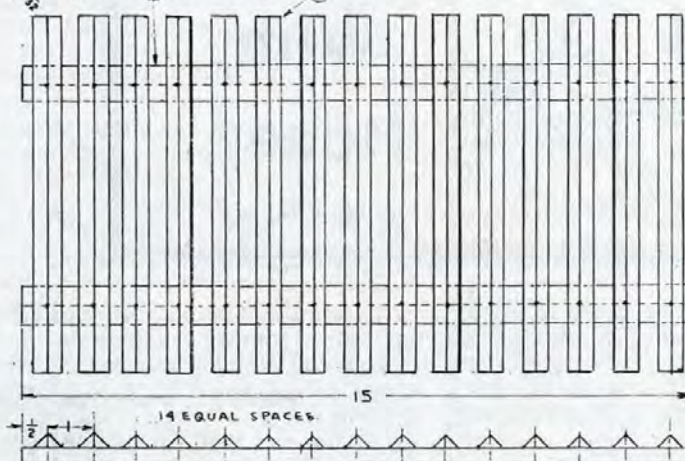
Hive Top Feeder With Float

By I. FRYO
Ontario, Canada

IN THE APRIL, 1968 *Gleanings In Bee Culture* I described a simple and effective bee feeder, but beekeepers do not use it because they don't like to cut holes in the hive cover. Knowing this, I have a suggestion for building a feeder of another design. It has an ample volume for feeding in outapiaries, greater than the Miller feeder, of similar design. With this feeder the bees have access to the full feeding surface, rather than a narrow "trough" as in the Miller feeder with the mesh covered feeding surface. This feeder can be level on the hive, increasing the capacity, rather than have to tilt, as in the mesh covered top tray feeder where the syrup must be forced to flow toward the one end. You will find that the bees will clean up the inner surfaces of the feeder better when they have full access to the syrup reservoir. This will prevent having the feeder tray retain a coating of granulated honey or syrup.



MATERIAL	
1	15 CEDAR
2	2 CEDAR
3	30 CAL. NAILS 3/4 LG



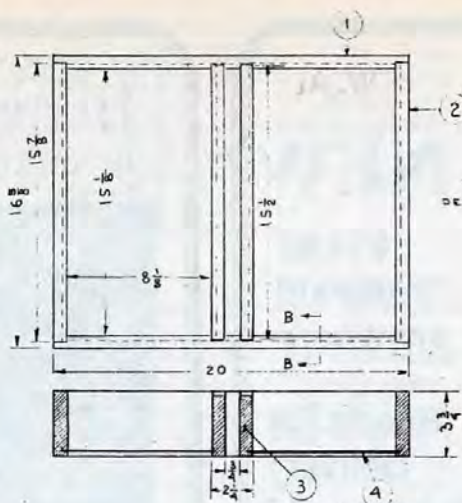
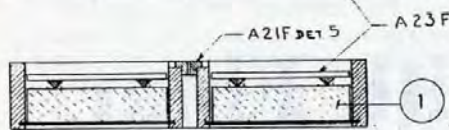
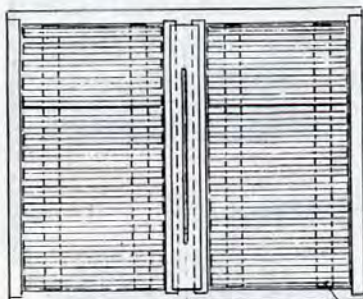
SCALE		BY DATE		FLOAT		I. FRYO		A 23F
A2ZF	1:2	DWN	I.F.	24.11.67	FOR SUPER TOP FEEDER	41 1/2 GEORGE ST	ST CATHARINES	
ASSEMBLY	4 FULL					L2R3H7	5116 DWG No.	

The float prevents bees from drowning in the syrup.

The feeder can be left on during the winter and two blocks of foam insulation added to the tray. To prevent the bees from chewing on the foam insulation the blocks can be wrapped in plastic and taped. A feeder will then be in place in the spring and feeding can be resumed after removing the foam insulation.

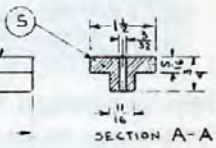
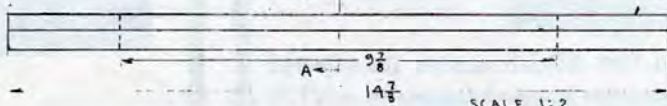
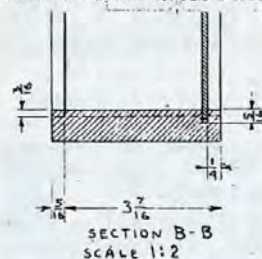
The only possible disadvantage is the fact that bees are not confined beneath a protective wire mesh when the hive top is removed. A smoking will force the bees back down into the combs and allow the feeder to be filled quickly. □

DET	QTY	MATERIAL
1	2	STYROFOAM 2x8x15
		PLASTIC MILL
		PLASTIC ADHESIVE TAPE



DET	QTY	MATERIAL
1	2	CEDAR 3/4 x 3 3/4 x 20
2	2	CEDAR 3/4 x 3 3/4 x 15 1/2
3	2	CEDAR 3/4 x 3 1/2 x 15 1/2
4	2	MASONITE 1/8 x 1 1/2 x 15 1/2
5	1	CEDAR 3/4 x 1 1/2 x 14 7/8
6	20	TWISTED GALV. NAILS 1 1/2 LG

DET. 6 IMPREGNATE WITH PROPOLIS DISSOLVED IN ALCOHOL



SCALE	BY	DATE
A 22 F	1:5	1.F. 23.III.82
ASSEMBLY	4:1:2	

HIVE TOP FEEDER

A 21 F
414 GEORGE ST.
SE CATHARINES, ONT
L2R 5N7
SIZE: DWG

SCALE	BY	DATE
A 21 F (DET. 1, 2, 3, 4, 6)	1.F.	24.III.82

HIVE TOP FEEDER
ASSEMBLY

1. FRYC
41 1/2 GEORGE ST
ST. CATHARINES, ONT
A 22 F

completely convinced that it is worth every last bit of extra effort put forth. Now for another favorite recipe:

This is great for your next coffee break or brunch.

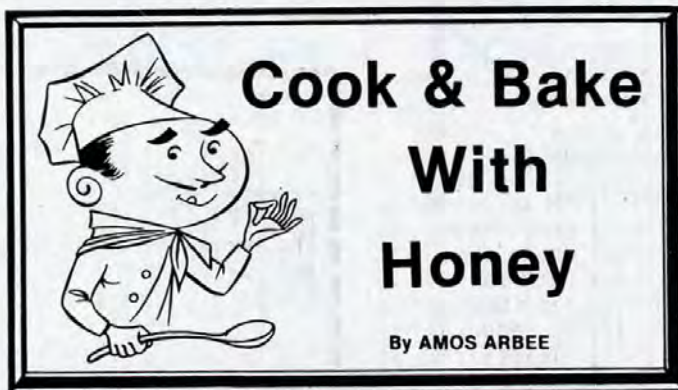
"Honey Pecan Goo'ness"

Sweet Dough

Scald 2 cups milk. While doing this, soften 2 pkgs. active dry yeast in 1/2 cup warm water. Then place 1/2 cup of honey, 6 tablespoons shortening, 2 teaspoons salt into large mixing bowl. Pour the scalded milk over ingredients in your bowl beating until smooth, add one cup flour. Stir in softened yeast, then add 2 eggs well beaten, then add remaining 5 or 6 cups flour to make a soft dough. Turn onto a lightly floured surface and knead 5 to 10 minutes.

Allow to rise about 1 hour or until double in size. Smear the bottoms of pans before shaping the rolls to place over top.

In small mixing bowl: 1/2 cup honey, 1/2 lb. butter - soft, 1 cup pecan pieces, 1 tablespoon almond extract, 1 teaspoon cinnamon, 1 teaspoon salt, 1/2 teaspoon ginger, 1/2 teaspoon nutmeg. Mix well until fluffy and place in pans. Place rolls on top and bake after rising for about 45 minutes at 325 degrees F. for about 30 minutes.



AS BOYS WILL be boys, a young boy recently begged his grandad to assist him in freeing a butterfly that was about to hatch from its cocoon. Of course the boy's grandad having much wisdom as a result of more years experience cautioned his young grandson to allow the butterfly to hatch as "Nature" had intended as this of course is how the butterfly becomes strong for flying later on.

The story concerning the butterfly hatching is almost exactly how I feel in regard to cooking and baking with honey. Sometimes it's a little difficult to break-out with honey in the recipe but in the end result it usually pays well both in the taste and keeping qualities insofar as moist and mellow texture. Next time you are cooking or baking your favorite recipe, try breaking into the use of honey. You may be

THE TRUTH about THE ALL NEW, ALL PLASTIC FRAME—FOUNDATIONS molded in one piece.

They are cheaper than the now obsolete assemblage of wood frames and wax foundations. From unsolicited testimony, they are the best on the market. The bees like them and make beautiful combs. In rare occasions some colonies, depending on the seasons, build bridges of drone cells between too far spaced frames. After easy removal the final combs stay perfect forever. If damaged by moths or mice they can be scraped and the bees rebuild them like new. They are interchangeable with any other comb, in brood nest or in super. They are not brittle in the coldest weather. They make stronger colonies that winter better and produce more honey.

No assembling — No nailing — No wiring — No embedding

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Sale will begin at 1:00 p.m. Inspection of machinery will be on sale day beginning at 10:00 a.m., with a demonstration at 11:00 a.m. All machines are 3 phase open motors.

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12" BELSAW PLANNER — 12" EDGER — AIR COMPRESSOR (3 hp.)

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Siftings

By CHARLES HRAZ
Box 127
Middlebury, VT 05752

(Continued from page 116)

Norman Bantz of New York who recently gave a talk to a "Nature Center Group", about bees and bee products and their uses in apitherapy. In the audience was a doctor that did not pay attention to Norman's talk. He had a painful fibrositis on his hand that was draining. It had been treated with antibiotics and surgery with no improvement. A friend with the doctor told him Norman said honey was good for wounds, burns, etc., that do not heal. The doctor just remarked that Norman was "nuts". The doctor's friend got some honey and insisted he try it on his hand. To the doctor's amazement, the draining stopped and his hand healed completely in just a few days. Two more personal experiences with his problems convinced him there must be something to this bee business after all.

This doctor is an Internist, specializing in venereal diseases. Through Norman, I met the doctor and he is most interested in the possibility of apitherapy to help con-

trol herpes simplex and AIDS. He sees victims of these problems every day in the clinic. It does not take much imagination to realize if apitherapy can, to some degree, control these two afflictions, bees and beekeeping will gain much greater respect than it now has.

In addition to these two serious problems, the field of immunotherapy could very well include the whole field of degenerative diseases. These are rheumatic diseases in all forms that affect 80% of the population to some degree. Heart and vascular diseases cause some 50% of the deaths today, and cancer in all its forms will affect more than 25% of the entire population. Adding up this list of degenerative diseases, it is evident degenerative disease may eventually affect just about everyone of us before we die.

Beekeepers interested in the fascinating field of apitherapy research, drop a line to Ann Harman, Information Officer, North American Apitherapy Society, 15621 Aitcheson Lane, Laurel, Maryland 20707. Include \$10.00 for membership if you wish to help pay for the costs of our meeting. I hope we will see many of you, November 12, 1983 at the Interna-

tional Hotel, Baltimore-Washington Airport, to learn what wonderful creatures the honey bees are. They truly are Mother Nature's pharmacists, ready to help you and your family to live a healthier, happier life. □



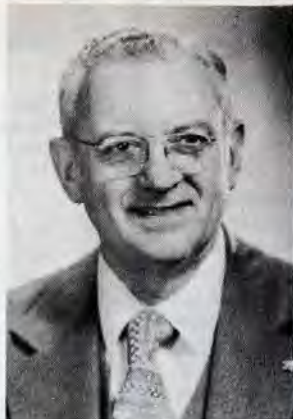
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WRITE: Better Way Wax Melter
116 - 11th St. S.E.
Altoona, Iowa 50009

Research Review

By DR. ROGER A. MORSE
Research Editor of Gleanings
Professor of Apiculture
Cornell University
Ithaca, NY 14853



A Book We Would Like

Recently I've been researching who made the first comb foundation. The credit appears to belong to a man by the name of Kretschmer in Germany in 1842. His son wrote about it in a book we have in the Cornell University library entitled *The American Beekeepers' Guide*. The copy we have is dated 1872 and is, according to its title page, "a new and re-written edition of *The Beekeepers' Guide Book*" written in 1862.

His father's invention wrote Kretschmer, "consisted of a narrow strip of tracing linen, coated with a composition of white wax and starch, and upon which the comb-foundation or base of the cells was impressed by passing it through a pair of engraved rollers." The strips of linen were attached with hot wax to the wooden top bars of the hives that were popular at the time. Of course, that was before the invention of the movable frame hive by the Reverend L.L. Langstroth in 1851.

We think of the Cornell Library as fairly complete. However, we do not have a copy of the earlier (1862) Kretschmer book. I have also seen references to a possible 1868 or 1869 edition. Either of these would be most welcome. According to the 1872 edition, Kretschmer lived in Coburg, Montgomery County, Iowa. The book was printed in Chicago. It is possible the 1862 edition was in German.

Kretschmer's book is interesting to read; he appeared to be an intelligent, practical beekeeper. He had problems with wax moths and fumigated his comb honey with burning brimstone (sulphur). He told how to make a bee beard. He knew how to combine swarms and to force swarming. His book includes a description of an extractor and gives directions for making mead.

We are not in a position to buy one of Kretschmer's original books but hope that someone might donate a copy. We do place suitable bookplates in gift books noting the name of the donor. I'm sure there must be copies in some beekeeper's library or a second-hand book store, especially in Iowa.

Damage by *Varroa* Mites

The mite *Varroa jacobsoni* lays its eggs in worker and drone brood cells just before the cells with the older larvae are capped. The *Varroa* eggs hatch and the developing mites feed on the pupae. As a result of the paper below we are just now getting some figures on the extent to which bees may be affected by this mite feeding.

As one might expect the greater number of mites feeding on a developing bee the greater the damage. When only one mite was present in a cell, a worker bee lost only about 6% of its weight. When as many as six to nine mites were present, the bee that emerges might weigh 20 to 25% less. Of course, many mites may also cause the death of the bee. Only a small percentage of bees showed wing damage (deformed wings) as a result of the *Varroa* feeding. Wing damage is one of the things that is easily seen and has often been used to judge the degree of the infestation in areas where the problem occurs.

Reference

De Jong, D., P.H. De Jong and L.S. Gonçalves. Weight loss and other damage to developing worker honeybees from infestation with *Varroa jacobsoni*. *Journal of Apicultural Research* 21: 165-167. 1982.

Ethylene Oxide Under Fire

Apiary inspectors and beekeepers in several states have shown that ethylene oxide fumigation of combs and equipment infected with American foulbrood is effective. It kills the foulbrood spores, however, the method is still not in the hands of beekeepers, where I agree it should be. Several states, including my own, have been reluctant to approve its use.

Ethylene oxide is one of the most widely used chemicals in the U.S. today. One of its more important uses is to fumigate hospital beds and equipment. Since it kills American foulbrood spores, which might otherwise live for 50 to 100 years, it is clear why hospitals want to use it. Very few organisms that attack man are so persistent.

According to a recent report (below) "A federal judge has rebuked" the federal administration for not writing stricter regulations governing its use. The judge indicated there was "solid and certain" evidence that there was risk involved to workers who use ethylene oxide. The substance is widely used as a pesticide, as a base for an antifreeze, and manufacture "textiles, detergents and bottles." Unfortunately for the beekeeping industry this ruling may very well delay use of ethylene oxide as an aid in American foulbrood control. Researchers have not found another chemical that is so effective. □

Reference

Smith, R. Judge orders Regulation of Ethylene Oxide. *Science* 219: 269. 1983.

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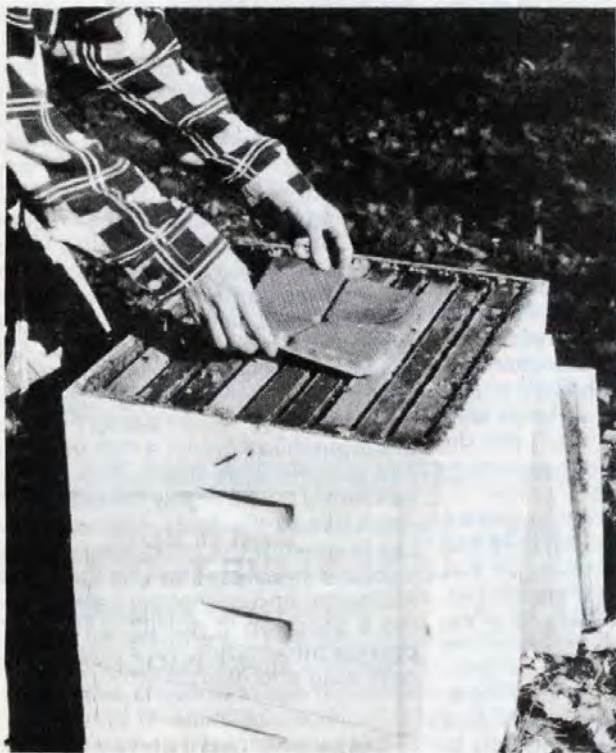
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Educating The Public About Bees

By W.L. GOJMERAC
Madison, WI

Beekeepers are a unique group of individuals. Being involved in education for nearly 25 years, I know of few comparable groups so ready and willing to explain and discuss with others their problems and achievements. They also will unselfishly help beginners or less experienced beekeepers avoid mistakes. Stated in another fashion beekeepers like to talk to themselves (other beekeepers). This is one way we educate each other as we learn from our mistakes and experiences.

In this article I would like to discuss another aspect of education where beekeepers are not doing well, and in my opinion we are now being exposed to some of the consequences. We're not educating the public about bees.

"Common Council Proposes to Ban Bees," "Neighbors Swarming Over Backyard Hobby," "City Suffers Case of Hives," "Beekeepers are Cut Out of U.S. Honey Jar," "Beekeepers Lose Lawsuit," and "Beekeepers Abuzz as U.S. Proposes to End Honey Price Support Program" are examples of some rather recent newspaper headlines. They may even appear humorous if you're not personally involved. This kind of press coverage, however, reflects to a degree how the public views our hobby, part-time occupation, business or profession. While these problems and confrontations will not "go away," a better educated or more enlightened public will view these problems, differences of opinion, and/or confrontations far less antagonistically, acrimoniously, or sarcastically.

Beekeepers, their organizations, and suppliers do well in dispensing information about bees and honey. But don't confuse education with dispensing information. While the latter is important and needs to continue it's also important to educate the public about bees and honey. When we dispense information, we're simply serving as a store, library, or a properly programmed computer.

We're making it easier for the person to obtain needed information.

But when people are educated, we hope to change their attitude, opinion, behavior, simplify a work situation, or make the enterprise more profitable.

As beekeepers, we need to divide our educational effort into two categories. First, we need to educate ourselves about bees and honey; and second, we need to educate our non-beekeeping friends, neighbors and youngsters about bees and honey, recognizing the fact they're not interested in becoming beekeepers.

You don't have to be a teacher in a formal classroom setting to be an educator. In fact, much of the education in our society takes place outside of the classroom. To be an effective teacher, you need to understand the topic or subject and be able to explain it to others. Although this prospect frightens many people, it's not as awesome a task as one might initially think. You need to recognize the fact that you, as a beekeeper, generally know more about bees, beekeeping and honey than does a non-beekeeping person. So most beekeepers can be competent instructors when dealing with the non-beekeeping public. But this places a responsibility on you as a beekeeper. In addition to simply knowing the "how to," you should also know and understand the reason "why" you do certain things.

In teaching it's important to make a clear and precise distinction between opinions, facts, and folklore. So you need to have a source of creditable information or "know the facts." For example, you may sincerely believe honey and/or propolis contains some mysterious health or nutritional ingredients and you're even able to find people willing to offer testimonials to verify your opinions. However, facts and/or documented proof on these topics is lacking. If you "kinda

stretch" some facts, or simply repeat unsubstantiated opinions and your "students" know it, your credibility in everything you teach about beekeeping is in jeopardy. A thinking person will not believe anything you say about bees, beekeeping and honey.

What should the public be taught about bees and honey? Everybody knows bees produce honey and pollinate some plants. But few people understand the **significance** of these facts. For example, without bee pollinated fruits and vegetables, our diet would be based primarily on such wind pollinated crops as corn, rice, and cereal grains and some non or self pollinated plants such as beans and potatoes. By our standards, this would not be a very appealing and appetizing diet. Also, livestock depend on legumes for feed. Without bees to pollinate these forage crops, meat, milk, cheese, ice cream, etc. would be far more expensive.

With reference to honey: most households have one or more cookbooks and a stack of recipes which describe how honey can be substituted for sugar and/or corn syrup. But beekeepers should be able to intelligently discuss things responsible for and significance of color, flavor and aroma of locally produced honey. Also explain why some people prefer comb and/or chunk honey over extracted honey. You should be able to explain seasonal variation in quality and quantity of honey. Capitalize on the fact that honey has a distinguished history, a rich tradition, and a world wide basis, from recorded history it was highly valued food. If you stick to the facts, you're not going to go wrong. I believe the general public is interested in this kind of information and beekeepers are not doing a good job in providing it. We do provide information, let's now go that next step and explain why.

Beekeepers could and should work more closely with schools to help educate youngsters about bees, beekeeping, and honey.

some teachers may resent a statement which implies schools can be "used to promote special interests," but the contribution made by bees affects society simply because we all eat food. This should be a component in some class curricula. How many science, biology, agriculture teachers and County Agricultural Agents, are knowledgeable about bees and beekeeping? How many home economics teachers and newspaper food editors have detailed information about honey? These people know that bees sting, pollinate crops, produce honey, and that honey sometimes might contain botulism spores.

Many teachers overlook this subject because they don't feel comfortable about discussing an unfamiliar topic in class, or they have had no formal experience or training in this area.

There are many ways for an association or an individual to work with, reach, or establish contact with local schools. The ideas explained here are not listed in any specific order or sequence:

1. Invite the local teachers to one of your association meetings as special guests. This would be highly appropriate if you have a good speaker on a general topic. Biology and science teachers would be interested in such topics as swarming, stings, bee nutrition, requeening — and agricultural teachers or county agents would be interested in pollination, insecticide problems, nectar/plants, etc. The home economists and food editors would be interested in topics related to honey handling and its uses. The invitation could be extended by way of letter and/or phone call. Keep in mind, these people have to pick and choose extra-curricular activities. So don't feel of-

fended or insulted if, on occasion, they choose not to come or say that they cannot attend your meeting. Also, be sure that you have a program that is worth their time. If you mislead or fool them once, you'll have difficulty getting their attention the second time. If the program is good, they will be very appreciative and probably return. Once they know you're sincere in trying to help with the educational process, they'll depend on you for reliable and credible information.

2. If your association chooses to provide a class or school with some reference books on bees and honey, then a personal letter to a specific teacher with a carbon copy to the principal or superintendent is in order. In essence, your letter should state that the association feels that bees and honey are important topics and is aware that the budget is tight, so you are donating the material, hoping the class will find it interesting, educational and useful. However, be selective in choosing what your association might consider presenting to a school. Advertising material, testimonials, literature with unsubstantiated claims are out; they might be accepted, but won't be used. It needs to be **credible teaching materials**. If someone from the association wishes to deliver these materials in person, it's important to call the teacher for an appointment. Most teachers will gladly meet with people before or after school hours, and maybe even during a free period. They obviously cannot accept a visitor during a scheduled class period.

3. A discussion on the curriculum or teaching program of a local biology or science class should be approached with a great deal of caution. If you have teachers in your association, ask them for a professional opinion, or have them as a member of your

educational committee. Like all professional and business people, teachers will and should resent outsiders interfering with or in their business. Reasonable people, however, are always open to new ideas. To confront a teacher with a question as to why information on bees, beekeeping and honey is not being taught, is out of place and should not even be considered. However, assume some kind of problem or controversy related to bees occurs in your community which makes the local newspapers. Items like a swarm landing in someone's yard, bees killed with insecticide, a proposed zoning or bee banning ordinance are topics that generate local discussion. This might be a good reason for the association to establish contact with schools. This might be done through an educational committee or a selected individual. Again, do not insist that something be included in the curriculum, but if the teacher plans anything, the association is interested in being of assistance. This will tell the teacher that the talents and resources of the association are available. Most teachers recognize that in every community there are many trained, talented, and experienced people who can be of assistance whenever controversial and/or important topics arise.

I know some associations provide or install an observation beehive in the local school. Some even furnish recipes, cookbooks and honey for class. Many beekeepers are invited into classes as guest speakers. These are fine activities and these practices need to continue. Now let's go the next step and help with the **educational process** by making sure that bees and honey are part of the curriculum in science, biology, agriculture and home economics. □

Questions and Answers

(Continued from page 126)

syrup, usually a 2:1 sugar syrup. The desired concentration is obtained by using one small package (0.5 grams of activity) for the preparation of 5 to 6 gallons of medicated syrup, or one large package (9.5 grams of activity) for the preparation of 100 to 120 gallons of medicated syrup. If only one or two colonies are to be treated, the syrup may be made up with a rounded measuring teaspoonful of

Fumidil-B per gallon of syrup (two parts of sugar to one part of water). Fumidil-B will dissolve readily in cold water. Heat is needed only to dissolve the sugar quickly. No heat should be used after the Fumidil-B has been added. A heat of 100 to 120 degrees F. is best for the water, and the sugar and the Fumidil-B added in that order. For preparing larger quantities see the package instructions. For treating overwintering colonies the medicated syrup should be preferably fed in the spring or both in the fall and the spring. Commonly, at least two gallons

of medicated syrup per colony are required. Newly hived package colonies should receive one gallon of medicated syrup per colony. The medicated syrup should not be fed just before or during the main honey flow.

Q. My question is about bee stings. I live in a residential area and keep most of my hives near my house. Should anyone with an allergy accidentally be stung, I'll want to respond as quickly as possible. What are the most effective antidotes to bee

stings? Is baking soda effective? Ammonia? I've never seen an advertisement for a bee sting kit in your magazine or any other. Can you help me locate one, or make one up from scratch at home? J.H. Massachusetts

A. Should a person be stung by a honeybee and that person be allergic to the venom, immediate medical attention is required. That means a trip to a hospital or attention by a private physician. A first aid kit is available which can be carried around on the person or kept in the vehicle of the beekeeper. This kit can be obtained from your physician or from a pharmacist, by prescription. The kit consists of a filled syringe of epinephrine hydrochloride and antihistamine tablets. The medication can be injected by the individual stung or by the beekeeper or by another person. This injection is not a substitute for medical attention, which should follow as soon as possible after the severe effects of the sting or stings are noted. It is not certain if any benefit is derived from the surface application of baking soda, ammonia compounds or other measures to treat non-allergic persons stung by venomous insects. In the event of a honeybee sting, the stinger and poison sac, which remains in the skin, should be removed at once. Aside from a local reaction, which may vary from a slight welt and redness at the point of the sting to prominent swelling in the vicinity of the sting, there is usually no life-threatening reactions in non-sensitive individuals.

Q. I am beginning to put pollen traps on some of my hives. My hives are located in an area where there is much spraying of strawberries and other types of honey plants. A friend of mine asked me the following question: If I eat some of the pollen that you have collected in your traps how do I know that this pollen is not poisonous and it might hurt me?"

I could not answer the question; can you, please? It would appear that to be perfectly safe one would be required to locate his hives in an area far removed from any possible poisonous spraying. M.P. California

A. I honestly do not know the answer to your question in regard to the possibility of your pollen containing residue from the sprays used in the vicinity of your bees. Only a quantitative analysis by an analytical chemistry laboratory could make this determination. The presence of a spray residue would only be revealed if the sample contained a certain

number of parts per million or parts per billion of the contamination. If the detection method shows the presence of a spray residue the substance may not be harmful to humans, at least in the concentration found. Because of the route the nectar takes before it is stored as honey, chemicals highly toxic to bees tend to be eliminated in the storage process. The nectar gathering bees simply do not return to hive if poisoned. If they do, they are rejected at the entrance or are carried out of the hive if they die within. Whether the same circumstances apply for pollen carried in from the field on the legs of the bee remains to be seen. Trapped pollen may possibly be a greater risk in the presence of poison sprays since it is not always used immediately by the bees, thus giving no quick indication that it is contaminated.

Without doubt the safest measure is to remove the colonies from the sprayed area if at all possible. In pollen trapping this may be less of a disadvantage than when the apiary is run for honey. Pollen forage is often distinct from nectar floral in your region, I am told, therefore at least providing an alternative location.

Q. I am going through some old copies of *Gleanings*, I noticed some references to a piece of beekeeping equipment called a slatted rack. In this windy area, a couple of the advantages of using it sound particularly enticing. But I do have a couple of questions I hope you can answer before I invest in some.

First, from the diagram I have seen of the rack in catalogues it appears that its use might complicate the necessary periodic cleaning of the bottom board or cleaning it instead of the bottom board. Is this true?

Second, nowhere have I seen anything indicating whether it is left on the hive all year or if it is removed other than during brood rearing. Which would be correct? N.D. Colorado

A. From my limited experience using the slatted rack it may be to your advantage to try this unit, especially under your conditions. It has a definite insulating value, allowing better use of the lower part of the brood nest by the queen. I did not notice any tendency to build comb or use propolis because of the extra space above and below the rack. It stands to reason that the use of the rack may involve some extra cleaning time although I did not notice an excessive accumulation of trash in hives with racks. With regular flights the bees seemed to clear the bottoms satisfactorily.

The slatted rack should be left on all year as it is most useful when brood rearing is in progress and for winter use.

Q. As a beekeeper who sells honey to the public, I would be grateful if you could give me the latest news or ruling from the FDA about any possible dangers to one's health (perhaps carcinogenic) from eating honey that has been packaged in plastic honey bears or cylinders. L.S. Massachusetts

A. We know of no ruling or investigations of honey packaged in polyethylene containers under way. Polyethylene is one of the oldest food approved plastics. I am sure the bee supply manufacturers would be advised of any such contemplated on going or completed investigations. *Gleanings* has no knowledge of any problems with honey packed in plastic containers in respect to human health and does not anticipate any in the future.

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Bees and Gardens



While watching the AFC and NFL football playoffs last month I happened to hear a pre-game discussion about how the game of football was elevated to the high performance standards that winning teams of today have achieved. Now, as compared to two decades ago, teams and individual player performances are better, according to many experts. This upgrading was accomplished in part by skilled and innovative coaching staffs and other students of the game who, notebook in hand, kept meticulous records of plays and performance by individual players and teams. Such former coaches a Paul Brown and Vince Lombardi and today's winning coaches Shula, Landry, Michaels and Gibbs do not rely on guesswork and instinct alone. Careful records are kept by staffers on their team's performance, the opposing team's weaknesses and strengths, play efficiency and a multitude of other details which are recorded, analysed, reviewed and discussed. Winners reach the playoffs and the Super Bowl not by chance or being given a ticket by wealthy owners; they must earn the right to play there by superior performances.

What does all this have to do with bees and gardens? Perhaps we can take a cue from the sports world. Why not give the system used by the best football, basketball and baseball coaches an opportunity to improve your gardening and beekeeping? Keeping records not only gives you a better grasp of what you should do, and when, but will help you to understand relationships between cause and effects in nature. Records of a season's gardening and beekeeping activities not only adds interest to the performance of many of the routine tasks but also provides valuable references when the time comes to order next season's garden supplies, beekeeping equipment and review the past season's overall performance. Records can help to discover new time and labor saving ideas, select better varieties of seeds, suggest new bee management methods and perhaps allow you to come up with better scheduling of the various tasks associated with your gardening and beekeeping activities. In the end you

may have discovered that your work is lightened and productivity improved.

You may for example, find from referring to your records that a certain variety of vegetable gives you better yields under your local weather conditions than another variety which you have been planting year after year. You may discover from your records that lettuce seed sown in late March produces vastly better quality lettuce than from a later planting made in the middle of April. The time element would not likely be remembered when it came time to plant lettuce the following season had not records of the exact planting dates been available from a previous year. You may find from consulting your records, to cite another illustration, that a package of bees installed in a hive during the middle of April, despite a spell of nasty weather, fared better than one which was hived on the 18th of May during relatively settled conditions. If one queen introduced to a colony of bees on April 25th failed to be accepted, but another one introduced two weeks later was easily and quickly accepted and began to lay eggs almost at once, the circumstances which caused the rejection of the first queen may

become evident from the the weather records or other notes you have kept. You will have learned to avoid costly errors because records have increased your ability to make better judgements. Records, for example, may indicate that a colony division made on the first of May failed to build up as well as one made three weeks later after the parent colony had become much stronger and had more brood to spare.

Few of us who garden and/or keep bees have infallible memories for all of the events and details that happen during the season. Record keeping provides a ready reference as to when a certain vegetable seed was sown, when the back yard apple tree bloomed and when a super abundant harvest of garden peas was picked. Your weather records could give you a clue, for example, why an early transplant of a variety of tomato plants failed to do well. The next season you can pick a hardier variety or delay planting until the weather and soil conditions are likely to be better.

As shown in the sample, a gardener- beekeeper almanac or calendar may be kept on a daily basis, month by month, throughout the year. The makeup is optional, as suggested in the sample, or showing other information which you consider important.

The important point we wish to stress here is to spark a resolve on your part to try record keeping. Those who do will undoubtedly be the first to testify to the value of such an undertaking. □

Monthly Record														
Year <u>1983</u>								Month <u>MAY</u>						
Weather				Garden				Bees						
Date	Temp.		S-Sunny C-Cloudy	Precip.		Seed Sown or Plant set	Variety	Harvest	Sprays	Inspection Manipulation	Plant Bloom		Colony Activity	Scale Hive
	High	Low	P. Cloudy	Rain	Snow	Start					Stop			
1	70	50	S	0		2 R CORN	ENERGY	ONIONS		DIVIDED #2			YELLOW POLLEN FLYING LITTLE	+1
2	64	52	C	.05		RADISH		RADISH					SOME NECTAR MUCH POLLEN	0
3	62	50	C	0		RADISH		ICHC					SOME NECTAR MUCH POLLEN	3
4	68	48	S	0		EGG PLANT		HYBRID					"	4
5	70	61	PC	0		BEANS		JUMBO					"	5
6	72	65	S	0		24 PLANTS		TRI-STAR		CHECKED FOR CELLS			"	5
7	73	61	S	0		STRAWBERRY		LETTUCE					"	5
8														
9														
10														
11														
12														

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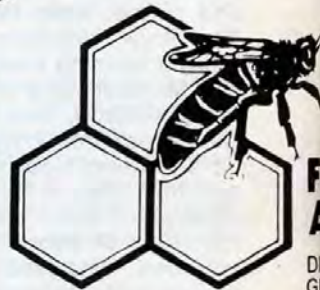
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Capping The News

THE EDITORS

"Beekeeping Small Talk"

A Survey of the Nation's Bee Industry

Although the U.S. Beekeeping Industry currently faces many problems, little is known about the views and opinions most industry members have on these various issues. And because of this gap, the industry's problem-solving efforts are hampered.

To aid in gathering the information needed to help fill this void, the Washington State Beekeepers' Association (WSBA) has taken on, as an association project, the task of conducting a national survey of the beekeeping industry.

In 1979, WSBA worked with the Washington State Department of Agriculture and Washington State University on a survey of the state's beekeeping industry. Survey response rate was nearly 80% and information received proved most helpful in dealing with government officials, other agriculture groups, the news media, and their own industry in making decisions and forming policy.

Spurred on by this success, the Washington State Beekeepers' Association (with technical assistance from Washington State University) is now heading up another survey. Only this time, the survey will include all states and the information acquired will be available for use by the entire industry.

"Of course, a national survey of the United States Beekeeping Industry is a project which requires combined effort," notes project coordinator, Diane Longanecker, "and to date, cooperation and support for the concept have been excellent."

To gain a comprehensive view of what information the survey needs to cover, Longanecker made a special mailing to more than 300 key members and associates of the U.S. bee industry from across the United States. These individuals included researchers; extension entomologists; honey packers/dealers; manufacturers; and more than a dozen government officials. In addition,

a number of queen and package-bee producers, and migratory and non-migratory beekeepers were also contacted.

"Because the suggestions we've received come from all segments of the industry as well as from those who have contact with our industry," explains Longanecker, "we have been made much more aware of just what information the industry would like (and needs) to know about itself. By working with survey experts at Washington State University, we should be able to develop a survey format that will be effective in gathering the specific information needed by the industry."

Although the Washington State Beekeepers' Association provided the 'seed money' needed to get this project started, Longanecker points out that major fundings is dependent upon the beekeeping industry of the United States.

"So far," says Longanecker, "all indicators show that the industry would like, and could benefit from, a rather detailed, indepth survey. However, just how much depth and detail we will actually be able to deliver is directly dependent upon the financial support the industry provides."

Contributions, comments and/or questions are most welcome and can be sent to: **The National Bee Industry Survey, Rt. 2, Box 2075-AA, Wapato, Washington 98951.** □

Africanized Bees in Argentina

The U.S. Department of Agriculture will spend \$101,000 to investigate Argentina's population of undesirable Africanized bees. Current estimates indicate that the Africanized bees now in Central America could reach the southwestern United States by the end of this decade.

Africanized bees (sometimes referred to as killer bees) threaten American agriculture. About a third of all food eaten by the American consumer comes from plants pollinated by bees. When Africanized bees move in, native honeybees and other bee species, as well as beekeeping enterprises, decline severely.

Invading bees do not collect much honey. In Venezuela, for example, the production of honey dropped from almost 13 million pounds per year in 1975, before the arrival of the bee, to less than 2 million pounds in 1981.

Under a cooperative agreement with USDA's Agricultural Research Service, scientists at the University of Georgia will study the present distribution of Africanized bees in Argentina, determine the conditions that affect the range and distribution of the bees, study floral preferences and pollination effectiveness, and identify the density of wild bee colonies.

Because eradicating the insect is impossible, geneticists at ARS's Bee Breeding and Stock Laboratory in Baton Rouge, LA, are experimenting with European bees, as well as colonies of Africanized bees in Venezuela, to develop methods to best meet the anticipated onslaught.

Laboratory director Thomas E. Rinderer, says "The Argentine information, as well as the Venezuelan studies, will be useful in formulating plans to best defend our native bees. We are interested in how the Argentinians are dealing with the ability of these bees to strongly defend their colonies, rob other hives, and form large populations of wild colonies that compete with beekeepers' colonies."

Rinderer is the ARS scientist supervising the study. Alfred Dietz is the principal investigating scientist at the University of Georgia. □

But Bumble Bees Don't Eat Honey Bees

By **STEPHEN B. BAMBARA**
North Carolina State University

THE SETTING WAS mid-August in a bee yard hidden back from an old dirt road. The small rural town of Louisburg, North Carolina was several miles away. I had just pulled up to the hives and was sliding out of the pick-up truck, when a large bodied black and yellow insect buzzed slowly passed.

My immediate reaction was to dismiss the insect as just another bumble bee, but almost at the same instant I realized that there was something different about this one. It landed a few feet away, so I approached slowly for a closer look. The insect was clutching a honey bee in its forelegs, and was not a bumble bee at all, but instead a robber fly!

The mimicry was excellent. Not only was the coloration and body shape like that of a bumble bee, but some of the behaviors duplicated those of the bumble bee as well. The robber fly had a slow almost clumsy flight, and its own low pitched buzz. It even held its wings folded flat over the back when at rest, as does a bumble bee.

Following that realization, I suddenly noticed another one, and another, and another. There were a dozen of these insects flying about or



The Robber Fly *Mallophora orcina*. Photo by author.

resting on the vegetation surrounding the hives.

Scientifically, robber flies are classified as Dipterans which have evolved predaceous habits and catch and eat other insects. As flies, they have only one pair of wings and large hemispheric eyes. Because they eat insects, they could be considered as beneficial, but the label is rarely used. They are common in the United States and show much variability. Many of these notorious predators are slender and lightning fast fliers which may be how they received their name. These particular robber flies described earlier, did not need speed, however, to pick off the slow flying honey bee as it came in for a landing.

The species observed in the Louisburg apiary (and several others since) was *Mallophora orcina* (Wiedemann). *M. orcina* was first described more than 150 years ago

and has been collected across most of the southern U.S. from Virginia to Arizona. Its range may be larger. The mimicry characteristics give *M. orcina* protection from creatures fearing a sting and make it less noticeable while preying on true bumble bees. In addition to bumble bees (*Bombus spp.*) and honey bees (*Apis mellifera*), it has been reported to prey heavily on yellow jackets (*Vespa germanica*) and wasps (*Polistes spp.*).

Another species of robber fly, *Pro-machus rufipes* (Fab.), was also observed in the same bee yards with *M. orcina*. But while it too was catching honey bees, it lacked the bumble bee mimic coloration.

An apiary is, no doubt, an abundant source of food for insects such as robber flies. However, the actual number of bees destroyed probably would be few in a hive containing tens of thousands of bees and would go virtually unnoticed by bees and beekeepers.

Next time you are in your apiary, anytime from mid-summer until frost, keep one eye open for mysterious bumble bee-like creatures. They may be eating your bees!

County Associations And The 4-H

By **BERNIE HAYES**
Wellsville, NY

COUNTY ASSOCIATIONS (bee clubs), usually made up mostly of experienced beekeepers, should devote a portion of their activities to encouragement of apiculture in their respective communities.

It is a source of "new blood" and the means of attracting the interest of members, especially those that have to be coaxed to leave their TV and easy chair and face a bit of cold winter to enjoy the reminiscence of

the summer; view the slide/movie show; make a new acquaintance or even give a talk on their specialty, Cobana, double queen hives, or what have you.

Basically, beekeeping is a "loner" activity, a very individualistic pursuit of that portion of nature represented by a tiny insect that has unique capabilities and plays a special role in nature's scheme of things.

Paradoxically, however the loner often has the typical enthusiasm of the craft which joins them together

under whatever clime or circumstance.

The bee, an animal, does fit into the rural community and beekeeping has been a part of 4-H especially where orchards and some field crops are a large part of the scene.

Personally, it is my opinion that the beekeeping bug does not bite as easily with today's youth because of lack of contact with any form of apiculture.

(Continued on page 144)

County Associations And The 4-H

(Continued from page 143)

However, the youth of today have access to a greater amount of scientific and practical literature and studies which encourage them towards entomology/beekeeping.

(Readers may recall the Todd Nelson bee and moth experiments done in space by the Columbia's crew during their March 1982 flight.)

Thus bee clubs are in position to increase their contacts between the beginner and the older experience of many years of practical work by some of the members. This resource needs to be expanded as time permits.

At the February, 1982, monthly meeting of the Allegany County Beekeepers Association, I proposed that we appoint a committee to explore the opportunity between our county 4-H and the club, to encourage youth work in beekeeping. 'This was done for three reasons; first, the club membership was top-heavy with the older adults; second, I had recalled seeing a 4-H sign many years ago on a nearby hillside and; third, I was willing to invest time and materials to bring this activity to a worthwhile beginning.

Contact was made with the county extension service (USDA) and we were fortunate to find there an experienced 4-H official, Mr. Bruce Smalley, with an open mind as to the possibilities of this joint effort.

I should add that our county is outside the fruit belt and predominately dairy-field crop oriented. The total bee hives in the county is around 3,000 and those mostly commercial.

There are no hives rented for pollination, or very few. The fall aster and goldenrod flow is the heaviest and it sustains beekeeping. Without it, for winter stores and super yield, I doubt that beekeeping would be worthwhile other than one full depth super of blended honeys. With it, a half ton can be extracted from about 16 hives in a normal season.

So, after a long interval of no interest, 4-H has been reestablished in beekeeping in our county-wide area. Bruce's office came up with a fine leaflet-primer adapted from Penn State Cooperative Extension materials for beginners.

Meanwhile, due to my offer to shake bees for 4-H nucs, the club

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agreed to fund the queens (Starlines) and foundation in these ventures — and the project was in business!

An essay contest was announced, 600 words or less entitled "Why I Would Like to Keep Bees," the winner receiving one complete hive (2 deep hive bodies and one shallow super) with 3 pounds of bees and queen. An estimated value of \$100.

Other considerations for making this award will be attentiveness at meetings and demonstrated ability to make use of information and skill learned.

Since safety is always a prime sub-

ject in any 4-H activity, it should be obvious to anyone who is allergic to bee stings to refrain from working with bees.

In cooperation with the Extension's 4-H program, a series of meetings are scheduled to introduce 4-H age youth (18 to 19) to practical beekeeping.

These are monthly meetings covering the following:

1. Introduction to Beekeeping
2. Practical Beekeeping
3. Management of the Apiary
4. Practical Application
5. Field Trip

(Continued on page 145)



Bee Talk

by DR. RICHARD TAYLOR

Trumansburg, NY

ON A BITTER cold day like this, too cold to stoke up my little stove and putter around in the shop, there's not much better to do than watch the snow blowing, and dream of the day, not far off, when these grey skies and lifeless trees will be replaced by soft colors; not much to do, that is, but plan, dream and remember. I think that memories grow richer as they get older, and the happy hours they have captured considerably exceed the joys of the original moments, so long ago.

Some very old memories were revived the other day when a friend announced that he was going to bake me some bread, and bade me supply honey to spread on it. That I did, and together we marvelled, he at the incomparable taste of the honey, and I at his baker's skill. He'd made a long French loaf, and I rose to the occasion with some pure white comb honey and lots of butter.

The memory this revived was of a simple and regular joy of my youth. Every Friday my mother baked bread, and by the time I got around to our kitchen, about half way through my long newspaper route, two loaves were on the counter, covered with a cloth, still warm. On the top of the cupboard I had a good supply of sweet clover honey from my first hive of bees and off would come the entire end of one of those loaves, cut good and thick, to be plastered over with butter and lots of drizzling comb honey. I never asked permission to do this, and always imagined that it was surely wicked, both to be eating at that time of day, and to be mutilating a new loaf before it had appeared on the table. I think I foolishly imagined that it might not be noticed. I was, in any case, never reproved — mysteriously, it seemed to me, for I was accustomed to a severe parental discipline that allowed for little frivolity, and which rested on the assumption that pleasures were likely to be tainted with evil. If something was deliciously fun, then one could suspect that it was at least a sign of poor character development. Conversely, if something was difficult or distasteful, then it was probably good for one, and would at least build fortitude. Hence the raw codliver oil I

was required to drink each morning, the cold bedroom, the cooked spinach sandwiches, considered essential for proper growth, and the unsweetened oatmeal, with a penny at the bottom of the dish, hygienically wrapped in soggy paper.

But getting back to my mother's warm bread, on one such Friday, tired from the labors of my paper route, having devoured one end of a loaf, drizzling with butter and honey, I was overwhelmed with temptation, and gluttonously sliced off the entire top! I resumed my paper route, gorged, and drenched with guilt. I well knew what was in store for me that night, if I had the courage to return to this scene of my crime, and to the punishment, so clearly deserved. But to my amazement, not a word was said, even when the loaf, hideously scalped, appeared on the table! Days later I overheard my dear mother reporting the mutilation of that loaf to some friends, and chortling with delight at my caper! Evidently I had unintentionally provided her, as well as myself, with a golden memory, worth a thousand loaves of bread, and vastly more durable.

I do believe that my mother's views on fortitude, and how this is strengthened by bearing unpleasant things in silence, may have contributed to my later skill with bees, for stoic calm in the presence of stings was for me almost a natural instinct. I have never doubted that every sting I receive is the proper reward for my clumsiness and that, in any case, even a sting on the lip or eyelid is to be met with silent disdain. The first sting I ever got, on my very first visit to an apiary, at a very tender age, was right on the top of my head, and I did not flinch. An hour later I was covered, head to feet, with great red welts, and I dealt with this test of character in what seemed to me the appropriate way: I got into a tub of very cold water. Today, I suppose, most parents, seeing a youngster in such a state, would rush him to the hospital, there to be advised never to allow him near bees again. Thank heaven, that was not my fate. Instead, I had received a fresh lesson in confronting adversity.

My dear mother, still living and approaching her hundredth year, has somewhat softened her severe view of life. She took up smoking cigarettes in her seventies, finally abandoning them only from the reasonable fear of starting a fire which failing eyesight might not warn against. She also took up having whiskey highballs, a pleasure that threatened neither fire nor early demise, but the virtual symbol of folly and waste. I suppose she passed along to me a combination of these two views of life, for I still prize discipline, but find ways to mingle it with the frivolous. □

County Associations And The 4-H

(Continued from page 144)

At the county fair exhibits will be encouraged.

As with most new interest, our turnout has been slow with three entries, two boys and a girl with respective parents. (Parental interest is vital until the beginner has faithfully learned the practical side of beekeeping.)

Bad weather, at meeting time, will cut into attendance and it is now recommended that such meetings be held during April-May.

Of course, it is very helpful to furnish a hive and accessories such as a smoker, tool, veil, etc. Magazines and sales catalogs along with various honey samples, a piece of wax and propolis and other items help to fill out the picture.

Incidentally, there is no fee charged for entry in this course and adults are welcome for what information they need.

The association feels that with members donating some of the necessities, what little cash required is for a worthy effort. It is a means of taking advantage of the resources of the Extension Service, a taxpayer supported arm of the government.

Personally, as a retired member of the community, I find time for this endeavor. It does require "home work" and the ability to put up with some discouragement along the way.

Slides and or movies, free from Extension sources, lighten such meetings though not necessary. They allow the leader to note what the kids are picking up from the teaching.

(Continued on page 147)

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Bees & Beekeeping 1608:

By JOE KLOFAS
Bridgton, ME

IN THE YEAR 1608, Thomas Hill, citizen of London, published a book called *"The Arte of Gardening,"* to which he added a treatise, "The mer-vailous government, propertie and benefite of Bees, with the rare secrets of the Honie and waxe." The learned Mr. Hill was a curious scholar and his book was gathered from the best of ancient and modern authors. It is a wild and delightful mix of good sense and sound knowledge joined to fanciful opinion all loosely held together by the learning of its author and a moral for us all: "For heerein may you see, first the marvellous government of the Bees, through the onely instinct of Nature, as in their obedience to their King, and other officers, in punishing the idle loyterers, in cherishing the true labourers, in their manner of fighting with such like a great many, as it is wonderfull to read, and almost incredible to beleve." Judge for yourself.

Of the great utilitie and profite of Bees unto mans use.

The bees, for that they much abhorre all filthy stinkes and smels, Palladius willeth the keeper of them to eschew diligently all strong and ill smelling savours, one also that delighteth to be chaste of body, and free from filthines, amongst these not breathing sowrly, or of a stinking breath, not sweating, nor savoring of sweat, no one besides of wicked conditions, or such a person as standing among the sight of the bees, doth not earnestly move and procure them to flie to him, or as one stinged endeavoureth to defend himself from them: but rather as a flatterer among his acquaintance and children hath learne to intreat and please the bees by a more gentle manner.

The keeper of bees, which mindeth to handle and look into hives, ought the day before to refraine the veneriall act, not a person fearfull, nor comming to the hive with unwashed hands and face: and one that ought to refraine in a manner from all smelling meats, powdered meates, fried meats, and all other meats that doe stincke, like as the Leekes, the Onions, the Garlicke, and such like, which the Bees greatlie abhorre: besides, to be then sweet of body, cleanlie in apparell, minding to come unto their hives, for in all cleanlinesse and sweetnes the bees are much delighted.

What the Honey is . . .

First, the learned Isidore writeth, the Honie to be of the dew of some liquid matter, and affirmeth also the same to be found sometimes in the leaves of great Canes. To which in a manner doeth Publius Maro agree, in this verse writing, that hitherto the heavenly gifts are of the Aereall Hony. Others teach, the Honie in India and Arabia to bee like to salt, gathered there on the leaves of trees: others do doubt, whether honie be a sweat from heaven, or a certain spittle of the starres, of the juice of the aire purging it selfe. But whatsoever substance the same is, yet it is a most sweete, subtile, and healthfull juice, as Pliny witnesseth, which at the first gathering of it is cleare water, but after boiling a while and purging of it selfe, as new wine (after the pressing forth) and doth from the twentieth day after, come to a perfectnesse of honie through the often tempering of it in hot daies, from the beginning of May, unto the middle of June.

What maner of person the keeper of bees ought to be.

A great profit riseth by bees, if they be set in a convenient and fit place, and that both carefully and wisely guided as Pliny writeth in his II booke, where he willeth, that of all other cloven beasts, the bees are principally to be cherished, because to mans use they gather a subtile and wholesome juice, being very sweete, and besides they frame by a marvellous skill and cunning) their cottages of war unto mans use, that no worke-man (be hee never so ingenious) can doe the like. The profit also comming by them in short time, if the weather hindereth not, is so great, that they increase in a short time into many swarms, which swarmes againe increase others, so that the first swarmes increased, they especially thrust forth from them in the moneth of May or June, by which meanes they cause a great increase of them. As Varro affirmeth the same of two head Gentlemen in Spaine, which onely by the meanes of their Bees, gained yearly ten thousand pound (but I rather thinke five thousand pound, which also is very much.)

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County Associations And The 4-H

(Continued from page 145)

After some thought, I had decided it was an opportune time to take advantage of the possibilities for such a project. My reasons are: 1. The rising cost of food in the family budget; 2. The nutritional interest against sucrose cane table sugar in the diet; 3. The return to rural living; 4. The teaching aids now available at very little cost.

As for a meeting place, the usual Ag. Center is available and we are fortunate in having a fine modern one complete with a large meeting room (50 cap.) which the club uses for its monthly meeting. It is well heated and has good parking capacity.

I will admit this sort of thing is a "crash" program in which the student has to "cram" a lot of information mostly new, but it does start them off in the right direction while a "pick-up" neighborhood bee hobby start may be full of holes bad for practice in the future.

However, today's kids do have a sharp memory, as a rule, though they may not know just how or when to use it; while us oldsters can forget anything within five minutes and have to bluff and haw until it comes back!

So, since the Association and the 4-H is over half through their program, the last half will be reviewed in another article. □

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Using Bee Catalogues To Advantage

By PATRICIA YUNKES
Hiram, OH

I have a special drawer in my filing cabinet for beekeeping literature and records and keep current catalogues from the nearest large suppliers. At one time or another, I have ordered from almost all of them. In addition, I have written for extra catalogues or for information from magazine ads. Therefore, when I want something special, I can compare prices and quality easily.

While one company may have higher prices than its competitors, it may also have items the other doesn't. For instance, one company has quality inexpensive woodenware, but that's all it offers. A second firm carries candle molds, while a third was the only place I could find that offered grafting spoons and queen cups.

Personal preference counts for a great deal. The quality of foundation

varies a great deal as does the price. Rims from one company proved unsatisfactory because they did not fit together well. It pays to order samples and small quantities before placing a large order.

There are some gadgets that I learned about that proved to be useful. One is the aerosol can of smoke. "Impractical," was my first thought. Then I thought about the times I visited my bee yards for simple visual checks to see if hive covers are on and entrance cleats are in place, or to peer under covers to see if they need honey supers. Invariably there's a hive that needs looking into and I've left my smoker at home or don't feel like lighting up for a quick check. A puff or two from the aerosol can can be a godsend at that point.

There are a few other items I have

gotten out of my catalogues that are worth their weight in gold:

Fume Boards — no more brushing bees from frames.

Cappings Scratcher — helps extract all the honey from your frames.

Leg Straps — it's amazing how many bees can get up your pantleg without them.

Hive Staples — makes moving hives easier.

Frame Savers — for emergency use in the field.

Bee Books — I never stop learning. This year I will try some new items that look interesting.

Queen Catcher — finding her is often only half the battle.

Branding Iron — This will reduce my fear of burglary in the bee yards.

And I hope this year's crop of catalogues will bring a host of new ideas. Along with my *Gleanings*, I will have a wonderful winter full of reading. □

Reflections Of A Novice-To-Be Beekeeper

By JEFF EDELMAN
East Islip, NY

All my life I have liked honey and until a few years back, always had some local honey in the house. I still remember chewing some wax comb from a Patchogue, Long Island, New York beekeeper's hive and wishing that I could have it filled with honey for me, my friend's and kin. It was only until this year that I finally realized this small dream, to my own, as well as others, surprise. Who would have thought I could keep bees? I still can't fathom it. But, after recently cutting a chunk of comb out of a frame, nothing seems more natural.

I was brought up in suburbia, an area that is rapidly becoming more urban, where the backyard was always a place for swings and pools. Every so often you'd find someone with a garden, mostly a retired person, or the local corn and potato farms of the area. Here on Long Island we are perhaps more known now for the highways that criss-cross our terrain which includes the Long Island Expressway affectionately referred to as the "world's largest parking lot". But, surprisingly, this area is a good place for bees, as I was to find out this past summer.

There are different types of ecosystems here within one geographic area and different plants, trees and flowers. There are marshlands and beaches, which the island is also famous for; grasslands, farmlands, highways wasteland, hilly and wooded areas with pine trees, oak, maple and other trees abounding. There is some linden and dandelions galore in the spring and summer; thistle, sumacs, mullein, goldenrods, and most every kind of cultured and wild flower, including the clovers.

In April, I went to a local garden and plant show and saw a demonstration on beekeeping by the Long Island Beekeeper's Club with Sam Stein of King's Park. Along with that demonstration was a slide show given by Bernard Beck of Huntington that served to awaken my interest in bees. I began to think that it just might be

possible to actually own one's own hive of bees. A foolish idea it seemed at first, until I went to the first novice bee meeting of the year where I saw other young, old and in between novices hooked on the same preposterous (at the time) idea.

In the yard of Sue Gusterson, a special education teacher and recording secretary of the L.I.B. Club, a meeting was held along with the president of the club, Fred Munzer. It was still cold in April and the meeting ended up inside with some questions and answers. I had already ordered my hive kit and made the mistakes putting it together that Fred would have been able to have me avoid, but that's life. At least the package bees had not arrived as yet. I still had a chance to mess things up with them.

At the early meetings I let it be known that I was still wary of bees and Fred announced that anyone afraid of bees should "go to Reinhold's", Reinhold Meyer a grandmaster beekeeper in Commack had bees, Fred stated, that were like no others. They were as gentle as could be. This I had to see.

Later on, in Reinhold's yards, I was staring at a face full of bees on a frame. There were thousands of them and none of them were attacking me. Reinhold, an elfin of a man who looked like a smaller version of Kris Kringle with a saintly, yet mischievous nature, pointed out the day old eggs to me and others. He wore no veil, a wool hat and all the wrong clothes for working with bees, yet he remained unscathed. From that day on, I felt better about bees. I still hadn't been stung yet. That was to come. I had asked Fred Munzer to initiate me before and he did not forget. I held out my right forearm and got my first sting by a honeybee. That night I had a slight respiratory reaction in my chest and some swelling, but recovered in four days. I took a few more after that, two by accident and one more on purpose. Now, about five months and twenty-eight stings later — I kept track of each sting — it is

down to no reaction except slight swelling, down after two days. This, even after six stings at once; four on the face at one unfortunate and surprising incident when my veil was left open, but since, diligently tape closed. After awhile, in some strange way, I even missed stings, until I got another one and then wondered what it was I missed them for.

One day, there they were. Package bees lying under the bush in the back yard. The Post Office wasted no time in calling up the house. My mother, braver than I expected, went down to pick them up, leaving one bee to stay with a sorry bunch of postal workers. I wet them down with water and then sugar syrup to calm them as the instructions I had learned said, and then hived them very quickly. I did a good job, except for the queen. That part I am not sure about. What became of her I am not sure, I don't know, but afterwards there was no pollen coming in. By good fortune, another local beekeeper had a swarm which we joined with my bees with a newspaper, the "Munzer method", I dubbed it. That worked. My bees began to build up, drawing out combs in brood chambers and storing twenty-five pounds of surplus honey. Not bad for me, I thought, when I expected nothing the first year.

With meetings every two weeks at Reinhold Meyer's and a few of the regular monthly club meetings, I was learning bit by bit, and even went to help Fred one Saturday with his hives. We went through close to thirty hives in about three hours, a change from spending a few hours on my own and the time at Mr. Meyer's. Fred had no time for playing around. I dropped some empty supers in some tall grass rushing to catch up with him and couldn't determine whether there was brood in the super by lifting it up and looking underneath which annoyed him to no end. On top of one of his hives he removed the cover to reveal a black widow spider poised on top, resting. "Is that a . . . ?", I asked, incredulous, knowing what it was. "Yup", Fred said, knocking it off with

his hive tool, "It will be there next time I open it too." After that I thought nothing was too hard. Fred had on shorts walking through poison ivy. Got a rash afterwards too that his wife, Barbara, had to tend to. I ended up with only three stings at the end, on my hands. "I'm difficult aren't I?", said Fred. "Nah," I answered, "Just get me back to my car before I tell you what I thought of today.."

All in all I learned something. In fact, I took the opportunity to try and learn as much as I could the whole summer, talking to everyone who knew about or kept bees. Beekeepers are the best kind of people. Most are concerned with the environment, health and helping one another. As an example, I wrote a letter to Dr. Roger Morse and he promptly sent me all the information and personally answered my questions. To take the time to do that with a beginner, or anyone, makes you feel good. At all the meetings I found a sincere interest in learning.

The season began as I became insured to the idea of keeping bees and getting stung, an initiation given with glee by Fred Munzer. Now I am starting to look at plants and flowers, try-

ing to identify them and insects as well. Nothing tastes as wonderful as honey from your own hive and no hobby I have ever seen has been as profitable and enjoyable. It is recreation and it is art. I found that every type of person keeps bees, from all walks of life. The experience I have had, small as it may be, makes me realize that you don't have to be a super-human type of person to keep bees, just an ordinary one, with an interest and a love for the activity. That's what I'd like any novice starting out to realize. Beekeepers are everyone and everywhere, all types and kinds, with an invisible thread holding them all together: Keeping bees. □

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No Bee Mites In U.S.

No parasitic mites of honey bees were found in a recent national survey and sample inspection of bee colonies, say U.S. Department of Agriculture (USDA) bee scientists.

Bee diagnostic specialists at the USDA Bioenvironmental Bee Laboratory here inspected over 200,000 bees from 44 states, Puerto Rico, and major beekeeping regions of Canada.

A year ago, the Agricultural Research Service (ARS) and the Animal and Plant Health Inspection Service (APHIS) of the USDA provide instructions for field collections and containers for samples of bees to State agriculture departments. Samples were then sent for examination to the Beltsville Bee Laboratory, part of ARS.

According to Shimanuki, the estimated 210,000 U.S. beekeepers enjoy an excellent reputation abroad as reliable sources of healthy bees and diverse genetic honey bee stock for export. Beekeepers in Canada, for example, import over \$6 million in U.S. honey bees each year.

"In order to prevent quarantines of U.S. bees by Canada or other nations, colonies must be periodically monitored by trained professionals. The parasites are very tiny and difficult to detect by beekeepers. Even the symptoms — deformed bees, decreased stamina and longevity, impaired flight — develop only after the parasitic mites have been with a colony for months."

V. jacobsoni, an external bee parasite, is one of few bee maladies that affects both adult bees and their brood. *V. jacobsoni* deforms and often kills the brood. The parasites measure one to two millimeters (0.04 to 0.08 inches) in length.

A. woodi is microscopic in size — approximately 0.09 millimeters or 0.0036 of one inch. It lives and breeds inside the tracheae (breathing tubes) of honey bees.

Although the survey as designed by APHIS has been completed, Shimanuki says his laboratory will continue to accept bee samples for mite inspection. Do not send samples directly to Beltsville, however. Contact your State agriculture department for the procedures.

U.S.D.A. News

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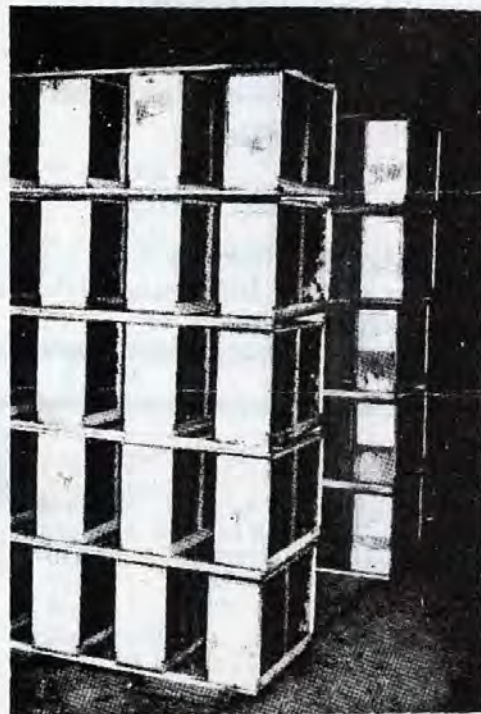


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S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY 1983						
S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE 1983						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

PLAN NOW on your shipping dates for the coming spring. Present indications are that shipments will have to be planned now for more difficult delivery schedules by parcel post. Now booking orders.

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Beekeeping "Down Under"

By **BRUCE C. OTTE**
Columbus, IN

NEW ZEALAND IS an English speaking country renown for its extensive beekeeping, so this was a country that I wanted to visit. I was curious about beekeeping practices in the Southern Hemisphere. Because their seasons are opposite from ours, it would be possible for me to work during the bee season there and return home in time for my own seasonal work.

I submitted a letter indicating my interest in working in New Zealand to *The New Zealand Bee Keeper* magazine and another to the New Zealand Ministry of Forestry and Agriculture.

Mid-September arrived and thoughts of hunting and trapping had begun to replace my dream of a "down under" adventure. Imagine the excitement when I received a call from a New Zealand commercial beekeeper. After a brief conversation, he offered me a job, I accepted it, packed and two weeks later was on my way to a season of Kiwi beekeeping. (A Kiwi is New Zealand's national bird. It's large, rather ugly and flightless bird. There is also a very tasty Kiwi fruit, shaped somewhat like a small, flat potato but with a tough, paper-thin skin. Inside is a soft, green, very sweet meat, good to scoop with a spoon and eat as is. New Zealanders also call themselves Kiwis.)

New Zealand consists of two major islands known as North and South Island. At one time New Zealand was an English colony but is now an independent democracy. Its major industries are sheep, dairy cattle and lumber. How many people live in New Zealand? No one seemed to know, but as I was told, there are between sixty and sixty-four million sheep!

It was during the first half of their spring when I arrived on October 3rd. Spring weather really begins in late August or early September.

Mr. Dudley Lorimar was my employer and was based in Hamilton on the North Island. He has been in bee-keeping since the end of World War II and usually employs five people during the busy season. His operation consists of approximately 1500 colonies.

At the time of my arrival in Kiwi

It was not unusual to find honey in burr comb. Often, colonies produced 4 to 5 supers of honey in one season. Deeps (10 frame size) boxes used for honey production. Generally, these carried eight frames.



land, the bees were having a struggle building up their colonies because of poor weather conditions. Generally speaking, weather on the North Island is moderate with more than adequate rain for good growing conditions. However, the winters are chilly and damp with a lot of fog. It occasionally frosts but rarely freezes. Their cold winds come from the southwest while the warm winds come from the north, a phenomenon I never got used to.

One of the first things that struck me was the difference in the appearance of their bees. They are such a golden yellow that they appear to glow, almost like a fluorescent insect. In addition, they are largely very, very gentle. This is almost always a plus for a beekeeper!

However, they also have a dark strain of bees that is not like the gentle Caucasian. They are called European dark bees and I learned to respect them in a hurry. Whenever I could I managed to be elsewhere when the time came for working with the dark bees!

Beekeeping is a very common vocation in New Zealand. There are six or more full time beekeepers in the Hamilton area alone. Honey is a New Zealand staple and almost every household has honey on the table.

Most beekeepers build their own wooden ware, including frames, which are very well made. Smokers, veils, foundation, extractors and other beekeeping equipment is available commercially but is very expensive. Smokers, for instance, cost about \$26.00.

During the spring, there is a number of different native and imported plants important to the bees. One of the earliest available in some areas is heather, a plant imported from Scotland. There is also a hedge

called barberry that sometimes produces a surplus.

Rewarewa, the native honeysuckle, is also a good honey plant growing in profusion. This plant appears to be entirely different from the honeysuckle in the U.S. The New Zealand specie is a tall, slender tree. The broom plant is also beneficial to the colonies, but is basically a pollen producer. The main summer honey flow came from white clover. In the Midwest, we know it better as white Dutch clover. The seed is often sown by sheep farmers in New Zealand from planes. It helps produce nitrogen in the soil which is needed by the grasses as a fertilizer. As a result, farmers need bees on their property to pollinate the clover so that it will reseed itself. A token amount of honey is usually given to the farmers as payment for use of their land for bee yards.

The truck that we normally drove really interested me. It was an Isuzu. I could seat three men, carry three tons of weight (about sixty, two-story hives), ran on diesel fuel and got about twenty-one miles per U.S. gallon.

During part of the year, we had bees over 200 miles away. October and November were spent feeding bees sugar syrup and frames of honey, as well as moving large numbers of bees. The end of November and the beginning of December were spent supering hives and uniting weak colonies. The colonies are run with two brood boxes with nine frames each, and the deep honey supers containing eight drawn combs are placed above a queen excluder.

The honey flow started and stopped a number of times during those last two months of the year. Some

(Continued on page 158)



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Queens	\$ 7.15	\$ 6.90	\$ 6.65	\$ 6.20	—
2 lb. Pkg.	22.55	21.70	20.85	19.50	2.75
3 lb. Pkg.	28.90	27.80	26.70	25.05	3.20
4 lb. Pkg.	35.80	34.45	33.05	31.00	3.30

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— Proven Honey Producers —

(Postage Paid, includes Insurance & Special Handling)

In Lots of	Queens	2-lb. w/queen	3-lb. w/queen
1	\$6.75	\$25.50	\$29.50
2-24	6.25	22.50	27.50
25-99	6.00	21.50	26.55
	Truck Orders		
1-99	6.00	18.50	23.00
100-up	5.50	17.00	21.50

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Gilbert Bourg Jr. — Owner
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QUEENS

Caucasians

	1-24	25-99	100 Up
2 lb. pkg. w/queen	\$21.00	\$19.75	\$19.00
3 lb. pkg. w/queen	25.75	24.85	24.50
Nice Large queens	6.45	5.80	5.35
50c ea. Clipping			50c ea. Marking

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Frugal Produced Disease Resistant

S & K APIARIES

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Maben, MS 39750

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1-24	\$7.00	25-99	\$6.50
100-up	\$6.00		

Clipped or Marked 25c

Some Maine Bees Have It Made

By BETSY MITCHELL

Maine may never be prime beekeeping territory. The growing season is short and except for the wild raspberries and blueberries there are no vast fields of nectar producing plants such as clover to make the business of honey making easy for Maine's bees. Winter and early spring are critical periods for bees in Maine. For this reason most beekeepers try to ensure that each hive is heavy with honey as late fall approaches so that there will be sufficient stores to tide the bees over until shadbush and dandelion provide the first spring nectar flow. But, despite the forbearance of the beekeeper in leaving considerable honey in each hive (50 lbs. or more), winter takes its toll and it is the rare beekeeper who does not find some colonies dead by early spring.

Loss of colonies can be due to a number of factors besides starvation. Colonies that are weak in number of bees in the fall are likely to die off over winter. The wise beekeeper will combine such a colony with another colony rather than risk encountering a dead colony some months on. Disease, loss of a queen, insecticide stored as pollen, can all cause the loss of a colony.

Today most hives in Maine spend the winter outdoors and each beekeeper has their own individual approach to helping the bees through the cold season. Adequate ventilation in the hive, fall medication against disease, and requeening are some of the measures one may take to support the bees through the hostile season.

Years back, hives were carried into cellars for the winter but this practice was abandoned when it was realized that overwintering success could be equalled or excelled simply by leaving the hives outside and maintaining good hive ventilation and adequate stores of honey in the hive for the bees.

But now, along comes R.B. Swans and Sons, Apiarists, with a modern twist to the old method of potato cellaring bees for the winter. Swan,

who has operated a commercial beekeeping business longer than any other beekeeper in Maine, offers the bees an apartment for the winter — a mite cool for humans (45°F.) and with absolutely no view — but hospitable enough to allow weak colonies to survive Maine's winter.

R.B. Swan and Sons Apiary was started in Brewer, Maine, in 1946 when Harold Swan persuaded his father, R.B. Swan, then newly retired from the telephone company, to go into beekeeping commercially. Both father and son were familiar with bees and had a few hives. Together they got more hives and began their commercial venture with a total of 46 hives. It took time and hard work to build up the apiary but from the start it was a family affair. Hilda Swan, Harold's wife, is skilled in most aspects of the business including handling the bees, and the Swan's children were made a part of the operation during their growing up years. Now, as adults, two sons continue to lend a hand, one as maker and supplier of hive parts, the other as beekeeper.

Today, R.B. Swan and Sons Apiary has some 800 hives located in 25-30 locations in the state. Most of these "out apiaries" are protected with electric fencing to ward off bears, notorious honey lovers and destroyers of hives. 1981 was one of the best years for honey in the northern counties of Maine. Swan's bees produced 57,000 lbs. of it and partly for this reason Swan has recently acquired and fitted out a large heating tank that can hold 1700 lbs. of honey at a time. The tank is coupled with new bottling equipment that allows one person to do the work of two or three.

But what of the winter apartment for bees? And heated, at that! In 1979 Swan's son, Richard, attended a beekeepers' meeting in Texas and heard a report about a Nebraska beekeeper, Jim Kuehl, who designs beekeeping equipment and has his own apiary. Kuehl was using an overwintering building with controlled environment, light, heat, and fresh air,

for his hives. Dave Ellis, current president of the Maine State Beekeepers Association and manager at Swans in charge of bees and honey production flew out to inspect the building. He returned to Brewer with encouraging words for the venture.

The overwintering building at Brewer is now a part of Swans extracting plant. It consists of a room 30' x 40' and with the essential equipment represents a \$20,000 investment. It costs Swan approximately \$8 per hive per winter to operate the chamber, but it is worth it as more hives get through the winter alive using this method and the bees consume half the amount of honey they would require outside.

On December 1st or thereabouts, single hive bodies containing bees and 25 lbs. of honey are placed in the overwintering building, one hive atop another as necessary. The bees remain in the chamber in the dark, keeping within their hives until April 1st when the hives are moved outdoors. Automatic ducts and blowers allow entry of fresh air into the chamber every 20-30 minutes. Temperature is maintained at 45°F. Once or twice during the winter dead bees are swept up but beyond that bit of housekeeping the chamber is left closed during the long night of the bees' residency.

In spring of 1982, according to schedule, the hives were moved out on April 1st. Then came the deep April snow completely burying the hives beneath an unseasonable wintry carpet. But the bees survived this late season christening and needed only the gift of sun and spring blooms to forget their long winter's sojourn and get on with the honey business. □



R.B. Swan

ITALIAN PACKAGE BEES AND QUEENS NO DRONES

We ship pure worker bees by your truck, car, trailer or by parcel post. Prices are F.O.B. Funston, Ga.

With Queens	2 lbs.	3 lbs.	4 lbs.	5 lbs.	Queens
1-24	\$19.80	\$24.85	\$30.20	\$35.85	\$6.75
25-100	\$19.10	\$24.20	\$29.55	\$35.15	\$6.50
101-499	\$18.55	\$23.65	\$29.00	\$34.60	\$6.25
500-up	\$18.20	\$23.25	\$28.60	\$34.25	\$6.00

Clipping Queens 50¢ each — Marking 50¢ each
For queenless packages deduct \$3.00 from above prices
Get worker bees only, don't pay for up to 20% drones you usually get in your package bees.

Packages can be shipped only by parcel post or your transportation. Get away for a few days, pool your order with your neighbor, pick your bees up here and save the postage. Deduct \$.75 each if you bring your own usable cages. \$3.00 deposit per package required to book your order — balance due 15 days prior to shipping date. For most desirable shipping dates book your order early.

We feed Fumidil-B for healthier stronger more vigorous queens and bees.

Prices subject to change without notice.
Thank you!

Shipping dates April 1st thru May 20th
JACKSON APIARIES
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QUEENS



Caucasian — Midnite — Starline

"Double Hybrids"

on request

	Caucasian	Midnite	Starline
1-10	\$7.40	\$7.90	\$7.90
11-39	6.85	7.35	7.35
40-99	6.40	6.90	6.90
100-499	6.00	6.50	6.50
500-up	5.85	6.35	6.35

"DOUBLE HYBRIDS" same price as regular hybrids. For clipping and/or marking add 50¢ per queen.

	2-lb. pkg. w/Cau.	3-lb. pkg. w/Cau.	2-lb. pkg. w/Hybrid	3-lb. pkg. w/Hybrid
1-10	\$23.45	\$29.45	\$23.95	\$29.95
11-39	22.25	28.25	22.75	28.75
40-99	21.00	27.00	21.50	27.50
100-up	19.85	25.85	20.35	26.35

Write for truckload quantities.
Prices subject to change without notice.

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HASTINGS — World renowned Carniolans BABCOCK — Golden Yellow Italians RACIAL HYBRIDS — Carniolan — Italian Cross

A true racial hybrid cross of a HASTINGS Carniolan queen mated to my Golden Italian Drones. This hybrid cross combines the best qualities of both races and is a very prolific, hard working bee developed for rigorous commercial beekeeping. This cross bred RACIAL HYBRID is a very good wintering bee and does well even under adverse conditions.

BABCOCK — Golden Yellow Italians are large yellow bees that are easy to handle and produce very large colonies. They are good honey producers developed from my TOP producing hives — "Most Beautiful Bees in the World."

HASTINGS — Internationally known PURE CARNIOLANS were developed in Northern Canada and have been wintered very successfully outdoors in extremely cold temperatures. These large grey bees work well in both hot and cool weather. I believe the Carniolan bees are the most WINTER HARDY race in existence. Pure Carniolans are extremely gentle and can be worked in good weather without smoker or veil.

QUEENS — All my queens are guaranteed mated and laying. My large 4 standard brood frame nucs allow me to carefully check the laying pattern of each selected queen before she is caged fresh and sent to you via air mail same day.

Package Bees and Queens (Your Choice of Race)

Quantity	2 lb. w/queen	3 lb. w/queen	queens
1 — 9	\$25.00	\$29.00	\$10.00
10 — 25	24.50	28.50	9.00
25 — up	24.00	28.00	8.00

Add for shipping packages via parcel post:

1-2 lb.	\$4.60	2-2 lb.	\$6.80	3-2 lb.	\$7.90
1-3 lb.	\$5.50	2-3 lb.	\$7.70	3-3 lb.	\$8.80

Add shipping prices to packages if ordering by mail. Shipping charges include postage, insurance, special handling fees, and handling charges. Insurance coverage is for full value of bee only. Insurance does NOT cover shipping charges. A \$5.00 per package deposit is required to book orders: balance due 2 weeks prior to shipping. Personal checks, money order or cashier's check accepted in U.S. currency only. Queens are postpaid and shipped air mail. Weather permitting shipments begin April 1st.

HUCK BABCOCK Queen Breeder

P.O. Box 685 Cayce, SC 29033 Phone after 8 p.m. only 803-256-2046

Beekeeping "Down Under"

(Continued from page 154)

hives produced over 200 pounds of honey, while in other locations the hives were lucky if they produced anything at all. Shades of home! However, an average of five tons per hundred colonies was the rule of thumb. I was surprised to learn that most of the honey was packed and sold as creamed or spun honey.

Mr. Lorimer had a number of locations with thirty to forty, two story colonies where the honey flows were great. Two deep honey supers were placed on top of each colony and in nine or ten days we would find them plugged out. We would remove these deeps, add one more, depending on the hive, and in ten days to two weeks, they also were filled. It was a beautiful sight.

Besides disease there are two main sources of irritation for Kiwi beekeepers. One is that livestock often upset hives. The other is European wasp. Wasps appear much like the yellow jackets that we are familiar with. If they appear in large numbers, they can completely strip strong colonies. Mr. Lorimer told about these insects taking one and a half tons of honey from one apiary in less than three weeks. This is one problem I can live without.

Some of the most common bee diseases that the Kiwis guard against are American foul brood, sacbrood, noseema and chalkbrood, but New Zealand is apparently free from European foul brood and bee mites. Strange as it seems, European foul brood is feared more than American foul brood. This is because of the devastating effects it has had on the Australian beekeeping industry.

As with most working people, and those that don't, lunch time was always long in coming and quick in passing. We often had lunch in picturesque and beautiful settings where one could really enjoy the surroundings. "Smoke up" is the Kiwi's answer to the American coffee break, only we would enjoy hot tea and some sweets brought from home. A very pleasant custom.

It was hard to realize Christmas was approaching and that back in Indiana my family was enjoying fires in the fire place and the first snows of winter.

Christmas week was spent with the Bryan Wills family in Reporoa, New Zealand, where my sister was enjoying the year as an AFS student. It was an interesting experience for this Hoosier to play volleyball at the beach in December. We had a really great time and the hospitality of the New Zealand people was truly wonderful.

And so in January, my New Zealand experiences came to an end. With feelings of nostalgia, I left my new-found friends and headed home, much richer because of the experiences I had had. But after all, there was a lot of equipment to build and the bee season was fast approaching back in the United States. □

Featuring BUCKFAST Queens

PRICES OF QUEENS - - - - - Postpaid

QUANTITY	ITALIAN	BUCKFAST	
1 - 4	\$7.60	\$8.20	For clipping add 25c
5 - 31	7.00	7.60	For marking add 35c
32 - 99	6.40	7.00	For both C/M add 60c
100 - 999	6.00	6.60	
1000 & up	5.90	6.50	

Write for prices for Package Bees and available shipping dates.

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News and Events



Obituaries

Frank E. Miller

FRANK E. MILLER of Reading, MA started beekeeping with a project for the Nature League in Lynn, MA. He went on to Massachusetts Stockbridge College where he kept bees to finance his education. He graduated from Cornell University with a B.S. in entomology. He worked for the U.S.D.A. at Yale University, studying the spruce sawfly. He also worked as a bee inspector in New York State. His son Paul has followed in his footsteps and now carries on the business in Reading and at his home in Dublin, New Hampshire. Four children, 10 grandchildren and his wife Mildred survive. He passed away October 30, 1982.

Norman Alexander

NORMAN ALEXANDER, a retired commercial beekeeper of Payette, Idaho died recently. Mr. Alexander, who was retired, moved from Bayard, Nebraska to Payette, Idaho where he at one time worked for Powers Apiaries.

He is survived by his wife, Alma Lee who lives in Payette, Idaho.

**WEST VIRGINIA
West Virginia Beekeepers
Association**

The Kanawha Valley Beekeepers Association will host the Spring Meeting of the West Virginia Beekeepers Association at Elkview Jr. High School, Elkview, West Virginia (near Charleston) on March 19, 1983. For further information contact Mrs. Lou W. Reed, Secretary-Treasurer of Kanawha Valley Beekeepers Association, One Hickory Hills, Elkview, West Virginia 25071. Phone (304) 965-1129. The program begins at 8:00 a.m. and closes at 4:00 p.m.

(Continued on page 160)

ITALIAN PACKAGE BEES AND QUEENS

Quantity	2-lb. w/queen	3-lb. w/queen	4-lb. w/queen	Queens
1-5	\$21.75	\$26.75	\$31.75	\$7.65
6-25	20.75	25.75	30.75	7.00
26-99	20.00	25.00	30.00	6.45
100-499	19.25	24.25	29.25	6.00
500-up	18.75	23.75	28.75	

Marking queens — 50¢

Clipping queens — 25¢

Add for shipping packages via parcel post:

1 — 2-lb.	\$4.60	1 — 3-lb.	\$5.50	1 — 4-lb.	\$6.95
2 — 2-lb.	6.80	2 — 3-lb.	7.70	2 — 4-lb.	8.80
3 — 2-lb.	7.90	3 — 3-lb.	8.80		

Add shipping prices to packages if ordering by mail. Shipping charges include postage, insurance, special handling fees, and handling charges. Insurance coverage is for full value of bees only. Insurance does NOT cover shipping charges.

A \$5.00 per package deposit is required to book orders; balance due 2 weeks prior to shipping. Personal check, money order or cashier's check accepted in U.S. currency only. Credit cards not accepted. Queenless packages available. Queens are Postpaid and shipped Air Mail.



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1983 PRICES

Three Banded Italians

Package Bees & Queens

We Start Shipping April 1.

	Queens	2-lb. w/q	3-lb. w/q
1 — 24	6.00	17.25	22.50
25 — 99	5.50	17.00	21.00
100 up	5.00	16.25	20.00

Add 3.00 per 2-lb. and 3.50 per 3-lb. for Postage and Insurance. Fumidil-B fed to all package colonies and queen rearing nuclei. Write or call for prices on packages picked up at our Apiary.

MILLRY BEE COMPANY

Rt. 2, Box 84
Millry, Ala. 36558
Phone: 205-846-2662

THREE BANDED ITALIANS

SERVING THOSE WHO DEMAND THE BEST IN PACKAGE BEES AND QUEENS

— PRICES —

	1-9	10-24	25-99	100-up
2-lb. pkg. with young laying queen	\$20.00	\$19.50	\$19.00	\$18.50
3-lb. pkg. with young laying queen	25.25	24.75	24.25	23.75
4-lb. pkg. with young laying queen	31.25	30.50	29.75	29.00
5-lb. pkg. with young laying queen	37.50	36.75	36.00	35.25
Extra Queens	6.75	6.50	6.25	6.00

Queens clipped 25¢ each Queens marked 25¢ each

Queens are Postpaid and Shipped Air Mail.

Package Bees are F.O.B. Shipping Point.

TERMS — Small orders cash, large orders \$2.00 per package deposit and balance two weeks prior to shipping date.

QUALITY DOES NOT COST — IT PAYS

THE WILBANKS APIARIES, INC.

Box 12 CLAXTON, GA. 30417 Phone: (912) 739-4820



(Continued from page 158)

MARYLAND

Maryland State Beekeepers Association

The Spring meeting of the Maryland State Beekeepers Association will be held on Saturday, March 1983 at Centennial Lane Elementary School, Elliott City, Maryland. Coffee and doughnuts start at 9:30 a.m. with the program beginning at 10:00 a.m. Featured will be Dr. Allen Steinhauer, Chief of the Entomology Dept., University of Maryland, College Park, who will discuss the status and prognosis of apiculture instruction programs and UMD, and the prospects of a replacement for Dr. Dewey Caron.

Also, a video tape will be shown of "THAT'S INCREDIBLE" segment featuring the OHIO HONEY FESTIVAL "Bee Beard Contest". Other program arrangements are pending.

MINNESOTA

Southern Minnesota Beekeepers

The Southern Minnesota Beekeepers meeting is scheduled for March 20th at Winnebago with Harry and Eleanor Steward as hosts.

The summer meeting will be June 26th at Bingham Lake with Milford and Ruth Mattison as hosts.

The fall meeting will be at Kasota, Nov. 6th with Dale and Julie Swenson as hosts.

These meetings all begin at 2:00 followed by a pot-luck lunch.

Belinda Jentz, our honey queen, does more than promote the use of honey when she is working for us. She has been known to talk at length with politicians about the problems that face our industry.

At Farmfest '82 she spoke with both Senatorial candidates, Dave Durenburger and Mark Dayton. She also handed out hundreds of honey and pollination pamphlets.

During the last several months, Belinda has appeared at the State Fair and on a Wilmar radio station. She helped students who were selling honey as a fund-raiser at Wilmar Vo-Tech and spoke with Douglas Edwards. While speaking with Mr. Edwards, a CBS newscaster, she discussed our problems with pesticides.

INDIANA - MICHIGAN

Michiana Beekeepers Association

The first meeting of 1983 will be held at the Harris Township Fire Station, 51070 Bittersweet Rd., Granger, Indiana on Sunday, March 20th at 2:00 p.m.

Main topic of discussion to be announced. Membership wintering reports will be given at this meeting. Non-members welcome! Call for further information (219) 293-4497, President or (219) 633-4830, Secretary.

CONNECTICUT Beekeeping Field Days

Professor Al Avitabile and Dr. Larry Connor have set three days in the spring for field days for new and intermediate

beekeepers. Each day the program will start with a lecture-demonstration session in the Bethlehem Elementary School. The day will be completed in Avitabile's bee yard in Bethlehem where a wide variety of management and manipulation methods will be demonstrated. Dr. Connor and Professor Avitabile will conduct split sessions in the field to allow greater contact and information exchange.

The program will start at 9:30 a.m. on March 26th, with additional sessions on April 2nd and April 9th. Participants should bring a sack lunch to eat at Avitabile's bee yard at noon. Protective gear is advised.

The registration fee for the three days will be \$35 per person. Pre-registration is advised, and should be sent to Dr. Connor at Beekeeping Education Service, P.O. Box 817, Cheshire, CT 06410. For additional information, phone Dr. Connor at 203-271-0155, or Professor Avitabile at 203-757-1231 or 266-7810.

NEW JERSEY

Buck's County Beekeepers Association

Mr. Walter Wilson, New Jersey Department of Agriculture Apiary Inspector, will be the featured speaker at the April meeting of the Bucks County Beekeepers' Association.

Mr. Wilson's seminar is being jointly sponsored by Delaware Valley's student beekeeping club, Delaware Valley College, and the Bucks County Beekeepers' Association. The meeting will begin at 8:00 p.m. on Thursday, April 7th, 1983. It will be held in the Mandell Hall auditorium of Delaware Valley College, which is located on Route 202, one mile west of Doylestown.

CONNECTICUT

Beekeeping Course

A course titled BEEKEEPING BASICS has been scheduled for the Hartford County Extension Office, 1280 Asylum Avenue, Hartford, CT 06105, starting March 3, 1983, running five Thursday evenings. In addition, a field demonstration is set for April 16th at Light Apiaries, Feeding Hills, Mass. This location is very near the Connecticut-Massachusetts line.

Dr. Larry Connor will instruct the course.

The evening sessions will run from 7 to 9:30 p.m. each evening.

For more information, or to register for the course, contact Dr. Connor at Beekeeping Education Service, P.O. Box 817, Cheshire, CT 06410. Phone 203-271-0155. Registration for the entire course is \$50, and includes BEEKEEPING BASICS and the text, *The Beekeeper's Handbook* by Avitabile and Sammataro. The fee includes the field day. However, those interested in attending only the field day may register for a fee of \$12.

Couples, business partners, students under 18, and retirees should contact Dr. Connor regarding a reduced registration fee for the course.

ONTARIO, CANADA

Fanshawe College Practical Course in Beekeeping
Harold C. Killins B.S.A. during the

past seven years has taught his practical courses in beekeeping to 302 people who have been enrolled. This year there will be one course starting at Fanshawe College on March 21st. There will be three sessions at weekly intervals in the classroom. These will be followed by six sessions at monthly intervals on sunny Saturday afternoons in the apiary. All basic subjects will be taught including spring management, disease control, swarm prevention, sources of nectar and pollen pollination, wintering and the harvesting and packaging of honey.

Practical experience will be gained by those who wish to handle bees in the apiary.

This course is designed for both the novice and the beekeeper who wants to improve his methods.

Apply early to Mr. Dan Link, Fanshawe College, Continuing Education, 520 First St., London, Ontario, Bay 20. Phone (519) 452-4425.

MASSACHUSETTS

Beekeeping Workshop

"Improve Your Beekeeping Skills; Spring Management. A one-day workshop on March 12, 1983, 9:00 a.m. until 4:00 p.m. at the University of Massachusetts at Amherst. Emphasis will be on effective spring management to ensure a healthy vigorous colony for the summer season. A review of management principles and applicable bee activities and behavior will be added, with topics including Colony Stimulation, Swarm Prevention, Requeening, and Equalizing Colonies. The cost for the workshop will be \$18.00 and the registration deadline will be March 4, 1983. For information on registration procedures or other questions please write: Rick Taupier, Division of Continuing Education, UMass Amherst, Amherst, MA 01003, or call (413) 545-2484."

OHIO

Tri-County Beekeepers Workshop

The Tri-County Beekeepers' Association, in cooperation with the Wayne County Cooperative Extension Service, invites you to its fifth annual Beekeeping Workshop, to be held on Saturday, March 5th, from 9:00 a.m. to 4:00 p.m. at Fisher Auditorium, Wooster, Ohio. Fisher Auditorium is located at the Ohio Agricultural Research and Development Center (OARDC) at the top of Madison Hill (State Routes 250 and 83 South) in Wooster.

Registration for the bee workshop will begin at 9 a.m. with the Introduction at 9:30 a.m. Several topics are planned to be of interest to everyone. All sessions will be completed by 3:00 p.m. at which time a half hour general question and answer session is planned, concluding with the door prizes that various honey and bee companies have donated.

Those who wish to pre-register by February 26th, may order a box lunch to be included with their registration. The cost of registration is: \$7.00 with the lunch or \$4.00 without the lunch. Checks or money orders should be made out to "The Tri-County Beekeepers' Association." Tickets for those who register before February 26th will be held at the door.

(Continued on page 162)

THE STOVER APIARIES, INC.
MAYHEW, MS 39753
PHONE 601-327-7223

ITALIANS

1983 PRICE LIST
PACKAGE BEES & QUEENS

STARLINE

IN LOTS OF	QUEENS	2-POUND & QUEEN	3-POUND & QUEEN	4-POUND & QUEEN	5-POUND & QUEEN
1-9	\$6.60	\$20.00	\$25.50	\$31.00	\$34.50
10-99	\$6.40	\$18.75	\$24.50	\$29.25	\$33.50
100-up	\$6.00	\$18.00	\$23.50	\$27.50	\$32.50

STARLINE QUEENS ARE 75¢ EXTRA.

PARCEL POST SHIPPING CHARGES

	1 Pkg.	2 Pkg.	3 Pkg.
2 Lbs. W/Queen	\$4.50	\$6.50	\$8.00
3 Lbs. W/Queen	5.00	7.00	8.75
4 Lbs. W/Queen	5.75	8.50	
5 Lbs. W/Queen	6.25	9.25	

SHIPPING CHARGES INCLUDE POSTAGE, SPECIAL HANDLING AND INSURANCE.

PLEASE ADD THESE CHARGES TO YOUR PARCEL POST ORDERS.

QUEENS ARE SHIPPED POST PAID.

Packages can only be shipped parcel post. To book parcel post orders, check or money order must accompany order. Prices are subject to change.

Live delivery on package bees can only be guaranteed until May 20th.

Marking and/or clipping of queens is 50¢ extra per queen.

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"OLD RELIABLE" PACKAGE BEES AND QUEENS

262-5853 — 281-0812 — Area Code 205

P. O. BOX 684

MONTGOMERY, ALABAMA 36101

1983 PRICE LIST

Parcel Post Package Bees & Queens

In Lots of	Queens	2-Pound & Queen	3-Pound & Queen	4-Pound & Queen	5-Pound & Queen
1-24	\$6.50	\$25.75	\$31.50	\$37.00	\$42.75
25-99	\$6.20	\$23.75	\$29.25	\$35.00	\$40.75
100&up	\$5.90	\$22.50	\$28.25	\$34.00	\$39.75

WRITE FOR PRICES ON PACKAGES 100 AND UP

PRICES INCLUDE POSTAGE, SPECIAL HANDLING, AND INSURANCE FEES.

If Shipment arrives in poor condition place Claim immediately with Post Office for damages.

Packages can only be shipped parcel post.

To book parcel post orders, check or money order must accompany order.

Prices are subject to change.

We may run late on shipping, but will come as near to your desired shipping date as possible.

Tested Queens are available at \$2.00 extra. Marking and/or clipping of queens is 50¢ extra per queen.

Packages and Queens to Be Picked Up at Montgomery, Alabama

In Lots of	Queens	2-Pound & Queen	3-Pound & Queen	4-Pound & Queen	5-Pound & Queen
1-24	\$6.50	\$19.50	\$25.50	\$31.50	\$35.00
25-99	\$6.20	\$18.75	\$24.50	\$30.50	\$34.75
100 & up	\$5.90	\$18.00	\$23.50	\$29.25	\$33.50

News and Events



(Continued from 160)

For registration and further information, please contact James Kinney, 1560 Woodcrest Dr., Wooster, Ohio 44691. Phone (216) 264-8369.

MASSACHUSETTS

Essex County Beekeeping Course

The Essex County Beekeepers Association is once again conducting a Beekeeping Course for Beginners at the Essex County Agricultural & Technical Institute located on Rt. #62 in Danvers, Mass. Classes start on February 15, 1983 and will continue for 9 weeks, meeting every Tuesday evening from 7:30 p.m. to 9:30 p.m.

KANSAS

Kansas Honey Producers

The Spring Meeting of the Kansas Honey Producers Association will be held at the Elks Lodge, 4th and Mulberry, Abilene, Kansas, on Friday and Saturday, March 25-26, 1983. Besides the business meeting and the auction for the Honey Queen Fund, the meeting will center on the proper methods of colony management and disease prevention.

Abilene is the site of the Eisenhower Center which includes the boyhood home, museum, library, and the final resting place of President of Dwight D. Eisenhower. Those attending the Spring Meeting are invited and encouraged to include a tour of the Eisenhower complex on their agenda.

The Kansas Honey Producers Association invites everyone interested to attend the Spring meeting.

For further information, please contact Duane Levin, Secretary, Box 5, Stuttgart, Kansas 67670. Phone: 1-913-543-6210.

NEW YORK

Beekeeping Seminar

The guest speaker will be Dr. Clarence Collison, Extension Entomologist from Pennsylvania State University. Dr. Collison will be assisted by John Barrett, Master Beekeeper from Plattsburgh, and Charles Mraz from Middlebury, Vermont.

In the afternoon, there will be demonstrations for both beginning and advanced beekeepers. The demonstrations for advanced beekeepers will be conducted by Dr. Collison. Demonstrations for beginners will be conducted by John Barrett.

Demonstrations will take place in the apiary and we ask that you come properly dressed. (Veil, gloves, suit, whatever you feel comfortable with).

There will be a film show on Beekeeping in Mexico. A discussion period with Dr. Clarence Collison, Charles Mraz and John Barrett will take place at 2:15 p.m. The Miner Institute honey house will also be open for viewing.

Space is limited and we are asking that you get your registration in early by calling Loretta Surprenant at (518) 846-8020. A box lunch will be available for \$3.00.



Pamela Kay Dugmore.

OHIO

Ohio Honey Queen

Pamela Kay Dugmore, 19, is the daughter of Col. and Mrs. Kent C. Dugmore, Dayton, Ohio. A student at Wright State University, Fairborn, Ohio, Pamela is majoring in Modern Languages.

Pam spent three days at the Ohio State Fair in the Agricultural-Horticulture building in August 1982 and reigned over the Ohio Honey Festival Queen's Castle for three days. This is always the second Thursday, Friday and Saturday in September, 11 A.M. to 11:30 P.M. 1983 will be the 16th Ohio Honey Festival.

MONTANA

Eastern Montana Beekeepers Association

At the annual meeting Eastern Montana Beekeepers Association members elected officers for 1983.

Ray Degenhart is president, James Snyder is president elect, John Urbaska is treasurer and Sheri Kisch is secretary.

The group meets in members homes the second Tuesday of each month and visitors are welcome.

Mr. Degenhart lives at 2547 Roundup Road, Billings, Montana 59105 and invites those interested in honey bees in Eastern Montana to contact him about joining.

PENNSYLVANIA

Beekeeping Short Courses

SPRING: Saturday, April 9, 16 and 23, 1983.

SUMMER: Friday, Saturday & Sunday, June 24, 25 and 26, 1983.

Delaware Valley College, Doylestown, Pa. will again be offering its Spring and Summer Beekeeping Short Courses. The courses are offered under the direction of Dr. Robert Berthold (Assistant Chairman Biology) in co-operation with Dr. Dewey Caron (Chairman, Entomology, Univ. of Del.), Mr. John Whitbeck (Pa. Dept. Agric. Apiary Inspector), and Mr. Frank Makowski (N.J. bee supply dealer). The program will include a special talk by Mrs. Marnie Berthold on home uses of honey.

Instruction will take place on the Delaware Valley campus, with the College apiary and Honey House being utilized.

Over 175 persons attended the 1982 courses. Included in this group were experienced beekeepers, novices, and those considering taking up beekeeping as a hobby. There were quite a few teachers who were planning to use the information presented in their own classroom situation. Also a number of people incorporated the course into their vacations.

The total cost for the three days of instruction is \$28; senior citizens are allowed to take the course for free, space permitting. Further information may be obtained by writing to Dr. Berthold, Delaware Valley College, Doylestown, Pa. 18901, or by calling him at (215) 345-1500.

OHIO

Beekeepers School

The Ohio Cooperative Ext. Service and Beekeepers Associations are offering a beekeepers school on Saturday, April 16, 1983 at Lakota High School, 5050 Tylersville Rd. which is located between I-75 (Exit 22) and Rt. 747 about 4 miles west of I-75; About 1/4 mile east of Rt. 747.

The cost is \$8.00 for adults or \$5.00 for 18 years and under, which includes registration and lunch. Fee is payable by April 9th. 4-H members free.

Send reservations to Don Cooke, 731 Miami Ave., Terrace Park, Ohio 45174. Make check payable to Don Cooke. No confirmations will be mailed. The program runs from 8:00 AM. to 4:00 PM.

CALIFORNIA

Los Angeles County Beekeepers Association

Honey Queens were an important part of the program at the Los Angeles County Beekeepers Association first banquet in 34 years. First the 1982 Los Angeles County Honey Queen, the newly chosen California State Honey Princess, Roxanne Mitchell, sang two songs for the seventy assembled members and friends at Brotherton's Farmhouse Restaurant in Pasadena.

This activity and the immediate picture taking of the Honey Queen beauties somewhat overshadowed the ensuing nomination, election and installation of 1983 officers. Elected president was George Nickel, Vice president, Don Null, and Secretary-treasurer, Roy Davis.

Another feature of the evenings program was a narrated slide presentation by retiring president Bruce Steele based on his hobby of photographing natural beauties found on the seashore and on land.

A short slide report was made by Mike Agnew of the Western Apicultural Conference at Logan Utah last August.

Also at this banquet several different awards were handed out. The "certificate of Merit" was presented to Bruce Steele, Pat Smith, Mike Agnew, Dick Rudy, Don Campbell, Elmer Mischeler (posthumously) and Roy Davis. The "Member of the Year" award went to Walt McBride. Then plaques suitable to their office were presented to the officers upon the completion of the 1982 year: President, Bruce Steele; Vice president, Pat Smith and Secretary-treasurer, Roy Davis.

BUY & SELL

Classified rates, 45¢ per counted word, each insertion, payable in cash in advance. Each initial, each word in names and address, 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) count as one word. Not less than 10 words accepted. Copy should be in by the 5th of the month, preceding publication. Send classified ads to: The A. I. Root Co., Advertising Department, Gleanings in Bee Culture, 623 W. Liberty St., P.O. Box 706, Medina, Ohio 44258-0706.

MAGAZINES

THE AMERICAN BEEKEEPING FEDERATION needs your support; participate in national affairs; receive six issues of the **NEWS LETTER** per year. The ABF, Inc., 13637 N.W. 39th Avenue, Gainesville, FL 32601. TF

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

THE INTERNATIONAL BEE RESEARCH ASSOCIATION regularly publishes new information on bees, beekeeping, and hive products, for beekeepers and scientists all over the world. Mail inquiries from USA: H. Kolb, P.O. Box 183, 737 West Main, Edmond, OK 73034, Phone: (405) 314-0984. **IBRA PUBLISHES: Bee World**, a quarterly journal for the progressive beekeeper. **Apicultural Abstracts**, a survey of scientific literature from all languages. **Journal of Apiculture Research**, for original bee research papers. Books and pamphlets on all beekeeping topics. Catalogues of publications and details of journals and membership \$1. Specimen copy of **Bee World** \$1.50; **Journal of Apicultural Research** \$1.50; **Apicultural Abstracts** \$2.00, from **INTERNATIONAL BEE RESEARCH ASSOCIATION**, Hill House, Gerrards Cross, Bucks. SL9 0NR, England. TF

DAIRY GOATS—for milk, pleasure and profit. Excellent for children, women and family! Monthly magazine \$11.00 per year (\$13.50 outside U.S.A.). **DAIRY GOAT JOURNAL**, Box 1808 T-3, Scottsdale, Arizona 85252. TF

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

SCOTTISH BEE JOURNAL. Packed with practical beekeeping. Sample copy from Robert NH Skilling, FRSA, 34 Rennie St., Kilmarnock, Scotland. Published Monthly, \$4.00 per annum. TF

BEE CRAFT — Official (monthly) magazine of the British Beekeepers Association. Contains interesting and informative articles. Annual Subscription (Sterling cheque 2.22 p.or U.S. \$6.) Post paid. The Secretary, 15 West Way, Copthorne Bank, Crawley, Sussex, RH10 3DS. TF

INDIAN BEE JOURNAL Official organ of the All India Beekeepers' Association, 817, Sadashiv Peth, Poona 411030. The only bee journal of India Published in English, issued quarterly. Furnishes information on Indian bees and articles of interest to beekeepers and bee scientists.

Annual subscription postpaid in foreign countries: For individuals US \$7.00 for institutions, companies and corporate bodies US \$10.00 or it's equivalent, to be received in advance by IMO or bank draft, payable in Poona (India). TF

MISCELLANEOUS

Dealership Territories available in some areas. Please contact The A. I. Root Co., P.O. Box 706, Medina, OH 44258 TF

BEE JOKES (100 Real Honey). Send \$2.00 To: **BEE JOKES**, Box 88, Granville, OH 43023 3/83

1982 Air Stream. 26 foot International Land Yacht Series; Excellent Condition. Will trade for bees or bee supplies. Cal 217-367-7396 — write — Doug Johnson, 720 South Broadway, Urbana, IL 61801 3/83

MICHIGAN Beekeepers: Hauling packages to lower Michigan from mid-April to early May. \$25.00 — 3 lb. package. Coombs Apiaries (616) 642-6361 4/83

For Rent: 400 Colonies, 4-5 high. 50 live; feed is set up. Palletized. Extracting facilities. Good honey area. \$10/hive. Matt Golas, Fisher Branch, Manitoba, PH: (204) 372-6552 4/83

BEEKEEPERS: Sweeten your experiences through a two year Peace Corps volunteer assignment. Expenses paid plus. Information: Toll-Free — 800-424-8580, Extension 93 4/83

RENDERING every day in our all new plant. All honey saved from cappings. Rendering slumgum and old combs. Write for FREE shipping tags and rates. **HUBBARD APIARIES**, Onsted, Mich. TF

HONEY STRAINER 100 mesh nylon bag. Approx. 18" x 20", Reusable, Practical, Convenient, Instructions, Ppd. \$3.00 ea., 2 up \$2.50 ea. Beckman G2, Box 633, Stuart, Florida 33495. TF

INSEMINATION DEVICES. For prices write Otto Mackensen, Box 1557, Buena Vista, CO 81211. TF

HONEY WANTED

BEEKEEPERS TAKE NOTICE — We cannot guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for CASH only or on C.O.D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED — HONEY, all grades, Send samples and price. M. R. Cary Corp., Box 122, Syracuse, N. Y. 13208. TF

BUCKWHEAT, light and light amber honey. Bedford Food Products, Inc., 209 Hewes St., Brooklyn, N. Y. TF

All Grades of Honey, Any quantity drums or cans. Call Toll Free 800-248-0334. Hubbard Apiaries, Inc., Box 160, Onsted, Michigan 49265. TF

WANTED—All grades of extracted honey. Send sample and price. Deer Creek Honey Farms, London, OH. TF

WANTED: comb and all grades of extracted in 60's or drums. Send sample and price to MOORLAND APIARIES INC., 5 Airport Drive, Hopedale, MA 01747. TF

WANTED—All grades of extracted honey. Send sample and price to MacDonald Honey Co., Sauquoit, New York 13456. Area Code 315-737-5662. TF

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. Hubbard Apiaries, Onsted, Mich. TF

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. Hubbard Apiaries, Onsted, Mich. TF

CLOVER, ALFLALFA, Buckwheat, Tulip Poplar, Wild Flower, or Orange in 60's. Dutch Gold Honey, Inc., 2220 Dutch Gold Dr., Lancaster, PA TF

HONEY IN 60's FOR SALE. Bedford Food Products Co., 209 Hewes St., Brooklyn, New York 11211. Telephone: 212-EV4-5165. TF

CLOVER, ORANGE, U.S. and Yucatan Wildflower, in sixties. Other flavors and bakery grade available. MOORLAND APIARIES, 5 Airport Dr., Hopedale, MA 01747. TF

Clover, Sunflower, Basswood; Excellent quality; in drums, a few 60's. Possible delivery Rt. 51 — Interstate 57 to Cairo, IL. Don Kohn, Withee, WI. 54498, 715-229-2297. 4/83

Premium Michigan Honey. 60¢ per lob. F.O.B., drums exchanged. Ph: 616 471-5038 3/83

BOOKS

RICHARD TAYLOR'S FORTY YEARS BEEKEEPING EXPERIENCE IN HOW-TO-DO-IT BOOK OF BEEKEEPING. \$6.95 ppd. LINDEN BOOKS, INTERLAKEN, NY 14847. TF

PROPOLIS THE ETERNAL NATURAL HEALER \$5.95 soft, \$8.50 hard, plus \$1.50 shipping. For table of contents, discounts etc. send stamped envelope.

Pollen books: *Pollen The Miracle Food, Source of Youth, Vitality and Longevity*, \$40.00 — 100 books postpaid. (For smaller quantities write to: Nutri-Books Corp., Denver, Colo. 80217). Murat Company, 2132 Northwest Eleventh Avenue, Miami, Florida 33127. Phone 305-325-9990. 10/83

CLASSIC REPRINTS: Miller's *Fifty Years Among The Bees*, \$7.95 softcover, \$12.50 hard, \$1.00 shipping. Root's 1890 *ABC of Bee Culture*, \$11.50 softcover, \$17.95 hard, \$1.25 shipping. NY residents add 6% tax. Molly Yes Press, RD 3, New Berlin, NY 13411. TF

MANAGE BEES BETTER. Read *Beekeeping Tips and Topics* and *Beekeeping in the Midwest* by Elbert R. Jaycox. Either paperback, \$7.95 plus \$1.00 postage, handling. Bee Specialist, Dept-R2, 5775 Jornada Road, Las Cruces NM 88001 4/83

COOKING WITH HONEY. Over 300 recipes. Includes folklore, history, more. \$6.95 ppd. Honey House, Rt. 10, Box 203-G, Statesville, NC 28677 3/83

POLLEN

FRESH, PURE, Bee Pollen available in 1 pound containers at \$8.50 per pound postpaid. 10 pound bulk pack at \$7.90 per pound. Large lots, ask for price. Hubbard Apiaries, Inc., Onsted, Mich. 49265. TF

POLLEN FOR BEE FEED. Postpaid, Insured, Duty free. 1-24 lbs. \$3.75/lb., 25-100 lbs. \$3.50/lb. Discount for over 100 lbs. 5 lbs. minimum order. Silver Star Apiaries, P.O. Box 186G, Vernon, BC V1T 6M2 3/83

BEE HEALTHY & ENJOY Canada's best bee pollen. From the pure north of British Columbia. Excellent flavor, superior quality, and guaranteed pesticide free. 3 lbs. \$22.00; 6 lbs. \$39.00; 10 lbs. \$54.00; 20 lbs. \$100.00, ppd. Blossomtime, P.O. Box 1015, Tempe, AZ 85251 TF

WANTED

WANTED—All varieties bee gathered pollen. Must be clean and dry. Pollen traps available. Hubbard Apiaries, Onsted, Mich. 49265. Phone: 517-467-2151. TF

WANTED — Old Beekeeping Books and Bee Journals. James Johnson, 107 State Ave., Terra Alta, W.V. 26764. TF

Black Bear recipes for a cookbook. Contact; Sussex County Beekeepers, R.D. #1, Box 202, Sussex, New Jersey 07461 3/83

ROYAL JELLY

SUPER STRENGTH Royal Jelly capsules, 100 milligrams per bottle of 100, \$12.50; five bottles, \$60. Prairie View Honey, 12303 12th St., Detroit, MI 48206. TF

PURE FRESH Royal Jelly, 2 oz. bottle, \$19 pp.; 1 lb. \$120. Prairie View Honey, 12303 12th St., Detroit, MI 48206 TF

BEE SWAX

BEE SWAX WANTED — Highest prices paid in cash or trade for bee supplies. The A.I. Root Co., Medina, OH 44256; Council Bluffs, IA 51501; San Antonio, TX 78204. Box 9153. TF

BEE SWAX WANTED — Small lots to truck loads. Write or call. DONALD SCHMIDT, 859 W. 9th Street, Winner, SD 57580. PH: 605-842-0350. TF

WANTED — Beeswax any size shape block \$1.35 to \$1.40 per pound. Prompt payment, small lots welcome. A. vanWees, Greenlane, PA 18054. TF

BEE SUPPLIES FOR SALE

WRITE FOR CATALOG—Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Mich. TF

FOR TOP QUALITY BEE SUPPLIES and advice on beekeeping problems, visit your nearest Root dealer and send for your FREE Root catalog. Satisfaction guaranteed. The A.I. Root Co., P.O. Box 706, Medina, OH 44256. TF

BEE EQUIPMENT MANUFACTURERS. Supers ends rabbit-jointed for added strength and durability. Our frames are one of the best on the market. All beekeeping supplies at commercial prices. Write or call for price list. **MONCRIEF BEE SUPPLIES**, Post Office Box 625, 1105 Lakewood, Lakeland, FL 33802. (813) 858-6754. TF

WE CARRY A COMPLETE LINE OF BEE SUPPLIES and containers. Write for price list. **E & T GROWERS**, R. 1, Spencerville, Ind. 46788. (A suburb of Ft. Wayne). Phone 657-5136. TF

ALL WESTERN BEEKEEPERS: Lock-corner supers — tops — bottoms — frames. Complete stock — supplies & equipment. Phone or write for quantity prices. **UNITED BEE CRAFT COMPANY**, 600 Harbor Blvd., West Sacramento, CA 95691. (916) 371-9340. TF

QUALITY CYPRESS BEEKEEPING SUPPLIES — dovetailed hives and hive parts, beginner's kits, complete supplies. Write: **BEE-JAY FARM**, Dacula, GA. 30211. TF

PINE BEE SUPPLIES

*Beehives dovetailed — \$3.50 each
*Super 5 1/4" or 6 1/8" — \$2.50 each
*Frames heavy duty per 100 — \$28.80
*Frames heavy duty per 1000 — \$250.00
*Lids or bottoms (migratory) — \$2.00 each or \$4.00 per set

Allow manufacturing time on large orders. **Marvin Smith Apiaries**, Rt. 1, Parma, Idaho 83660, Phone 208-722-5278 days. TF

RADIAL HONEY EXTRACTORS-5 and 10 frames, Patented, factory made of stainless steel. **GAMBLE'S HONEY EXTRACTOR CO.**, P.O. Box 7997, Greensboro, NC 27407, Phone: (919) 299-3973, Day or Night. TF

HONEY EXTRACTORS FOR HOBBY BEEKEEPERS — Affordable Prices. FREE Literature. **BEE LINE MANUFACTURING**, 1019A Saint Elmo, Austin, TX 78745 TF

400 Nucs for April & May Delivery, 3 or 4 frames. Call or write **Praise The Lord Honey House** 13808 Dragline, Round Rock, Texas 78664, Ph: (512) 251-3823 or (512) 836-1675 4/83

HOBBYIST: METAL SINGLE FRAME EXTRACTORS, \$49.95 plus postage, wt. 8 lbs. **Mulligan's Apiaries**, 18 Richard Ave., Merrick, N.Y. 11566 4/83

NEW NO HEAT OR ELECTRICITY USED. Uncapping fork (not just a scratcher). No flavor loss and better flavor retention. No burnt fingers or shocks. Honey from dark comb not discolored as with hot knife. \$11.00 each pp., Blossomtime, P.O. Box 1015, Tempe, AZ 85281. TF

Four frame nucs and singles available early in May in north-central Illinois. **Tannes Orchard, Speer, Illinois 61479.** Ph: 309-493-7781 or 309-493-5442 5/83

NUCS in your equipment, foundation exchange, 3 frame/Queen 20.00, 4 frame/Queen 24.50, 3 frame Queenless 14.50, 4 frame Queenless 19.00. **Dappen Honey Farm, P.O. Box 657, El Dorado, CA 95623.** Ph: (916) 622-8522 4/83

Bee Comb foundation, Wholesale prices. Free List. **Wilborn Supplies**, Route 6, Box 235, Guntersville, Alabama 35976 5/83

2500 Supers, 9-5/8 and 6-5/8. Other misc. equipment all or part. Sell cheap. **Jerome Kurschner**, Box 102, Prairie Farm, WI 54762 3/83

3 Frame Nucs, 1 — 10 \$28.00, 11 — 50 \$25.00, 51 and Up \$22.00, \$2.00 off frame exchange. **W.S., SPOKANE, WA, 509-926-1088** 4/83

200 two story hives with supers on goldenrod locations in Northeast Ohio. All or part. 216-678-4400. **C.E.R.** 3/83

160 strong singles. Good equipment, 83 queens. Delivery after April 1. \$45.00 each. **T-H APIARIES**, PH: 415 676-9375 4/83

Large Hobby operation. Equipment new used. Must sell. **H. Krecklau**, Route 1, Carver, MN 55315, PH: 612 448-4898 3/83

BEES & QUEENS FOR SALE

WE USE ALL POSSIBLE CARE in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for a certificate of inspection as a matter of precaution.

ONE HUNDRED full 10 frame colonies of bees \$40.00 — \$50.00. Heavy with honey. State inspected with 3 stainless storage tanks. Phone 904-245-2461. **L.M. Hubbard**, Belleview, FL 32620. TF

Nucs \$25.00 — 3-frames/queen — Hybrid — guarantee live delivery — Shipped in cardboard container. **F.O.B. Dixie Honey Company**, E. A. Cannady, 919-579-6036. Rt. 3, Box 206A, Shallotte, NC 28459. TF

Colonies for sale in Florida. Call Evenings only, (904) 567-9495. No Collect Calls. Terms Negotiable. TF

500 colonies of bees on good Spring Buildup locations with or without supers. Also nuclei, package bees and queens. **G.C. Walker, Jr., Rogers, Texas 76569**, 817-983-2891. TF

PACKAGE BEES delivered to Wisconsin near Green Bay, Eau Claire and my home. **Ronald Hazard**, RT 2, Poynette, Wis 53955. Phone: 414-992-3217. 4/83

Carniolan Bees & Queens, Queens \$6.50@, 3 lb. pack with Queen \$22.50@, 2 lb. pack with Queen \$16.50@. Live delivery guaranteed. Health certificates furnished. Shipments begin April 10th. **King Bee Apiaries**, Rt. 4, Box 90, Greenville, AL 36037, Ph: 205-382-2305 TF

Package Bees and Queens, delivery mid April, BUFFINGTON'S HONEY FARM, R.D. #2, Box 189, Halifax, PA 17032, (717) 896-8637 5/83

For Sale: Quality 5-frame nucs — \$36.00 per nuc. Italian Bees — placed in your equipment at Belmont N.Y. after May 1st. \$5.00 deposit per nuc at time of order. **Dick's Bees**, 716-268-5310 5/83

200 Bee Hives with new Italian queens, \$50.00 Ryland apiaries, Rt. 2, Box 215, Deville, LA, PH: (318) 466-5309 4/83

Ten 2-story strong colonies. Excellent equipment, \$60.00 each. Bottom pollen traps, \$15.00 each. Phone (805) 484-3418 3/83

PACKAGE BEES. Pick up in St. Paul, Minnesota — mid April. Now booking 1983 orders. Please book early. Write or call for a free brochure. **J.B. Apiaries**, P.O. Box 6626, St. Paul, MN 55106. 612-776-1668 4/83

Ohio Beekeepers — package bees delivered to Urbana, Ohio. \$18.25 — 2 lb., \$22.50 — 3 lb. 50 packages or more delivered to your home. J.L. Rockhold, 800 Miami St., Urbana, OH 43078. (513) 653-5727, after 4 P.M.

3/83

SEEDS

Mixed sweet clover seed, 50% white, 50% yellow. 10 lbs. \$7.50 plus U.P.S. Innoculant \$1.50. Higgins 3801 US 50, Hillsboro, OH 513-364-2331/3/83

FOR SALE

Protective Clothing for Beekeepers. Write now for brochure. B. J. Sherriff, Dept. GBC P.O. Box 416, Nacoochee, GA 30571 TF

COMPLETE BEEKEEPING OUTFIT in westcentral Nebraska. Over 2,100 high yielding palletized colonies, locations, building, land, supers, extracting and packing equipment, trucks, trailers. Very established growing retail market. Well known label. Town & country Realty of North Platte, NE 69103-0931, Ph: (308) 534-9485 4/83

FOR SALE, 25 — Italian Queens or more \$5.95 ea., 25 — 5-frame Nucs or more 24.95 ea., 25 — 5-frame exchanged w/wax 19.95 ea., 20 — 10-frame Colonies, new hives dipped 39.00 ea., 100 — 9-5/8 Hive Bodies empty, 345.00. 1000 9-1/8 deep frames, 275.00, 100 — migratory flat covers or bottom boards, 220.00, **Hubbard Honey Inc.**, P.O. Box 726, Belleview, FL 32620, Ph: 904-245-1106, L.M. Hubbard Since 1918. 7/83

For Sale 600 or More Deep Supers Drawn Comb. Earl Alexander, 436 Porter Field Rd., Richmond, IN 47374. TF

Ten hives of yellow bees in two-story twenty frames \$50.00 each. R. Floyd Kittle, Burgettstown, PA 15021, Box 98, PH: 412-947-5947 3/83

3 frame Nucs, laying Queen, E.A. Jones, Stillwaters Apiaries, Rt. 2, Box 10-A, Keysville, Va 23947, PH: (804) 736-8815 4/83

For Sale: 170 10-frame brood chambers, many with honey, 110 deep supers, 80 bottoms, 60 telescopic covers, Johnson dovetailer with motor, plus misc., Independence, Wisconsin, 715-985-3912 3/83

600 single hives of bees on pallets, with or without extracting equipment, locations truck, honey house, loader etc. Will consider terms. (612) 645-2221 or write American Credit, 1572 West Van Buren, St. Paul Minnesota 55104 4/83

New frame spacing tools for 10-frame honey super. Fast and easy to use. Produce more honey on fewer frames. 1/2" cast aluminum. Lifetime guarantee. Specify 8 or 9 frame. 1—spacer 9.65, 2—spacers 9.45 ea., add 1.50 postage and packaging. Dealers welcome. Wolf World Products, P.O. Box 707, Baldwin, WI 54002 7/83

1959 C.O.E. 2 ton Ford flat bed truck. Dropped frame, all steel bed, rebuilt engine, rebuilt transmission, front end rebuilt. \$1,850 Contact Grant, 916-265-5877 3/83

For Sale — Strong 4 frame nucs. Breeders chosen from our best overwintering and highest producing colonies in upstate N.Y. Delivery to Hamilton, N.Y. early May. \$35 each. Quantity discounts. Winter address: Robert O. Knapp, 303 Beach Place, Myrtle Beach, S.C. 29577 4/83

8 x 20 goose neck trailer 27' boom \$4,295.00, 8 x 16 trailer \$2,295.00, 100 2-story colonies @ \$60.00, PH: (418) 779-6164 5/83

Four frame Nucs in our equipment or yours with frames exchanged. Italian bees, health inspected. D.M. Brister, Rt. 1, Box 305, Caddo, Oklahoma 74729, Ph: 405-367-2570 3/83

For Sale — Used Equipment, 300 bottom boards, 900 9-5/8" 10-frame drawn comb brood supers, 900 9-5/8" 9-frame drawn comb extracting supers, 300 telescoping covers and inner covers, Tom Tylee, 2205 Hillview Dr., Menomonie, WI 54751, Ph: 715-235-5632, Dick 714-235-0788 4/83

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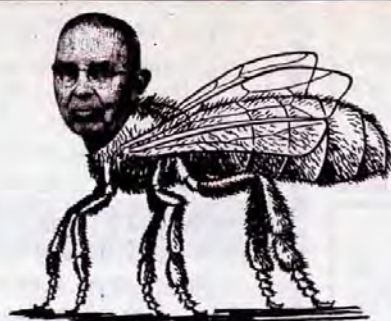
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Index to Display Advertisers

Almance Bee Co.	150
American Bee Breeders Assn.	130
American Bee Journal	167
American Bee Supply	Inside back cover
American Lung Society	146
Arnaba Ltd	121
Australasian Beekeeper	167
Australian Bee Journal	166
B&B Honey Farms	118
Babcock, Huck	157
Beekeeping Education Service	123
Bee Plasticcombs Co.	133
Bee Supply Co.	123
Berry, M. C. & Son	161
Better Way Wax Melter	133
British Bee Journal	167
Busby's Bees	155
Callahan Apiaries	155
Calvert Apiaries, Inc.	146
Canadian Beekeeping	167
Cary Corp., M. R.	118
Chrysler & Son, W. A.	120
Cloverleaf Mfg., Inc.	130
Cook & Beals, Inc.	121
Curtis, Elliott & Sons	167
Curtis, Harold P. Honey Co.	151
Dadant & Son	121, Inside Front Cover
Dixie Honey Co.	151
E & T Growers	121
Farming Uncle International	162
Fields of Ambrosia	140, 141
Forbes & Johnston	123

Glenn Apiaries	153
Gregg & Son Honey Bee Farm	151
Gulf Coast Bee Co.	155
Hamm's Bee Farm	123
Hardeman Apiaries	151
High Shoals Apiaries	118
Hive Fountain	150
Homan, Farris	144
Homan, Holder Apiaries	123
Honeybee Products	153
Honey Land Farms	153
Hubbard Honey, Inc.	153
IBRA	138
Irish Beekeeping	167
Jackson Apiaries	155
Johnson Co., Carl E.	118
Jones & Son Ltd., F.W.	155
Jurica Apiaries	151, 144
Kelley Co., Walter T.	129, 168
Kona Queen Co.	155
Lohman Apiaries	148
Lone Pine Bees	146
Maxant Industries	150, 117, 123, 129
McCary & Son	144
Mid-Continent, Inc.	127
Miksa	167
Miller I. Enterprise	121
Millry Bee Company	159
Mitchell's Apiaries	148, 155
Norman Bee Co.	153
Otte, B.C.	151

Perkiomen Valley Apiaries, Inc.	129
Pierce Mfg. Co.	118
Pierco	129
Plantation Bee Co., Inc.	167
Pollen, C.C.	118
Prairie View Honey Co.	123
Props Alderman's Bee Supplies	133
Queen Rite	153
Queen's Way Apiaries	155
R. M. Farms	120
Root Co., The A. I.	117, 120, 123, Back cover
Ross Rounds	126
Rossman Apiaries, Inc.	159
Sandoz, Inc.	125
Simon Apiaries	121
S & K Apiaries	155
Speedy Bee	167
South African Bee Journal	167
Stearns Bee Farm	155
Stoller Honey Farm, Inc.	120
Stover Apiaries, Inc.	161
Strauser Bee Supply, Inc.	115
Sundance	155
Taber Apiaries	167
Tate, W.L. & Son Bee Co.	146
Weaver Apiaries, Inc.	150, 158
Weaver Howard & Sons	157
Werner, H. E.	123
Wicwas Press	131
Wilbanks Apiaries, Inc.	159
Wildwood Apiaries	153
Wolf Bee Supply	167
York Bee Co.	152

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- ✓ **Queen laying?** check for a good brood pattern. Pollen is crucial now. Got enough Beltsville Bee Diet on hand?
- ✓ **Take another hard look at that frame.** Be alert for sunken cappings, a buckshot pattern, and other possible signs of disease.

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