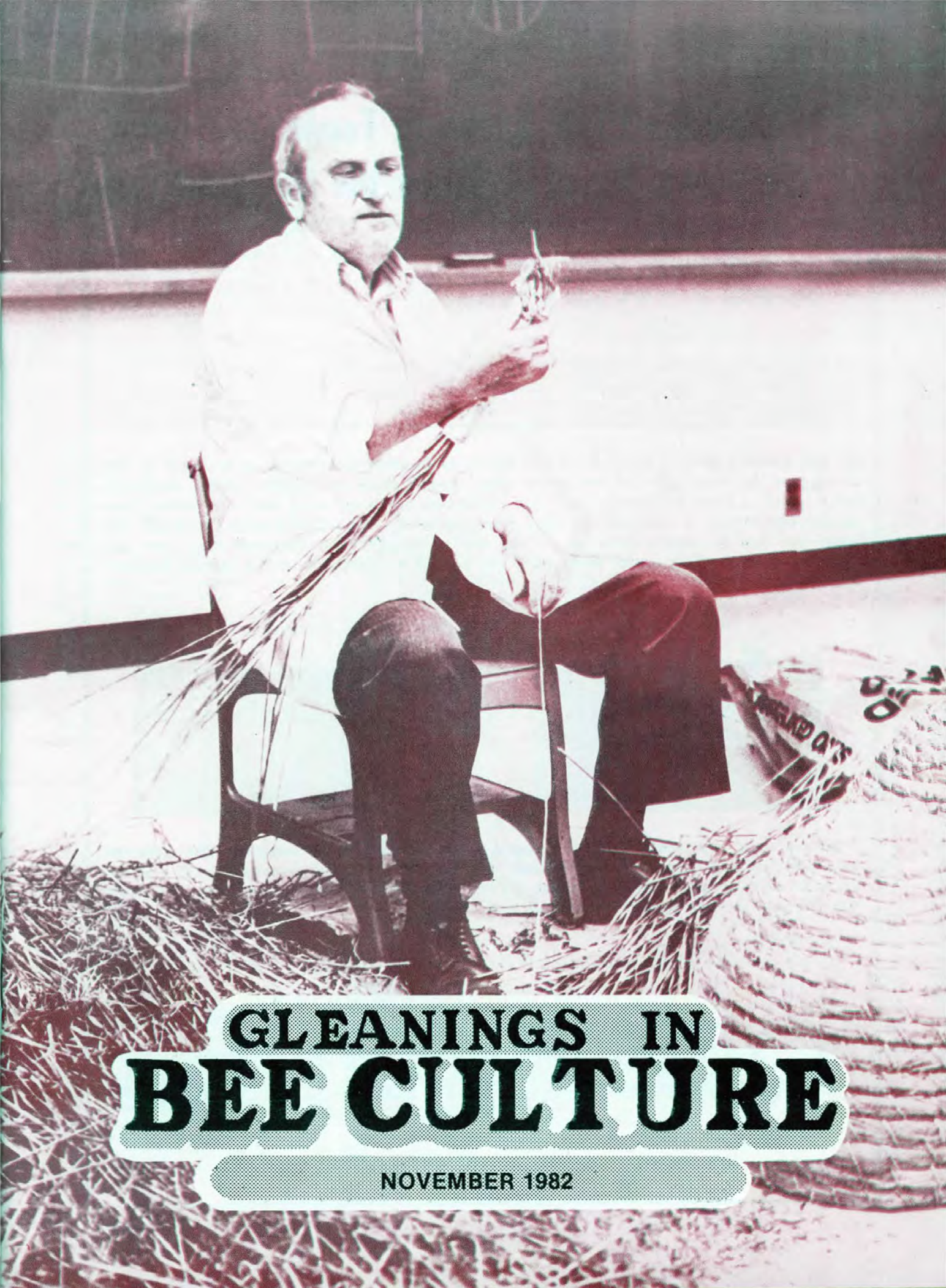

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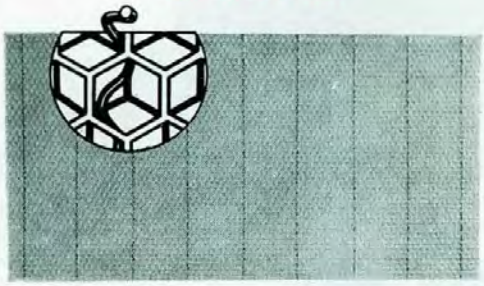

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Dr. Roger A. Morse, Research Editor
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Cover Story

Karl Showler, Technical Officer of the International Bee Research Association, England demonstrates the construction of a straw skep for the Eastern Apicultural Society meeting in Morgantown, West Virginia last summer. Mr. Showler is the author of a book titled *The Observation Hive.*

Gleanings In Bee Culture

November 1982 (ISSN 0017-114X) Vol. 110, No. 11
Created to Help Beekeepers Succeed
109 Years Continuous Publication by the Same Organization

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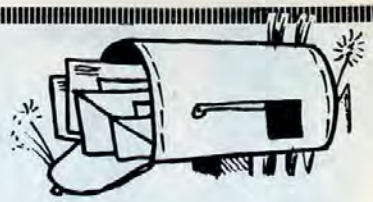
Gleanings Mail Box



Information on Sycamore Maple

Dear Editor,

Can you or your readers shed any light on the sycamore maple, *Acer pseudoplatinus*, as a source of nectar? My interest in this species started two years ago while traveling in East Germany when I saw some trees in a city park whose blooms were quite sticky with what I believe to be nectar. The leaves were not sticky, nor were there any ants or aphids noticed. Is this a common occurrence for the species or an isolated incident?

Any information you can give me on this will be appreciated.

David N. Griffith
P.O. Box 95
Dadeville, AL 36853

Label Suggestion

Dear Editor,

Being my own grocery buyer, I notice in the jam and jelly department that they list products as PURE but then they list the contents. For instance: Strawberries, glucose, and several other items. I feel that beekeepers are being mislead by putting pure on their labels and that they should list as "100% PURE".

Commercial packers have been listing honey on this basis and maybe they are protected by listing the contents but if there was printed on the label "100% PURE" then they would be protected by the law.

Walter Kelley
Clarkson, KY

Getting Bees in Supers

In answer to the question from B.T. in Texas (Sept.) relative to his bees not entering the supers I offer the following information.

Two years ago we had one of the heaviest honey flows we have ever had. We bought new supers with foundation and placed them on several hives. While other hives with pulled foundation made outstanding surpluses these hives did not put up one pound of honey. In fact they refused to go into the supers. Two weeks later we placed two frames of extracted combs in the middle of each new super and the bees immediately began working the supers. They pulled the rest of the wax and made nice surpluses.

If the gentleman from Texas had new wax in his supers he will probably solve the problem by inserting some drawn combs into the middle of each super.

Stephen Philip Dampier
Marianna, FL

Big Honey Crop

Dear Editor,

I recently heard from my friend in California who is caring for my one colony of bees there, along with his own bees, that honey production was fantastic. He'd already removed more than 350 pounds of honey from each of six colonies and would probably have another 100 pounds to remove from each before now, which is the low period for nectar flow in the San Fernando Valley.

In my third year of teaching apiculture at Pierce College we had a similar year when the timing of the rains, as this year, brought a nectar flow as this past season seems to have been.

From 20 colonies we removed an average of 500 pounds of honey and one of my students with 2 colonies took off 650 pounds from one and 850 pounds from the other.

She was from Utah and she and her husband went to visit her brother near Provo, Utah. She was telling him what a fabulous honey crop her bees had produced. He couldn't believe it and told her she was lying. Her husband confirmed her statements, adding that he had seen her records and sales slips. Her brother was a commercial beekeeper and remarked he never got over 100 pounds from a single colony and usually averaged about 50 pounds from all. "That amount of honey is preposterous—650 and 850 pounds," he said.

I have done as well on single colonies, once in Michigan and several times in California, though I confess the California production was with the aid of several swarms added to the parent colony.

In the bonanza year my students got a real workout extracting. Our whole agricultural program was based on giving experience as well as standard book and lecture proceedings.

Edwin Tate
Killbuck, OH

Honey Speeds Healing

By ROLLIN MOSELEY
Scottsboro, AL

According to Israeli scientists, honey can speed the healing process in wounds. Expanding on research done in the Soviet Union, the scientists say they have proved honey can speed the healing of open wounds and prevent their infection from bacteria and viruses.

Dr. Aushalom Mizrahi, a microbiologist at the Nes Ziona Biological Institute, says the experiments by his research team prove conclusively that treatment of open wounds with honey helps prevent infection and speeds healing.

It was also reported that doctors in Tel Aviv's Serlin Maternity Hospital used honey successfully to accelerate the healing process after gynecological surgery for removal of cancerous growths in female organs.

Mizrahi said honey contains, aside from sugars, ingredients with properties similar to those of antibiotics. He said honey is a natural absorbent.

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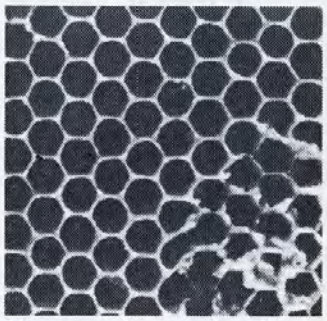

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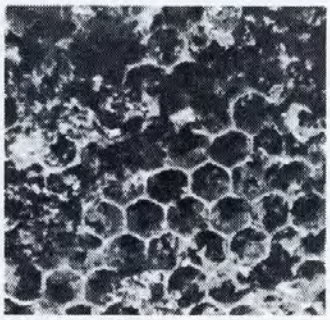

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Wintering Honey Bee Colonies — Biology And Management

By DR. JAMES TEW*
Wooster, Ohio

Biology of Wintering Bees

UNLESS A BEEKEEPER IS ABLE to re-locate bee hives in a warm climate for wintering, cold weather can be a major obstacle to successful colony management. With the severe winter of 1982 still a fresh memory, many beekeepers are reviewing "what went wrong" and what changes to make should the winter of 1983 be as demanding.

The qualified beekeeper's goal is to assist (wherever possible) the temperature and humidity regulation of the honey bee colony. Wintering biology is surprisingly complicated. The system honey bees have devised requires the grouping of a number of cold blooded animals to pool their warmth (clustering). This cluster works to actively control its environment when the ambient temperature is lower than they can tolerate as individual bees. Individual bees have limited capacity to respond to low temperatures. Single bees are unable to move at about 10°C (50°F) and will die after 2-3 days at 0-10°C (32-50°F). Bees will die after three hours at -3°C (26.6°F) and after one hour at -4°C (24.8°F). (Free, 1977)

Death of such bees is attributed to the differential effect that coldness has on the required steps in sugar assimilation. At 1°C (33.8°F) metabolism in tissues still proceeds actively, but absorption from the gut is restricted. Since the bee is dependent on sugar (honey) it soon dies of starvation at low temperatures. (Wigglesworth, 1972)

Heat production of adult bees can be determined by oxygen consumption or by carbon dioxide production. There is no evidence to indicate that honeybee heat production is abnormally high when compared to other insects. Honeybees generate heat by microvibrations of their thoracic flight muscles (Michener, 1974). Heat generation can occur even when there is no obvious wing movement (Esch, 1964). The amount of heat an individual bee can produce varies with age, activity, humidity, hive temperature, and time of year. Normally, individual bees are able to generate at least 0.1 calories/minute (M. Roth, in Chauvin, 1968).

In colonies actively producing brood, heat produced by larvae and pupae is significant. The rate of metabolism of brood, determined by oxygen consumption/gram of insect tissue, indicates that production of heat by brood is comparable to that of an equal number of resting adult bees (Ribbands, 1953).

"There Are Many Factors To Be Considered In Successful Wintering."

Small animals generally need a higher basal metabolism rate than larger animals. The smaller the animal, the greater the body surface area from which heat is lost. Honeybees successfully alter this situation by clustering. This behavior reduces the ratio of exposed body surface to body weight, making the cluster equivalent to a larger animal (Ribbands, 1953).

The cluster of bees in an average colony forms a generalized spherical shape. As a colony is cooled, clustering becomes evident at 18°C (64.4°F). A distinct cluster is formed at 13°C (55.4°F), but may have small satellite clusters near the main cluster. At about 0°C (32°F) all bees should be in the main cluster (Michener, 1974). The outer edge of the cluster never falls below 6°C (42.8°F) and is usually about 12-13°C (53.6-55.4°F) (Moeller, 1977). In the brood area, temperature is held to about 35°C (95°F). Because of the smaller ratio of surface area to volume, larger colonies are more efficient than smaller ones. Consequently, small colonies must produce more metabolic heat and are required to consume more food per bee than those of a larger colony (Free, 1977).

As the ambient temperature drops, a cluster has two ways to maintain its temperature: cluster contraction and increased heat production. Contracting the cluster results in decreased surface area and increases the insulation capabilites of the outer shell of bees. A compact cluster has 3.3 bees/cm². The cluster expands or contracts depending on environmental temperatures. Maximum cluster contraction is reached at about 5°C (41°F) (Free, 1977). Clusters with available honey stores have been able to withstand temperatures as low as -40°C (-40°F).

Acclimatized bees at the cluster periphery are the first to perceive falling ambient temperatures and are consequently critical in cluster temperature regulation (Free, 1977). Such temperature changes are perceived with the terminal antennal segments. Surface bees are sensitive to such stimuli as temperature, light, and vibration. Internal bees probably respond to mechanical impulses from disturbed surface bees (Ribban 1953). Disturbance of the cluster results in an immediate rise in its internal temperature. Increased temperatures may persist for several days (Gates, 1914). Michener (1977) reported that there is no consistent rotation of bees from the outer insulating shell to the cluster interior. Glandular differences between outer bees and inner bees were cited as showing a lack of constant rotation. However, Free (1977) indicated that the attempts by peripheral bees to reach the cluster center may contribute to increased cluster temperature.

Glandular differences also exist in other aspects of honey bee wintering biology. During warmer months, individual worker bees live about six weeks. As would be expected, bee longevity must be greater in cool temperate climates. There are records of bees living 300-400 days (Maurizio, 1959). Autumn bees have little or no brood to feed and yet honey and pollen stores are abundant

(or rather they should be). In the absence of brood, fat bodies in adult workers become enlarged with many globules of protein and have enlarged hypoharyngeal glands. Such glandular differences are thought to contribute to increased longevity of winter adult bees. (Michener, 1974).

Preparation and Manipulation of Colonies for Winter

In a natural situation, one of the first steps a colony takes toward thermoregulation of the nest is to select a site that is dry, has a defendable entrance, and completely encloses brood combs and adult bees. Plant resins (propolis) are used to seal the nest site to help control the temperature and humidity inside the nest cavity. There are many factors to be considered in successful wintering. Unfortunately there are several that the beekeeper can do little about such as extended periods of extreme cold.

If the colony is populous and headed by a young queen, the first of several controllable factors is accomplished. Only strong two story colonies should routinely be wintered in northern areas. Attempts to overwinter small colonies may result in a dead colony in the spring and will leave the beekeeper with combs and equipment contaminated with Nosema. If colonies are combined and winter well, spring splits can be made to re-establish the previous fall colony numbers. If a colony has poor queen, the population may be low or consist of many bees that are going into winter old and depleted. Populations in such colonies may look adequate, but will decrease faster than a colony with younger bees.

It is recommended that during early September at least five combs of brood should be present in colonies to be wintered (Johansson, 1978). An adequate pollen or protein substitute is required in the fall for late season brood rearing to be accomplished. Lack of pollen stores will also inhibit spring build-up. Five to six frames of pollen are required by the average colony. Most of these frames are placed in the lower hive body (Johansson, 1978).

Adequate honey stores properly positioned are critical. USDA recommendations specify 41-46 kg (90-100 lbs.) of honey for colony survival from October to April in the northern tier of the US and parts of Canada. The average colony will only use about 27 kg (60 lbs.). The extra honey will compensate for colonies stronger than average. The gross weight of a three story colony hived in 24 cm (9½") 10 frame equipment should be no less than 80 kg (175 lb.) in October. (Moeller, 1977). A standard 10 frame, two story colony with a gross weight of 72.6 kg (160 lb.) would have approximately 41 kg (90 lb.) of honey (Johansson, 1978).

Strong colonies can exist on suprisingly small quantities of honey — 1.4 kg-1.8 kg/month (3-4 lb./month) until brood rearing starts. After this time honey consumption increases dramatically. Many strong colonies that wintered well, die in early spring because of stores depletion. Many feeding techniques have been researched and recommended, but for most beekeepers, honey in the comb is the best feed. If extra food must be supplied, the feed should be given early enough for the bees to process and store in combs. The colony stores should weigh approximately 41 kg (90 lbs.) after feeding is completed. Apparently, heavy feeding for long periods results in undue stress on the wintering colony (Moeller, 1977). Only well ripened honey or sugar syrup should ideally be given to bees. If bees are being wintered in a warmer climate, this restriction is not as binding since bees can take frequent cleansing flights. Since the natural movement of the cluster is upward, most food stores (20.4 kg, 45lb.) should be positioned above cluster. After brood rearing is initiated, the cluster is forced to stay in postion around the brood. Warm days 4.4°C (40°F) are necessary for the brood rearing cluster to reposition honey stores nearer the clustering site.

If possible, only partially filled frames should be directly over the cluster.

Having high quality stores readily available and properly positioned, not only insures more successful wintering but will assist in lowering incidences of diseases. Nosema is probably the most serious. Infected colonies, at best, results in weakened colonies and, at worst, results in the death of the colony. The beekeeper should always be watching for brood diseases, but especially in late summer-early fall. If diseases are detected, appropriate drugs or corrective measures can still be taken.

Internal colony moisture places stress on wintering hives that may facilitate the onset of diseases such as Nosema. For every 4.5 kg (10 lb.) of honey that a colony consumes, about 3.8 (1 gal) of water is produced. Measures should be taken that will allow the escape of moisture ladened air. Common procedures for accomplishing this are: drilling 1.9 cm (3/4") auger holes below hand holds; inner covers in the wintering position; or allowing .6 cm (¼") opening across the front of hive beneath the inner cover. Such upper entrances allow the escape of air, and allow bees a second entrance if the lower entrance should become blocked by dead bees or snow.

Since environmental and hive conditions vary, it is difficult to give exact specifications for the best ventilation procedures. Some frost inside the colony is not undesirable, but excessive frost or ice is not acceptable.

During warm periods, ice melts and cold water drips on the cluster. However, the opposite extreme is probably as bad. Excessive ventilation would result in wider temperature fluctuations with increased cluster temperatures and food consumption (Ribband, 1953).

Even if snow and ice are expected to block lower entrances, they should be reduced. Entrance widths vary, but generally, the entrance height should not exceed .9 cm (3/8"). This height will allow bees an entrance but will restrict mice and other rodents from entering.

Colonies winter better if placed on stands approximately 10 cm (4") off the ground. Positioning colonies to receive as much sunlight as possible is beneficial. Colonies provided with a wind break and sunlight have more opportunities to reposition the cluster than shaded, exposed colonies.

As beekeeping developed many practices and techniques were recommended and implemented, but many were discarded. During the early 1900's advice abounded concerning cellar wintering, packing and wrapping. In most areas of the U.S., outdoor wintering with no wrapping (or minimal at best) has become the accepted procedure.

Philips (1918) stated that placing colonies in cellars was simply another way to wrap colonies — the major difference being the entire apiary is "wrapped", not just single hives. Early recommendations were for locations where temperatures fell below -3.9°C (25°F), cellaring was practical. In areas that had temperatures below -9.4°C (15°F), cellar wintering was recommended. The popularity of cellar wintering has declined steadily due to cellar construction costs and labor costs to manipulate hives. If indoor wintering

is attempted, the cellar should be dry, dark, quiet, and ventilated. The temperature should be kept at 3.3-7.2°C (38-45°F). On warm days, colonies should be carried from the cellar, entrances opened, and bees allowed a cleansing flight.

Colonies wintered in cellars are normally in one hive body and are heavy with honey or sugar stores. All entrances are normally closed. Carbon dioxide accumulation near the colonies on the floor can cause excessive colony population reduction. In larger cellars air movement is important.

Bee houses are commonly used in Europe but are not widely used in North America. Pirker (1978) reported good results using an environmentally controlled bee house to produce package bees in Northern Canada. Colonies were given entrances through the walls of the house. The system was reported to be highly specialized and would require training.

Another technique that helps colonies withstand winter conditions is individual wrapping or packing of colonies. Packing hives is expensive. However, some increase in honey production has resulted from winter packed colonies. The occasional warm days that allow cleansing flights may not be fully utilized by bees in heavily packed colonies. Current USDA recommendations are for a light tar paper wrap for colonies in windy locations (Moeller, 1977). Some materials commonly used as light weight wrapping are: roofing felt and corrugated water resistant paper boxes. Recently, translucent corrugated sheet plastic has been successfully used. Detroy, et al (1982) reported that colonies that were protected by sheet plastic wintered on less honey stores and had lower incidences of Nosema than control colonies. Usable life of such plastic wraps was estimated to be at least five years.

A moisture absorbing material such as straw, burlap or polyurethane insulation should be placed beneath the outer cover of the hive (Johansson, 1978).

Electrically heated hives were researched by Owens and Farrar, (1967). The results indicated that bee colonies in good condition will winter in Madison, Wisconsin, without packing or heating. However if heating hives is a consideration, thermotape with an insulated hive was shown to be the most efficient of the heaters tested.

Successful wintering of honeybee colonies will be a challenge to beekeepers for the foreseeable future. Even now new techniques and procedures are being tested. Shaparew (personal communication) is testing specialized inner covers that allow an upper entrance and vent moisture without hive modifications.

Hopefully, in years to come severe winters such as ones experienced in recent years will not be so devastating as wintering biology knowledge increases.

As Beekeeping Developed Many Practices And Techniques Were Recommended And Implemented, But Many Were Discarded."

Key Points For Effective Overwintering Of Honeybees

Adequate honey stores in the proper location — a minimum of 90 lb. (40.8 kg) of honey in October with about 45 lb. (20.4 kg) of the honey in the top hive body.

Large population of young bees — only the best colonies should be carried over winter; any subnormal colonies should be united or disposed. Colonies with much queen trouble in late summer generally should not be overwintered.

* Assistant Professor and Technical Coordinator, Commercial Beekeeping, Agricultural Technical Institute, Wooster, Ohio.

Good wind protection — windbreaks, shrubs, trees, or light tar-paper wrap around the hive.

Therapeutic feeding — about 1 gal (3.8 1) of sugar syrup containing fumagillin for each colony, in the fall, to retard nosema disease development.

Upper entrance — to allow escape of moisture-laden air.

Bottom entrance closures — to prevent mice entry.

Pollen — a good reserve of bee bread in the combs, as well as early spring feeding of a good pollen supplement, to insure uninterrupted brood-rearing until pollen becomes abundant in the field.

Winter inspection — to make adjustments of honey stores, if necessary.

* Overwintering of Honeybee Colonies, Production Research Report No. 169, page 14, 1977.

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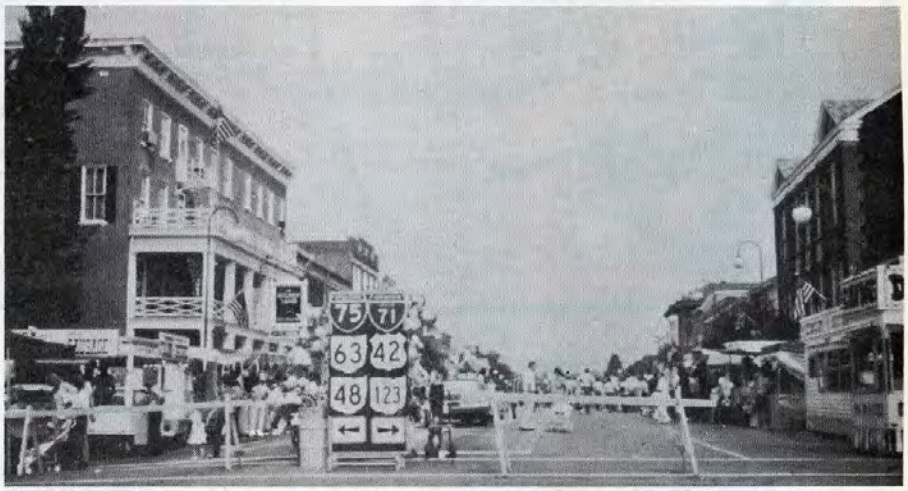
Ohio Honey Festival

The annual Ohio Honey Festival was held in Lebanon, Ohio in September, 1982. Special events such as putting on bee beards and the commercial and educational exhibits drew people from a wide area.

All photographs are by James Steed of Richmond, Kentucky.



Lebanon, in Southwestern Ohio is the center of festival activity every September.

Bee beard demonstrations are always popular. Here is a preliminary step, hanging the caged queen around the neck. The worker bees will be added next to form the "beard".

Karen Steed wearing a sweater she purchased at the Ohio Honey Festival.

Many bee-related activities were found at the Ohio Honey Festival.

Orcutt print courtesy of Washington State Game Department
(From Poelker and Hartwell, Black Bear of Washington, 1973)

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Monthly HONEY Report

LAWRENCE GOLTZ

October 10, 1982

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	36.60		38.00	40.00	35.50	36.50	34.00
60 lbs. (per can) Amber	42.00	30.00	34.20		34.80	36.90	34.00	35.50	33.50
55 gal. drum (per lb.) White	.62	.56	.58	.58	.61	.60	.55	.60	
55 gal. drum (per lb.) Amber		.48	.52	.53	.56	.58	.51	.58	
Case lots — Wholesale									
1 lb. jar (case of 24)	27.50	24.90	25.80		26.50	24.00	24.60	25.80	24.00
2 lb. jar (case of 12)	26.50	23.30	24.20		25.20	23.50	23.60	24.10	23.50
5 lb. jar (case of 6)	30.00	27.80	26.25	25.00	29.50	28.00	26.70	26.75	26.20
Retail Honey Prices									
½ lb.	.90		.90		.89	.90	.87	.90	.97
12 oz. Squeeze Bottle	1.35	1.25	1.50		1.45	1.35	1.29	1.10	1.29
1 lb.	1.50	1.45	1.50		1.53	1.42	1.49	1.59	1.54
2 lb.	2.70	2.69	2.90		2.60	2.60	2.60	2.50	2.80
2½ lb.	3.45				3.29	3.25		3.15	
3 lb.	4.00		3.89		3.69	3.85	3.80	3.95	4.00
4 lb.	5.00	4.95			4.79	4.90	4.79	4.95	
5 lb.	6.00		5.95		5.55	5.60	5.40	5.95	5.89
1 lb. Creamed			1.55		1.59	1.49		1.59	1.69
1 lb. Comb	1.75		2.25		2.05	1.65	1.80	2.10	
Round Plastic Comb	1.50		1.85		1.75	1.90	1.70	1.60	
Beeswax (Light)	2.00		1.50	1.70	1.85	1.65	1.50	1.80	1.80
Beeswax (Dark)	2.00		1.45	1.50	1.80	1.60	1.45	1.75	1.75
Pollination Fee (Ave. Per Colony)	25.00		27.50		18.00	20.00	20.00		18.00

Miscellaneous Comments

Region #1

Honey crop in Champlain area and north into Canada was poor, perhaps 15 lbs. average crop. South of the Champlain Valley, crop was very good. Connecticut, western Massachusetts and eastern New York had very good crops, up to 200 lbs. per colony of very good quality honey. Demand and sales for honey were slow during spring and summer but have picked up considerably. Moisture content seems to be higher this year. Winter stores generally good in New England. The problem may be with too many old bees due to the queens being crowded in the brood chamber by incoming nectar. Dry during July and August in Vermont, but considerable rain in September put plants in good condition.

Region #2

Bees in good condition in West Virginia. Good fall honey flow. Good

to fair honey flow in New York State. Honey crop above average in Pennsylvania due to good flow of honeydew in July, but fall flow below average. Bees in good condition for winter with some feeding necessary.

Region #3

Ohio honey crop above average with excellent early season quality. Later in the summer, under dry conditions, honey stored was much darker. More rainfall in fall but fall honey flow variable. Indiana ended up with a fine crop of darker than usual honey.Prices to producer from packers have softened somewhat. Beeswax price down. Imports and poor economic conditions hurting. Hardly any fall honey flow in northern Illinois but southern part experienced a good fall flow from Goldenrod, Aster and Spanish Needle stored in brood chambers. Southeast Wisconsin came up with a short crop. August cold and wet with bees forced to use surplus from July. Alfalfa failed to give a surplus with little or no fall flow.

Region #4

Light frost on August 27th pretty well ended things in North Dakota for the year. Good weather has allowed fall work to proceed. Double brood chamber hives average around 120 lbs.; hard killing frost on September 20th in North Dakota. Beekeepers reporting crops ranging from 75 to 180 lbs., but most in low hundreds. The cost — price squeeze continues. Water white honey sold at major east coast packers averages two cents lower than last year at this same

(Continued on page 609)

When the 17 year-old son borrows the family car, math is no longer a problem. In one night he can subtract 5 years from the life of the car and add them to the life of his father.

Questions and Answers

Q. I was reading in the August issue of "*Gleanings*" about compensation paid to beekeepers for losses caused by aerial application of fields close to bee hives. I have a small operation (8 hives) but nevertheless, take good care of them and glean several hundred pounds of honey each year.

This July a canning company sprayed within one mile of my bees several times. I told them about it and showed them pictures of the damage they had done. In one case I picked up a 14 quart bucket of dead bees (I have a picture of this). They told me that they were in business and could care less about my bees or any bees. I called in our bee inspector, Mr. Lloyd A. Lindenfelser, P.O. Box 436, Tremont, Illinois 61568 and have his statement on paper of the loss due to insecticide spray.

My bees are registered — the canning company tried to say they were not.

Now, as a subscriber to your magazine, I would like to know who I can get to help me get compensation for my losses. They are still spraying the sweet corn with Malathion 57% and I believe I will have a complete loss of eight hives this year. As so many were killed I don't think they will be strong enough to live through the winter. I was not informed when they were going to spray near my bees.

Please advise me who I can talk or write to that will help me. I don't want just talk and sympathy with the problem. G.W.W., Illinois

A. Since the Beekeepers' Indemnity Program was discontinued there is no compensation from the federal government for beekeepers who suffer losses of bees.

What it all comes down to is that a beekeeper may have to move the bees out of the spray area if contamination is to be avoided, but this can only be done if notified of the intended spraying. This is an important part of the programs being set up in sprayed areas to provide protection for the beekeeper through notification and to also guide the pesticide applicator when spraying.

Once spray damage to bees has occured and evidence has been documented and witnessed legal action is possible. Other considerations must be taken into account such as the amount of loss by the beekeeper, proving negligence on the part of the applicator and being certain that all possible precautions were taken by the beekeeper to protect the apiary and/or provide the applicator with the information he is entitled to by local law or agreement. Proving negligence on the part of an insecticide applicator which results in bee loss is obviously not an easy thing to prove in court.

In recent legislation by beekeepers in Wisconsin against a canning company in Wisconsin (see Capping The News, in this issue) the possible violation of pesticide labels was an issue. This approach may also apply to your situation.

We suggest that you or other beekeepers in Illinois, or any other state, for that matter immediately contact your local ASCS office and your Apiarist (see the Who's Who in Apiculture, published each April in *Gleanings* for the name and location of your Apiarist) when a bee kill happens which is excessive and unusual. The most likely evidence is a sudden accumulation of dead and dying bees at the hive entrance. In the event your county has an apiary inspector or there is an apiary inspector covering several counties you may find it quicker to reach such an individual to provide identification and witness the type and extent of the bee kill should action be decided upon at a later date.

Efforts to protect colonies by placing a cover over the hives during the spraying have been tried by beekeepers. In addition, water was sprayed on the covered colonies to keep them cool, ventilated screens used to keep them confined and syrup and sometimes pollen supplement given to supply their food needs. We cannot vouch for the success of these methods, the results apparently being unpredictable.

Q. I have been approached recently by people who are selling bee pollen and are making claims for its value nutritionally as well as in other health related areas. The only literature I have read is published by companies trying to sell their product.

I would appreciate any information you might be able to provide on the beneficial aspects of bee pollen. N.B., Missouri

A. The subject of pollen is quite extensive and much of the information is conflicting. At least, using pollen is harmless, unless you have an alergy to some of the plant pollens, which does not usually affect people who use pollen in the diet. We suggest you try it.

The facts about the nutritional value of pollen may be considerably subdued as compared to some of the claims of the commercial promoters but there is no doubt that pollen as collected and preserved by careful processors does have much value as a food supplement. How to value it is a decision that must be made by the individual.

Q. Now that our main honey flow (basswood) is over, the bees hang on the hive moving back and forth in what your book (ABC & XYZ) describes as the washboard movement. Has the purpose of this movement been determined, if so what is it? H.B., Minnesota

A. Apparently no one has identified positively the so-called "washboard movement" seen on the front of hives. The cluster seems to leave a polished surface after doing this but we can only guess of the significance of the performance.

Q. I am interested in planting a tree you have mentioned in *Gleanings In Bee Culture* called the Bee Bee Tree. Do you have information as to individuals or firms that may have this tree for sale?

I would like to plant this tree for my bees.

Any information that you could supply me with will be appreciated. Thank you. Duane Bisher, RR 1, Russiaville, Indiana 46979

(Continued on page 608)

Questions and Answers

(Continued from page 606)

A. We do not know of a source of seed or of nursery stock for the bee bee tree. Perhaps our readers can advise.

Q. Can you tell me what is wrong with my honey? It is crystalized in the combs on the hives.

I have my bees under large oak trees. I had them there for years and this happened last year and this year. What should be done with the crystalized honey? I cut the capping off and cranked out honey that would come out from the combs, and put it back on the hives. Thank you for what you can tell me. S.S.K., New Jersey

A. Generally the cause of honey crystallization is the floral source of the honey. Since you are writing in August I would guess that you are talking about honey that was stored in the combs last spring, rather than from this fall. Fall honeys are notorious for quick granulation as are a few of the spring honeys, such as dandelion.

Any granulation remaining in the combs before the new honey is stored may contribute to quick granulation. To have combs cleaned out by the bees place any supers of comb containing cells of granulated honey under the brood chamber during the spring, summer or fall. A strong colony cannot seem to resist either carrying the liquid honey up into the brood chamber, or above, or cleaning out the cells by removing the granulated honey. Other than cleaning out the combs with water or replacing them, one a very tedious and the other a very expensive process. The best way is to get the bees to do the job.

Storing honey in clean combs is not the complete answer to avoiding early granulation when there is nectar being gathered in your neighborhood that is likely to granulate early in the season. It would be better to remove this honey soon after it is gathered and keep it separate from the other honey with better keeping qualities. It may have been possible to warm the combs before extracting with sufficient heat to liquefy the granulated honey, but not melt the combs. This is tricky and may not be successful. Beeswax technically melts at about 145°F but can soften at 130°F and perhaps below if not well reinforced by wires.

Q. In reference to article "Honey Drying in the Hive" by V. Shaparew of Ontario, Canada (September, 1982 *Gleanings in Bee Culture*). I found it very interesting and informative and look forward to more information on the subject. It brings up general questions which would answer themselves if H.D.V.'s were used. I think the idea is worth trying.

Do you have knowledge of any bee supply house which offers H.D.V.'s for sale? C.E., North Carolina

A. We suggest you write to the author-manufacturer V. Shaparew, 3371 Trafalgar Rd., RR#1, Oakville, Ontario, Canada L6J422.

Q. I have an opportunity to purchase a used extracting set-up from an outfit which is folding due to American Foulbrood problems. If I steam cleaned and clear-coated the wax encrusted extractor, would there be any danger of contaminating my combs?

Also, have you ever heard of AFB contamination from hive bodies of infected colonies which are left over after the frames are destroyed? S.M., New York

A. I may be voicing a personal opinion rather than giving you an absolute answer, but in my opinion the extractor should be safe to use after giving it the cleaning and coating you have described.

When a hive is treated for foulbrood contamination in this manner, the hive bodies, inner covers, top and bottom boards are usually scorched with fire on the insides. The bees, frames and combs with honey and brood are burned and the remaining ash buried. This should insure that the hive, when reused, is free of contaminents.

Q. I have four hives of bees by 10-15 acres of sunflowers. They were put there about one week before the sunflowers bloomed. I have looked the sunflower over and never have seen any bees on the blossoms. Can you tell me if sunflower is a source of nectar or pollen or both? We had ample rainfall. D.T., Virginia

A. In answer to your question it is a puzzle to me why you have not observed at least some bees on the sunflowers. To not do so is unusual, although sunflowers are not a heavy producer of nectar and pollen, bees do visit most fields regularly. Perhaps the weather or other conditions were not suitable for bee flight when you checked the flowers or the bees may have been concentrating on some other floral source nearby at the time. The bees may not visit the sunflowers during certain periods of the day in your area.

Bees and Mankind by John B. Free. Allen and Unwin, Inc. 9 Winchester Terrace, Winchester, MA 01890. 150 pages plus index. Hard cover $17.95. John W. Free is well known for his previous publications: *Bumblebees* (with Butler); *Insect Pollination of Crops; Social Organization of Honeybee Colonies;* and other books on entomology for children. John Free has been associated with entomological research in England for many years at Rothamsted.

Bees and Mankind is divided into three parts. Part I is concerned with the biology of solitary and bumble bees. Part II with honeybees and Part III with beekeeping, past and present.

The book's subjects are nicely balanced between beekeeping in history, descriptions of the practice of beekeeping and the biology of various solitary, bumble and stingless bees.

The photographs are exceptional both in quality and in being relevant to the subject matter.

This book is a professional quality which has been well researched and of excellent composition. Seldom does one find so much information on the subject of man's association with bees in a single publication. It is a worthwhile addition to any beekeepers's library.

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Looking for an appropriate gift for a beekeeper friend? Take advantage of this Christmas gift offer at this very special rate. Don't pass up this opportunity to introduce someone you know to the beekeeping journal that is for everyone, beginner and experienced alike. Your gift will be appreciated! We will mail an attractive card announcing your gift to that special beekeeper or friend.

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A man's gift maketh room for him, and bringeth him before great men. *Proverbs 18, 16*

(Continued from page 604)

time. Large amounts of honey continue to be turned into government agencies.

Region #5

Goldenrod and aster bloomed well in North Carolina mountains and prospects for a fall honey flow look good after some late season rains. Heavy fall re-queening activity reported by queen beekeepers in the lower South. Saw Palmetto was the best flow in many years in Georgia and South Carolina. Pepper bush in Florida had a profusion of bloom but did not yield much. Build up for citrus does not look promising without plenty of feeding. Colonies which have come through a hard season at this time in Florida are very strong but not uniformly so.

Region #6

September has been cool and wet in Kentucky with flooding in some areas. Fall flowers have been producing winter stores with only isolated areas receiving a surplus. Aster did not yield a surplus in locations where it is a major honey plant. Honey sales are average to above average. Fall honey flow in progress and prospects are good for a fall flow in Tennessee. Honey is moving well at retail level and prices are holding steady. Bees in good condition with plenty of stores for winter even though they fail to have a fall flow. Cool fall weather.

Region #7

Bees in fair condition in east central Oklahoma. Asters, goldenrod and cotton produced good light honey, about 60 lb. per colony. Pollen sales

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Wintering Results Using Ventilating Inner Covers

By V. SHAPAREW,
B.A.Sc., M.Eng., P.Eng.
3371 Trafalgar Road
R. R. #1, Oakville, Ortario,
Canada. L6J 4Z2.

MY ARTICLE ENTITLED "Ventilation Requirements of a Beehive in Winter" published in *Canadian Beekeeping*, Vol.9, No. 7, Fall 1981 issue, dealt with research, development and testing to improve outdoor wintering of beehives in cold climate. It concluded that excessive carbon dioxide (CO_2), or expressed differently, inadequate oxygen content within the hive's atmosphere are responsible for the bulk of wintering problems. Presence of moisture in the beehive is not believed to cause appreciable wintering problem. However, improved ventilation to reduce CO_2 concentration resulted in elimination of moisture within the hive.

To complement my research work a voluntary test program was organized in the fall of 1981. Twenty seven beekeepers from different parts of North America agreed to participate. They were supplied ventilating inner covers in quantities of 2 minimum and 10 maximun, a total of 102, for testing during 1981/1982 winter. The purpose of this test program was to obtain sufficient information on wintering results, for comparison, on beehives equipped with conventional and ventilating inner covers. The participants have agreed to report the wintering test results not later than May 1, 1982, after spring examination. The results were to be reported on a questionaire supplied to each participant. By May 20, 1982, sixteen reports were received representing 67 beehives with ventilating inner covers. The spring condition of beehives for all 16 reports are shown in table 1. The names of beekeepers are not shown to uphold individual privacy. However, each author will identify his report in the table by location and results reported. One copy of each report, as received, was submitted to the editor for factual verification.

Review of test results.

The reports identified that the most probable causes for dead colonies, in descending order, were: inability to move to food, lack of food (genuine starvation), severe winter, inadequate preparation for winter, mouse entered hive, wind turned over and broke cluster.

The type of insulation varied from no insulation at all to packing straw bales around each beehive. The same type of insulation was used for both groups, group 1 with conventional and group 2 with ventilating inner covers.

Six reports strongly emphasized that the beehives in group 2 were dry during spring examination. One report identified reduced food consumption in group 2.

Table 1 gives detailed account for each report on conditions of beehives during spring 1982 inspection. The bottom line of the table shows percentage of total, for each category, both groups. If these percentages are expressed as rations to the nearest full number, we can make the following comparison.

a) Group 2 had three times fewer dead colonies.

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The ventilating inner cover in place on a hive.

Wintering Results Using Ventilating Inner Covers

(Continued from page 610)

b) Group 2 had seven times fewer very weak colonies.

c) Group 2 had no weak colonies.

d) Group 2 is equal to group 1 in medium category.

e) Group 2 had twice as many strong hives, compared to group 1.

f) Group 2 had 4 times as many very strong hives, compared to group 1.

These dramatic improvements in wintering results can only be attributed to improved ventilation of CO_2, which resulted in adequate oxygen supply, achieved by ventilating inner cover.

This test program was not a controlled one. However, because of reasonable quantity of participants in different geographic regions, the infromation derived from these tests is considered valuable and creditable. Because of very favorable test results a full scale controlled test program would be justifiable. Should a scientific institution, associated with beekeeping, be interested in conducting such a test program, I will extend my fullest cooperation. □

Table No. 1

Outdoor wintering of bees. Wintering results for 1981/1982 winter, as observed and determined during 1982 spring examination.

Report No.	Reports received from: State or Province	Locality	Spring condition of beehives with conventioanal inner covers. Quantity of beehives, Group 1. Very Strong	Strong	Medium	Weak	Very Weak	Dead	Total	Spring condition of beehives equipped with ventilating inner covers. Quantity of beehives, Group 2. Very Strong	Strong	Medium	Weak	Very Weak	Dead	Total	Combined quantity of beehives in the apiary
1	Ontario	Ayton		8					8		3					3	11
2	Virginia	Sterling	1	1	3	1	1		7		3	1		1		5	12
3	Wisconsin	Milwaukee	1	1	2	2			6	1	1					2	8
4	Connecticut	Trumbull		1		1			2	2						2	4
5	Ontario	Cambridge	6	8	22	2		6	44	2	1	2			3	8	52
6	Ohio	Smithville		4	2	10	4	26	46			1			1	2	48
7	Saskatchewan	Caron						5	5			1			2	3	8
8	Alberta	Calgary		1	1		1	1	4	2	1	1				4	8
9	Ohio	Mantua		3	1			2	6		2					2	8
10	Ontario	Toronto	1	1	1	1	1	2	7		3	2				5	12
11	Pennsylvania	Scranton		8	5		10	10	33		5					5	38
12	Minnesota	Isanti	7	8	16	8	5	7	51	1	4	5				10	61
13	Ontario	Hamilton			1			3	4			2				2	8
14	Ontario	Farry Sound			4	6	3	2	15	8	2					10	25
15	Wisconsin	Algoma	See Note 2 below														
16	Massachusetts	Paxton															
Summation			16	44	58	31	25	64	238	16	25	15	0	1	6	63	301
Percentage of Total, %			6.7	18.5	24.4	13.0	10.5	26.9	100	25.4	39.7	23.8	0	1.6	9.5	100	

Notes: 1. For report No. 7, the beekeeper was away from home in the autumn of 1981, thus was unable to prepare the bees for winter.

2. For report 15 and 16, each beekeeper had 2 ventilating inner covers. Both reported very favorable results with ventilating inner covers. However, the information was incomplete for presentation in the above table.

By L. Goltz

Propolis, The Eternal Natural Healer by Dr. Felix Murat. F. Murat Co., 2132 N.W. 11th Ave., Miami, FL 33127. 137 pages, including bibliography plus index and prologue. I wish there was more accompanying information about the author, but the bibliography listed is fairly impressive and the book contents bear out the depth of which the subject matter, propolis, has apparently been investigated. Whether the merits of using propolis medically warrants the high level to which it is credited in the book, and apparently held in other countries, remains an unanswered question in American medicine. Aside from discussing some applications of propolis which may be challenged in American medicine (propolis in the treatment of baldness, for example) the book does credit to the subject. Beekeepers need more information about propolis. Much remains to be investigated by critical research on the application of propolis for medicine. Keeping in mind these notes of caution, we think that you will find much of interest in this book.

Book Review

By L. Goltz

International Bee Research Association Publications

The International Bee Research Association has published three reprints from *Bee World. Varro Disease of the Honeybee Apis mellifera* (M106) by Professor W. Ritter (1981), .85 postpaid. *World Distribution of the Mite Varroa jacobsoni, a Parasite of Honeybees* (M107) by Dr. D. A. Griffiths and C. E. Bowman (1981). .85 postpaid. *Preliminary World Maps of Honeybee Diseases and Parasites* (M108) by Margaret Nixon (1982). $2.75 postpaid. All three reprints can be purchased direct from the International Bee Research Association, Hill House, Gerrards Cross, Bucks. SL9 ONR, England.

Leaflets Available from IBRA

The International Bee Research Association has published a series of 10 leaflets on source materials for apiculture (SAM), funded by the International Development Center, Ottowa, Canada. They provide information often needed and sought by beekeepers and some have a world-wide application.

The leaflets can be purchased from IBRA, Hill House, Gerrards Cross, Bucks SL9 ONR, England.

The following are the subjects covered:

1. Suppliers of equipment for tropical and subtropical beekeeping.

2. Marketing bee products: addresses of importers and agents.

3. Planting for bees in developing countries.

4. Opportunities for training in apiculture, world-wide.

5. Sources of voluntary workers for apicultural development.

6. Sources of grant-aid for apicultural development.

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8. Apicultural reference books for developing countries.

9. Educational aids on apiculture.

10. Writing about apiculture: guidelines for authors.

Prices: Postpaid $2.00 each or $16.00 for all ten.

Research Review

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

An Insecticide That Repels Bees

FROM WASHINGTON STATE comes information that Permethrin applied to sweet corn repels honeybees from fields where it is used. This is the second research station to report this activity; this confirmation comes as good news. Larry Atkins of California showed that this material which is normally toxic to honeybees, would also repel bees from fields of seed alfalfa and cotton; this was reported in this column last December.

Permethrin is a synthetic pyrethroid. Pyrethrum is a natural insecticide made from the flowers of plants belonging to the genus *Chrysanthemum* and has been known for many years. The synthetic pyrethroids are a recent invention. Most of the natural material is from Africa.

So far as I am aware no one knows why Permethrin acts in this manner nor do I know of anyone who is working on the question.

Pike, K.S., D.F. Mayer, M. Glazer and C. Kious Effects of Permethrin on mortality and foraging behavior of honeybees in sweet corn. *Environmental Entomology* 11: 951-953. 1982.

Varroa Control with Tobacco Smoke

IT WAS OBSERVED in Greece that tobacco smoke, from an ordinary smoker, killed large numbers of varroa mites. Bee lice (*Braula coeca*) were also killed. No checks were made and it is not known how many mites remained after the treatment. This report is preliminary and clearly the method needs further testing.

de Ruiiter, A., Tobacco smoke can kill varroa mites. *Bee World* 63: 138. 1982.

Honey Production on the Canadian Prairies

In 1980 about 230,000 packages of bees were imported into Manitoba, Saskatchewan and Alberta from the U.S. The figures for 1982 are probably comparable. Two-pound packages are favored, produced in Georgia, the Gulf states and California. Most of the packages are brought in by truck — mostly, I suppose, because trucks are more dependable than planes. In addition about 120,000 colonies are overwintered in this area of western Canada.

In the report cited below I especially enjoyed one picture showing package installation in an apiary with snowbanks still several feet high. Obviously snow is no problem, a fact not realized by many hobbyist package users in the U.S. Each package is given four frames of honey (a total of about 25 pounds), two frames with pollen and three empty combs for egg laying.

In Canada it is best to have the bees hived by the end of April, the same date we strive to meet in the northern U.S. states. The main honey flow will start (with some local variation) about ten weeks later.

The authors give a good description of the management scheme followed on the Canadian prairies. Timing is critical. Some queenlessness cannot be avoided and it is important to move quickly to unite queenless colonies to save as many as possible. Starvation in mid-June is always a possibility and must be guarded against. Attention must also be paid to diseases, swarm control and proper supering.

It is stated that pollen substitutes and supplements as well as drugs are used by some beekeepers in the area, but no specific information is given. Calcium cyanide is still used by many Canadian beekeepers to kill their bees in late August or early September. Although this chemical is not approved for use in the U.S., Canadian beekeepers are free to sell their honey here. I suspect some drugs not approved for use here may also be used in Canada. This puts U.S. beekeepers at something of a competitive disadvantage, but exports of queens and package bees more than make up for it.

No mention is made in this article about the quantity of honey produced but it is well known that yields of 200 to 300 pounds per colony are not unusual in parts of the Prairie Povinces.

Nelson, D.L. and S.C. Jay, Producing honey in the Canadian Prairies using package bees. *Bee World* 63: 110-117. 1982.

W. A. S. 1982

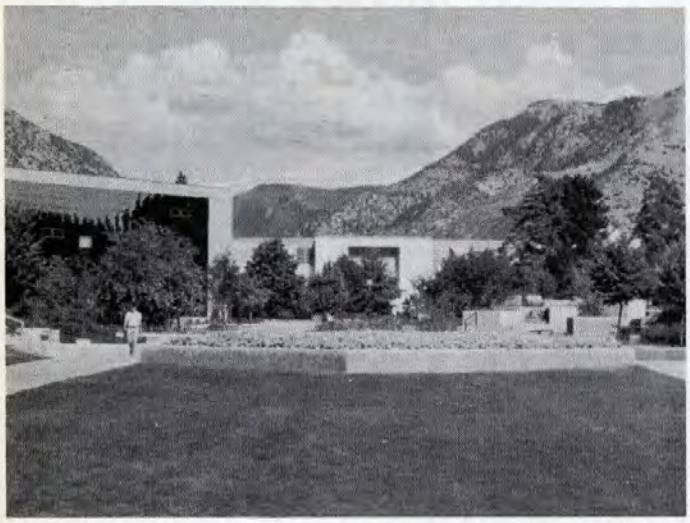
THE WESTERN APICULTURAL SOCIETY met for its fifth annual conference in Logan, Utah, August 16 through 20th. The meeting was held in the Conference Center on the modern, beautiful campus of Utah State University. The accomodations for participants were in the university dormitories and the excellent meals were served at the university cafeteria.

The program consisted of a number of speakers on various topics, demonstrations at the university apiary, field and sight seeing trips. A room adjacent to the meeting room contained a number of displays and commercial booths for beekeeping related items.

For the editor of Gleanings this was the first W.A.S. meeting. During the two days we attended we made some new acquaintances and visited with friends who we had the privilege of meeting on other occasions.

The enthusiasm of beekeepers who attend W. A. S. meetings makes up for the comparatively smaller number. One feels a closeness to other individuals that is not always attained among larger groups. Distances are formidable for many who would like to attend every conference. Members in Arizona, for example, may never have met fellow members from British Columbia at a conference but eventually it is planned that meetings will draw together members from everywhere in the geographical range of the W. A. S.

Meanwhile, we extend our sincere thanks to the W. A. S. for the invitation to attend and the opportunity to meet with such very enjoyable people. The 1983 W. A. S. conference will be in Pullman, Washington. The Secretary-Treasurer of the W. A. S. is Zandy Neese, 2882 E. Standish, Anaheim, CA 92806.



The beautiful Utah State University Campus, site of the 1982 W.A.S. Convention in Logan.

No. Elbert Jaycox is not showing Norman Gary how big the one was that got away but rather was part of the queen pheromone demonstration.

Dr. Norman Gary demonstrates the effectivness of a queen scent pheromone.

William P. Nye, president of the Western Apicultural Society preparing to open a hive during one of the field events at the Utah State University.

Bee Talk

By RICHARD TAYLOR
Route #3
Trumansburg, NY 14886

Here's a picture of my honey stand, which I guess I've talked about many times in these pages. Actually, a man built it as a shelter for his children, to keep them dry while they waited for the school bus on rainy days. The children grew up, and there it stood, useless, until I came along and gave him a ten-dollar bill for it. All it needed was a coat of paint and some shelves. Now it stands in my yard, year 'round. I've sold an awful lot of honey there, letting people help themselves and leave payment in a little box.

This year, for the first time, I didn't open it up, and I really miss it. I miss replenishing the shelves, emptying the cash box, adding up the receipts at the end of the day, and talking with my faithful customers. I was just getting ready to open it up when a gentleman said he'd buy my entire comb honey crop, which is the only kind of honey I raise any more. I have to buy strained honey from my friends to meet the needs of customers who don't appreciate comb honey.

Well, his offer was just too good to turn down. He has outlets in New York City, and he said he'd buy up a couple thousand round sections every year if I wanted to supply him.

This got me to thinking that I could greatly expand my comb honey production if I should want to, and that is just what I'm going to do. I love raising comb honey, it is easy and pleasant work, I don't have to fool around with a honey house and all that extracting equipment, and I've got my method of raising comb honey commercially down to a good system that gives me the maximum production with the minimum of headaches. Some bee books suggest all sorts of extra manipulations and special management practices for raising comb honey, but I learned a long time ago to ignore all that. Of course if you only have a dozen or so hives, and lots of spare time, you can go in for all these fancy systems. But if you just want to raise lots and lots of comb honey to sell, then what you need is lots of hives in several apiaries and a simple system of commercial management. The big headaches of comb honey production, like scraping the propolis off the sections, have been eliminated by the invention of round sections.

Is there a market for comb honey? Indeed there is. You've got to look around a bit, and follow up on leads, but the market is there. Comb honey is a specialty item, but there are lots of people looking for items like this. On the back of my shop door I've tacked up names and addresses of people who are ready to buy comb honey in hundred-lot quantities anytime I get in touch with them.

Comb honey is also a luxury item, and maybe you have noticed, that even in this persisting economic recession, there has been no slowdown in the purchase of luxuries. The really fancy cars are selling as fast as ever, and expensive restaurants are always full. Offer people, especially wealthy people, something different and good, and they will gladly pay whatever is needed to get it.

That last point became clear to me when a friend of mine asked me whether I'd like to offer my honey customers some of his excellent maple syrup. I started putting his jars of syrup on the stand, and it sold vigorously, even though it cost four times as much as the jars of beautiful honey sitting right next to it. Of course I sold a lot more honey than syrup. In fact the price difference was one way of telling my customers what a good buy the honey was. But the remarkable thing to me was that, with such a comparison before them, the people bought any maple syrup at all. And they bought lots of it. They saw maple syrup, knew they wanted it, and didn't even pause to consider the price. People who have more money than they need are sometimes like that.

Now there is no doubt whatsoever that good comb honey, properly produced, and properly packed in beautiful round sections, is awfully good. It isn't "blended" (mixed up) with other honeys, and best of all, it is never heated. The result is honey in its absolute perfection. Slowly but surely people discover this, and the demand gradually but constantly increases.

I haven't been selling all my comb honey this year to the man who offered to buy it all. I keep aside enough all the time for people who, seeing that my stand is closed, still want comb honey badly enough to come to the door. And I have also tried to keep it in front of people in this area where I live, because someday I'll need the local customers again. I make sure that the roadside stands don't get accustomed to not having it. And I even went out of the way to pick up a new outlet, in a way that readers might find instructive. I took a half dozen sections into a new natural foods store, and invited the lady behind the counter to stock them. To my astonishment, she declined! This seemed hard for me to believe, because I was sure it was a perfect product for the kind of trade they were doing there. So a week later I dropped in again, to find the lady's husband behind the counter this time, and I offered him a half dozen. "How much will they cost me?" was his question. "Nothing, until you sell them," was my reply. The store is now a regular customer, and phones every few days for more comb honey.

So next year I've got to set up another apiary, and I can hardly wait to do it. I just love raising comb honey, and I think I'll have twice as much fun raising twice as much as I do now. Getting it sold at a good price doesn't seem to be any problem. It seems to me like a perfect way to spend my retirement years, when that day finally comes.

Beekeeping Exhibit

A Mississippi Agricultural and Forestry Museum is being established and The Mississippi Beekeepers' Association has and is getting an exhibit on beekeeping included. The museum will consist of two basic parts. An outside display will consist of a walk-through farm of the 1920-1930 era which will portray farm life then. We plan to set up active bee hives (gums, etc.) on the farmstead.

The inside display will consist of artifact, photographs, and other visual aids.

This exhibit will be such that it (or portions of it) can be transported to other public exhibit areas for showing.

Donations from interested persons would be appreciated. Interested persons should contact Mr. Bruce Hartfield, Mississippi Agricultural and Forestry Museum, P.O. Box 1609, Jackson, Mississippi 39205

The pollinating activity of honeybees on rape was studied in Czechoslovakia. Seed quality was improved by good pollination and yields on plots pollinated by honeybees were 59% higher than on caged plants.

Apicultural Abstracts 1982 Vol. 33 No. 2

It is estimated that the annual cost in the U.S.A. of losses due to honeybee poisoning and reduced pollination is 135 million dollars.

Apicultural Abstracts 1982 Vol. 33 No. 2

J.B. Free, reporting on experiments performed at Rothamsted Experiment Station, England, found that when the entrance of a colony led directly into the brood area, foraging honeybees collected much more pollen, and so were potentially more valuable as pollinators, than when the hive entrance led into the storage area. This result supports the hypothesis that pollen collection may be stimulated by pheromones present in the brood.

Apicultural Abstracts 1982 Vol. 33 No. 2

Bees and Gardens

It may be stretching the concept of gardening to include shrubs and trees in the estate of vegetables and flowers, but since we are beekeepers as well, I am sure that you will understand the need for such information. In fact, ornamental trees and shrubs planted around the home may be the only "gardening" experience of some beekeepers. Some beekeepers are not interested in the sometimes irksome tasks of preparing the soil, planting, weeding and harvesting or do not have space or the soil for a proper garden. Most beekeepers, however, are usually, at one time or another, involved in selecting and planting ornamental plants around a home. A beekeeper may even have the opportunity to influence what is planted in public parks, commercial buildings, along highways or on private land. Some unexpected bonuses for resident beekeepers would result in the years to come if substantial stands of nectar and pollen plants could be arranged. Some shrubs and trees bear nectar and pollen in far greater proportion to ground space occupied than field crops. This is because they are pyramidal in growth, sometimes rising over 100 feet with branches bearing many levels of blossoms available to bees. A basswood, tulip, poplar, eucalyptus or locust tree is a long-time investment in the future of beekeeping. The value in honey and pollen over the years far outweighs the cost of purchasing and planting the young tree. The same can be said of certain shrubs, with the prospect of a quicker return.

When larger plots of land are available for planting trees, groves of locust, maple, tulip poplar or basswood form valuable woodlots for future harvest. While the trees are maturing they yield nectar and pollen, protect the soil, give shade and wind protection and sometimes produce fruit and nuts if this type of tree is chosen. Trees such as maple may produce maple syrup. Of course the trees are usually harvested for lumber.

Some commercial nurseries have one and two year old tree seedlings as well as five and six year old young trees. The seedlings are often good buys if you have garden space to "line them out" until they gain girth and height and form extensive but compact root systems. In a couple of years they can be transplanted to a permanent location. Some states operate nurseries for growing trees for reforestation and are available to residents free or at a nominal cost. Be certain to check this source for possible nectar or pollen bearing trees.

Of course, the thrifty and those who enjoy growing their own plants, should try to grow shrubs and trees from seed, cuttings, divisions or tip layering. Note the column under propagation in the chart following.

Beekeeping organizations may consider a group project of planting honey plants on private or public land; or, cooperate with garden clubs, Boy and Girl Scouts and other civic organizations to help select and plant trees and shrubs of value to bees. The commercial planting of woodlots,

parks, highway berms and strip mined land, for example, offer opportunities for beekeepers to make suggestions as to the choice of species.

While on the subject of trees it may be well to remind ourselves that fruit trees fill several needs of the home gardener. They are a stimulant to the bees in the spring and of course yield a harvest to the grower. Fruit or nut trees can be used for hedges, windbreaks, shade and are often ornamental. In the next column I will discuss some the fruit and nut trees, ornamentals and timber trees that are of interest to beekeepers.

The following list of shrubs of use to bees does not include those which may be growing wild in your area: only those which are nursery grown or which can be propagated at home. Digging up and transplanting wild shrubs usually involves considerable risk to the plant. This is because of a poorly developed root system and the shock of being moved from its natural environment to one which is likely to be unfavorable.

Name	Description	Flower Time	Use	Propagation	Environment	Remarks
Black wattle (*Acacia decurrens*)	20' or more. Leaves fern-like. Round scented flowers like fluffy balls	Winter and early spring	For the early and abundant flowers	Seed sown in spring or by cuttings	Prefers the South but can be grown in North w/shelter	Pollen
Bottlebrush (*Aesculus parviflora*)	8-10' shrub with white, pink or red flowers resembling a brush	Summer	Ornamental	Seed sown outside in the the autumn	Restricted to warmer climates	very attractive to bees
Barberry (*Berberis spp.*)	Evergreen shrub with spiny branches, golden yellow flowers	Spring	Hedges	Cuttings in late summer	Hardy	Minor Nectar and pollen source
Butterfly bush (*Buddleia davidii*)	Vigorous, 12-15'. Usually lilac flowers in slender panicles.	Late Summer	Flowering Garden shrub	Cuttings in late Summer	Hardy	Attractive to bees
Rose of Sharon (*Hibiscus syriacus*)	4-6' tall. Large 3" diameter. Flowers pink, red or violet	Late summer	Garden or park plant	Cuttings or tip layering	Hardy	good pollen source
Holly (*Ilex aquifolium*)	Evergreen. 2-10' or more. Leaves thick and spiny. small white flowers	Early summer	Hedges, screens or specimen	Seed	For South only	Nectar
Common Privet (*Ligustrum vulgre*)	Fast growing semi-evergreen. Flowers small, white	Summer	Hedges. Screens	Cuttings from ripe wood of current seasons growth	Full sun or half shade, cold tolerant	nectar, honey tends to bitterness
Magnolia (*Magnolia spp.*)	Up to 30'. Often evergreen. Flowers large, creamy white	Spring and Summer	Wall shrub or specimen	Layering or seed	Some are hardy	Bees cover insides of flowers
Cotoneaster (*Cotoneaster spp.*)	Partly evergreen. *Up to 15'*. Flowers small, pinkish	Summer	Small shrub borders	Cuttings in late summer or seeds in spring	Hardy up to middle U.S.	minor honey source
Snowberry (*Symphoricarpus albus*)	Slender shrub about 3' tall. Small pink flowers in in slender spikes	Summer	Hedges and isolated clumps	Remove suckers from base of plant	Hardy	Nectar
Honeysuckle (*Lonicera tartarica*)	Medium sized shrub. 6'. Paired flowers. 3/4-1"long. white to pink	Spring	Wall shrub	Layering or cuttings	Fairly hardy	Nectar and pollen
Vitex (*Vitex negundo incisa*)	10-15'. Lavender blue flowers in terminal spikes	Mid-summer to frost	Screening hedge	Seed	Wide range in U.S.	excellent nectar plant
Flowering Almond (*Prunus glandulosa*)	Deciduous. Pinkish-white flowers in rosettes	Spring	Wall shrub	Layers or cuttings of ripe wood	Moderately hardy	nectar and pollen
Russian Olive (*Elaeagnus angustifolia*)	10-12'. Leaves silver-gray	Spring	Wind break, hedges	Cuttings	Very hardy	Nectar
Autumn Olive (*Elaeagnus Umbellata*)	6-8'. Yellow-white flowers, fragrant	Late summer	Windbreak.	Cuttings	Hardy	Nectar
Tamarisk (*Tamarisk spp.*)	Flesh-pink flowers, rich blue-green foliage. 6'	Spring — summer	Hedge	Seed	Hardy	Dark, off-flavored honey
Japanese Quince (*Chaenomeles speciosa*)	4-6'. Cultivars with pink, white & red flowers	Spring	Hedge, specimen planting	Stratified seed, cuttings, layering	Hardy	Nectar and pollen
Myrtle (*Myrtle communis*)	Evergreen. 9-14', white flowers	Late summer	Hedgs and shrubberies	Cuttings or seed	Restricted to the South	Pollen

The Honey Bee and The World of Arts

* By Mary Jamieson,
Honesdale, PA

Time — 18,000 B.C. to 1982 A.D.
Place — The World
Event — The observation of the Worlds' most efficient architect, manufacturer, organizer, pollinator, communicator, and aviator. In other words an exceptional World Artist!

Who is this famous artist? Why the honeybee of course; natures most famous celebrity. Just one day of observing a beehive can prove to you that the life of a honeybee is a well organized and artistic adventure.

The bee colony, like a little town with thousands of inhabitants, has certain bees to govern each of its activities. Thus the individual bees all depend on each other for their survival.[1]

We have met the artist, now its time to evaluate their work. The honeycomb is the bees most artistic creation. It is a wax-city consisting of, "Two single sheets of six-sided horizontal cells, arranged back to back, the open ends facing opposite directions."[2]

The bees, "Inspired mathematicians, utilize the hexagonal cell, which fits snuggly against its neighbors on all sides, combining structual strength and maximum capacity."[3] Walls of the average wax cell are only 1/350 inch thick but can hold 30 times its own weight. Besides being master builders, "Even the very substance from which the combs are built — the wax is produced by them; each worker bee carries with her a minute wax factory."[4]

In order to gather their food, they must be an artist at flying. "No aircraft invented or steered by man flies as well as a honeybee. Capable of carrying weights heavier than themselves, they soar, and hover in the air, their 'propellers's' beating the air 11,400 times a minute."[5] Honeybees use the art of dancing to communicate the location of a food supply. By dancing in circles or figure eights, the scout bees communicate to the rest of the hive where she found the polen.[6]

"Long before man started recording history he was exploiting the unaparalleled industry of the bee."[7] Thus it became that bees and honey held a prominent place in the customs and religions of people all over the world. Consequently, symbols of the honeybee are found in many forms of art both ancient and modern.

Bees have influenced man since as early as 18,000 B.C. This was confirmed with a rock painting found in "The Cave of Altamira", found near Santander Spain."[8] The painting shows bee's combs and honey hunters' ladders.

In a small area of the Republic of South Africa, a collection of 76 rock paintings done by Bushmen, depict various aspects of Bushman's honey-gathering activities. This evidence documents the importance of honey in the economy of the Bushman hunters.[9]

"The ancient Egypitans used a bee in their heiroglyphics. They thought so highly of the bees, they used the same sign to mean 'King of Upper and Lower Egypt.' ",0 The honey-producing insect appeared on monuments as early as 3500 B.C. Besides using the honey, they discovered the wax combs could be used too. "Long before anyone had paper, the Egypitans made writing tablets out of wax."[11]

Skillfully made wax figures have been discovered in Egyptian tombs, placed there centuries before Christ was born. The Egyptians arranged to have their bodies specially treated after death and these preserved mummies were treated in wax. Also the Kings had wax dolls made to resemble their bodies and placed in the tombs.[12]

The Egyptians are also credited with the invention of painting with wax. By mixing hot wax with colors, they painted on a warmed surface and created an "encaustic painting."[13]

About 300 B.C., the Greeks of Ephesus used the honeybee as a design on one of their coins. The Greek philosophers preached the life-giving properties of honey, and believed honey everyday would keep them free from disease throughout their lives. Even after death the Greeks sometimes used honey to preserve the body.[14]

In the Middle Ages, beeswax was very important and was sometimes used in place of money. Much of it was used for Church candles and only wealthy people could afford to use beeswax.

When the movement to Christianity was started, the churchmen, wishing to teach morality, compared the life of bees with that of Christ and suggested that man might well copy the industrious life of the hive. Meanwhile, religious artists were using the bee as a symbol in their paintings. "A common subject was St. Ambrose with a beehive in the background — based on the legend that when he was a baby, his lips had been smeared with honey."[15]

Another example of the use of the bee in Medieval Art is found in a picture by Titian, the great Venetian master — it shows the "Infant Jesus with a bee in his hand."[16]

By Napoleon's time the bee had so firmly became established as a symbol of industry and royalty that he had his coronation robes decorated with golden bees. He was inspired to use the bee because of the finding, 1,000 years before, of 300 golden bees in the tomb of Childeric I, a former Frankish King.[17] Napoleon's Coat-of-Arms and flag also contained bees.

Sculptors have frequently used wax to aid them in their work. Michelangelo, and Leonarde da Vinci have made small models of wax to serve as patterns for final work in stone or metal. Wax was also used for making molds to be cast in gold or other metals.The very earliest metalwork was cast in wax molds. Large bronze statues have been cast

using the "Lost Wax Process."[18] an example being the statue of "Buddha" cast in 15th century and now on display in the Museum of Fine Arts, Boston.

Propolis, a 'nuisance' product of the hive, was made use of by paint and varnish makers. Propolis was the main ingredient in the varnish used by a famous violin maker, Stradivorius in Cremona, Italy.[19]

Thomas Edison's wonderful mind first thought of making an instrument that would react to the vibrations of sound through grooves cut into a cylinder of soft material. He made a cylinder of wax and with a sapphire needle for cutting grooves, a way of making first-class recordings was found.[20] Today, a flat record disk is used, but the master disc is still made of wax.

In 1854, Madame Tussaud, started the famous Wax Museum in London, England. No other material can be colored and shaped to resemble flesh so well as beeswax.[21]

The only instance where a bee plays an important part in the religion of a civilized people, is found in America. The Mormons use it as a symbol in their sacred writings. "The Book of Mormon.[22]" The Mormons of Utah helped choose the emblem for the state seal which includes a picture of a beehive surrounded by flowers.

Many companies have used bees or beehives in their designs. The Belleek China Company made very valuable "Honey Pots" with the shape of a hive covered with bees.

American cut glass companies have used bees as a design for dishes. There are also hand-made stained glass plaques depicting scenes of hives and bees.

Poems have been written about bees and even a movie was made about the life of a beehive.[23]

Bees and man have helped each other for centuries in many fields of art, but there are still adventures to be taken together.

On March 22, 1982, bees were placed aboard the Columbia Space Shuttle III to help man determine if they can live harmoniously in their 'Colonies' in outer space!

* First Place Essay Winner in the American Beekeeping Federation 1982 4-H Club Essay Contest. Mary is 12 years old. She received a $250.00 check as a prize. The 1982 contest attracted entries from 27 states.

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Capping The News

THE EDITORS

"Beekeeping Small Talk"

Accidents

NO ONE LIKES to hear about some of the bad news in beekeeping and we do not enjoy reporting and commenting on it but problems seem to have a way of keep cropping up in our midst.

The most recent bad news concerned the burning of a truckload of bees and hives that had overturned on a highway in Illinois. The mayor of the town where the accident occurred ordered the load burned when the town officials decided that the flying bees were a hazard to people.

Apparently some beekeepers were present at the scene along with the town officials and 35 police, firefighters and other city workers. No doubt the beekeepers' advice was offered and considered but apparently the officials considered the situation out of control with the coming of daylight, when the bees began flying. The accident happened at 11:45 PM. The bees were being trucked from Dickinson, ND to Hahira, GA. No one required hospitalization because of the accident or as a result of bee stings.

The value of the load was estimated at between $60,000 and $100,000 dollars, and consisted of 486 hives of bees.

This report follows closely on another incident in which a couple of hives of bees fell off a truck near an apartment complex. In this accident the bees stung several people and sent others into a panic, no doubt an over-reaction, but never-the-less a situation which gives bees and beekeeping bad publicity.

Accidents are not always avoidable but carelessness is.

Whether moving one colony or hundreds it is the responsibility of the beekeeper to secure the load. A road accident such as happened in Illinois may have happened despite a well secured load but the other incident at the apartment building may have been avoided by more careful handling.

Bee Kills

REPORTS CONTINUE TO come in about the killing of bees by pesticides.

In a May, 1982 court case in Outagamie County, Wisconsin the five day proceedings of a civil law suit involving beekeepers, pesticides, a canning company and an aerial applicator was competed. The jury made no decisions in favor of the beekeepers.

The suit includes the use of Sevin® , Lannate® and Pen-Cap M® on sweet corn. The bee kill was documented by the ASCS. The monetary value of the suit was $350,000.00.

The beekeepers were attempting to prove label violations in use and application of the pesticides. It is the understanding of these beekeepers that pesticide label instructions approved, including bee cautions, are legal and binding and must be followed by the user and/or applicator. They believe that presently the legal inference of the "bee cautions" on pesticide labels, is the **only** protection available for honeybees against pesticides. Therefore, their on-going, unspoken goal has been, and still is, to obtain a Wisconsin legal precedent regarding label rules and regulations.

The plaintiffs believe that the presiding judge incorrectly instructed the jury during the suit.

Lawyers are preparing an appeal with the ultimate goal of it being presented to the Wisconsin Supreme Court.

Considerable cost has been involved in the court actions. Any donations would be greatly appreciated, according to Oscar Carlson, president of the Wisconsin Honey Producers Association. Contributions should be sent to—

Bennett-Myer Fund
Kimberly State Bank
600 W. Kimberly Ave.
Kimberly, WI 54136

Phone calls or correspondence, suggestions, advice or inquiries should be sent to—

Robert Bennett
Rt. #3
Appleton, WI 54911
Ph. 1-414-757-5115

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National Honey Report

The National Honey Report began issuing reports again as of October 1, 1982, on a trial basis. The new report will be issued weekly. The U.S.D.A. started charging user or subscription fees for all printed market reports August 1, 1982. If you would like to subscribe to the new honey report write to the Federal-State Market News, 2015 South First Street-Rm. 4, Yakima, WA 98903. Tel. 509-575-2492. A form will be mailed to you which can be returned when completed to the above office along with your payment. You may subscribe for only certain months at $4.00 per month (U.S., Canada and Mexico) or other countries at $8.00 per month. A year 'round subscription is $48.00 (U.S., Canada and Mexico) or $96.00 for other countries.

The Breathitt County Honey Festival

By JAMES STEED
Richmond, KY

It has been held every year on Labor Day since 1978 at Jackson, Kentucky, which is accessible via the Mountain Parkway and Kentucky 15.

Jackson is a tiny rural town of only 2,000, but they expect 50,000 visitors to the honey festival each September. Jackson is the home of Lee's Junior College. The country is beautiful and the people friendly.

On the way there, you pass the scenic Red River Gorge area and the Natural Bridge State Resort Park in Slade, Kentucky (606) 663-2214.

I have wanted to attend the festival for a long time, and this was the first year I have gotten to attend.

Mr. Doug Terry was the festival chairman. Every year free biscuits and honey are provided, in fact, all the honey and biscuits you can eat. A giant biscuit weighing some fifty-odd pounds is baked. This giant biscuit and what they believe to be the country's first coal truck drag race have been submitted to the Guinness Book of World Records.

Other attractions were the Honey Bowl Football Games, a 10,000 meter "honey run," music of all types, and fireworks. There was a turtle race, a pie-eating contest, a frog jump and frog race, and a horseshoe tournament. Festively decorated coal trucks formed a parade through the town. The big attractions were the first coal truck drag race and a concert by Ray Stevens.

A large craft tent housed booths selling honey pots and numerous hand-made items. The most interesting item of the craft booths to me was a beautiful black and white print titled "Honey Baby," by Berea, Kentucky artist Mitchell D. Tolle, done especially for the festival. These prints were sold for only $15 by publicity specialist Jeanne G. Dzierzek and her mother. She still may have prints for sale at the Inter-Mountain Publishing Company, 1028 College Avenue, Jackson, Kentucky 41339.

Joe J. Feltner built the largest skep ever seen. Photo by J. Steed.

Mr. Joe J. Feltner of Cherokee Indian extraction was selling his honey with the help of his family. He had made the largest skep I have ever seen. Mr. Feltner lives at Hyden, KY 41749.

The Breathitt Area Beekeeping Association had an attractive sales booth and sold members' dark honey for the benefit of their association. Their president is Carroll Fackle, Secretary Howard Perkins, Treasurer Rick King. Bill Eaton, Kentucky Bee and Honey Specialist, had a brochure about honey that was available to anyone.

It was a delightful trip. Of course, there is an Ohio Honey Festival around the 8th-10th of September at Labanon, Ohio each year and a West Virginia Honey Festival On October 22-24 at Parkersburg City, West Virginia.

"Free biscuits and honey". Photo by J. Steed

Pollen Trapping For The Beginner

By J. IANNUZZI
Ellicott City, MD

Introduction

AN AD IN A RECENT journal trumpets *Pollen for Profit*, stating that honey is a one-shot deal but pollen flows year round in some places and up to four months in Canada. The trap being promoted is also said to "monitor your hives' production, acts as a warning system, increases egg-laying space, helps reduce swarming, and makes money" since the wholesale cost of the sweet stuff is only about 55¢ a pound versus $2.30 for the same amount of pollen. The spiel notes that eight ounces of the yellow dust is collected on an average day for a 245-day season (eight months).

First Experience

I captured my first pellet of pollen on September 12, 1981, a warm day with a high of 87°, when I needed some of this protein for show purposes because of entrance requirements (what is exhibited had to be from one's own hives). The amount was about two ounces plus at least 75 bee body parts — a far cry from the heralded half pound a day. The equipment used was a box trap purchased from but no longer built or sold by the Walter T. Kelley Co., Clarkson, Kentucky. It looks like a galvanized shoe box (see photo) attached to a frame held in position when placed between two hive bodies. As insects enter the upper part of the box through the V-shaped five-mesh hardware cloth (five holes to the linear or 25 to the square inch), the grains are brushed off their hindmost legs and fall into the box below through the six-mesh screen. Since I did not know any better, I had installed it just above the bottom board on the first day then later moved it to its proper position. The following two weeks yielded only about two more ounces. Then I quit collecting, leaving the trap in place between two hive bodies all winter, naturally with the bottom board open.

Second Trapping Period

In the spring of this year (1982), I collected pollen for two-thirds of the month of March, removing the take each day at sundown, about 8:30, after the bees had quit flying. This is the actual record of what I harvested:

An abecedarian peers at pollen collecting in the light of advertisers' claims

Day	Quanity	Color	High-Low Temperature;Weather
March 11	½ oz.	buff	40-66 sunny warm
March 12	3-minus oz.	buff	46-76 sunny warm dry
March 13	¼ oz.	grn, yel,orng	46-67 cloudy wet
March 14	¼ oz.	grn, orng	44-64 cloudy coolish
March 15	3 grains	orng	41-51 ditto
March 16	1	grn orng	39-41 overcast; rain
March 17	1/8 oz.	dark grn	38-63 cloudy, cool; sun
March 18	1/16 oz.	grn & yel	42-56 cloudy, cool, w/peeping sun
March 19	½ oz.	grn & yel	55-60 warm sunny
March 20	18 grns	grn & yel	40-50 cloudy, rainy, no sun
March 21	7 grns	grn & yel	42-51 cloudy, cool, no sun
March 22	20 grns	grn & yel	36-51 chilly, cloudy, little sun
March 23	¼ oz.	grn, yel, orng	33-66 sunny warm
March 24	1/8 oz.	grn, yel, orng	32-71 sunny, warm, some wind
March 25	½ oz.	grn	41-70 foggy; coolish but sunny noon
March 26	15 grns	grn & yel	39-48 wet cold windy spotty sun
March 27	0		27-39 sunny but cold, windy
March 28	28 grns	grn & yel	19-48 cold
March 29	36 grns	grn, yel, blk	33-73 cold morn/eve; sunny noon
March 30	¼ oz.	grn & black	32-78 ditto
March 31	20 grns	grn, yel, blk	51-60 rainy then sunny

In the 21-day period about six ounces of pollen were collected, a far cry from the advertised 168, and half of that was the product of **one** day. A scrutiny of the above will reveal that each day's collection was closely correlated to the weather. For example, March 12, the second hottest day in the listing, and also the warmest and dryest, the bees brought home almost a full three ounces of their precious pellets (the left bottle in the photo), all buff colored with a sprinkling of orange. Weighed again after overnight freezing and 24-hour drying on top my oil-heat furnace, it came to 2-½ ounces, the best harvest for the entire period which yielded in the other 20 days about the same amount (the other jar in the picture).

Since skunk cabbage and swamp maple were in bloom then, I presume that that was being collected. What is most puzzling are the grains of black pollen garnered for the first time on the 29th and running until the end of the experiment (it tasted a little like liquorice).

Method Used

It should be repeated that normally the landing board entrance is closed off while this trap is in operation as was done during the fall, except for the first day. Since I had started the new season with the bottom board open on March 11 and made such fantastic collection the next day, I refused to seal the bottom during the entire period, giving the little ladies their choice of entrance. One day I took particular note of what they did: They seemed to choose the trap door and the other opening about equally. I actually preferred this setup to what the literature states since it meant that I was not depriving the whole family of bees of daily new protein by closing off the principal entry.

Collection Routine

This was the harvesting procedure. About 6:30 every evening after the insects had retired, I emptied the trap box into a clean handkerchief on top of the two-story hive and wiped the box out with a paper towel. Once in the house, I poured the day's take into a plastic sandwich bag, closed it with a bread wrapper tie, dated it and placed it in the freezer overnight to kill off any possible insect eggs. When the process was repeated the next evening, the first freezer bag was placed open in a dish on top of the same furnace for drying 24-48 hours. Later it was weighed on a postal/diet scale, recorded and packaged in the queenline jar after impurities were removed by blowing or picking out with a toothpick (this occurred very infrequently since the collector was kept scrupulously clean and because all the worker bees were not forced to use the trap entrance only which causes them to lose wings and things as happened in that initial September experience.

Choice of Hive

Naturally the selection of the colony is closely related to pollen trapped. I chose the strongest of all which had been doublebrooded the preceding 12 months. The March 11, 1982 inspection revealed that it had an empty bottom chamber but more brood in the top than any other two-story honey factory. The shallow super left on over the winter had at least one frame of capped honey remaining. Reversing these deep boxes, I left the pollen trap in position until the experiment ended on the last day of March 1982 when an examination showed that all the honey stores were depleted and feeding was necessary; however, the trap position prevented my using the entrance Boardman feeder; hence, I had to remove it.

Selection of Trap

I like this particular collection device since it can be easily reproduced at home (see illustration) at very little cost out of scrap lumber although I will be the first to admit that finding five-mesh wire less than roll lengths is difficult (Kelley advertises a 100-foot roll, two feet wide, for $75 plus shipping. I also like it because of its position on the hive, for the reason given previously.

Conclusion

Most beekeepers of my acquaintance do not "fool" with pollen collection. In fact, in our local beegroup of 48, I know of only one other beeman who owns such equipment but rarely uses it. For something different, it is worth a try since one should always endeavor to expand his experiential horizons although the advertisements should be taken *cum grano salis*, as the ancient Romans used to say. Even though Dr. Elton Herbert Jr., the bee nutritionist at Beltsville, MD, looks down his nose on royal jelly and pollen as being of 'little nutritional value to human beings,' the man who sleeps in the White House uses bee pollen bars when he is not popping jelly beans, according to the best daily in the nation (*New York Times*, January 12, 1981, p. B6). And according to Lisa Flynn Stec writing in *Bestways* (November 1979) honeybee pollen contains more protein per equivalent weight than the traditionally high-protein foods such as beef, eggs, cheese and even sunflower seeds!

Pollen trapping and consumption? Try 'em; you just might like them. And as for the advertised claims, as Julius Caesar would say, *Caveat emptor*!

The pollen trap looked like a galvanized shoe box in a frame. Collected pollen is shown in the two bottles.

During the proceedings of the 1981 British Crop Protection Conference a paper by E.L. Atkins, University of California, Riversise was read which defined the toxicities to honeybees of several formulations compared in laboratory and field tests. When sprayed on alfalfa, Sevin-80-sprayable caused 4.5 times as many honeybee deaths as Sevin XLR and twice as many as Sevin SL. These and other results, showed that formulations differing slightly in physical properties have different toxicities, and that the danger to honeybees can thus be reduced by the correct choice of formulation.

Apicultural Abstracts 1982 Vol. 33 No. 3

"An apiary neglected or mismanaged is far worse than a farm overgrown with wees or exhausted by ignorant tillage; for the land is still there, and may, by prudent management, soon be made again to blossom like the rose; but the bees, when once destroyed, can never be brought back to life . . ."
From *The Hive and the Honeybee* by L. L. Langstroth, 1853.

The Hackberry, or Sugarberry Tree

By BERNIE HAYES
Wellsville, NY

While writing articles for our informative bee magazines, I often find that the beekeepers themselves provide the impetus for a timely article.

Recently Charles A Cavett beekeeper-rancher of Bayard, Nebraska wrote of this tree and I became intrigued by the name "Sugarberry" also applied to it.

Checking the Honey Plants Manuals I find that indeed this botanical Celtis family to be an important nectar source.

The Northern Hackberry (*Celtis occidentalis*) ranges from N. England, Ontario to Minn., Charles Cavett's Nebraska, south to Georgia and Texas. Well spanning the eastern half of our country.

The berries, sweetish to the taste are edible though the color, purple mostly is not attractive. It is usually a small sized tree, looking like an elm with a rough "warty" bark.

Here in New York state, it is rare but nearby my county is a near record breaker for this species. It measures 51 inches in diameter and 65 ft. tall. It would be interesting to stand under this tree during a nectar flow and hear the bees roar over the harvest, similar in quantity to the basswood.

Apparently, this tree forms clumps in favorable locations. Oddly, but our flora has almost no other hardwoods that fruit and which are edible with a sweetish taste. Due to the dark color it is doubtful that anyone eats them.

I am sure that rancher Cavett of Cavett Apiaries would have many more interesting observations of the Hackberry had I pursued this topic further with him. Though he did bring my attention to seedlings available from Gurney's Nursery, Yankton, SD at modest prices.

This little known member of the Elm family is ideal for planting since it will grow in most soils, rapidly when young with a fibrous root system for easy transplanting. Propagation is by seed, layers or cuttings of ripened wood, fall dormant. Also the tree is relatively free of disease and insect pests.

The variants of this species I am listing below for beekeepers in other locations.

C. Occidentalis, natives to Eastern and middle West states. Laevigata (sugarberry) natives to Mississippi South to South Central. Douglasi, to 20 ft. brownish fruit, western states. Julianae — a Chinese exotic in California. Australis, orange fruit, South.

Texas beekeepers benefit from the shrubs (*pallida*) yielding a honey that is pale amber. Most of these honeys are good quality.

The Southern berry (Mississippi) is often plentiful and blooms in March or April.

The Northern is rare in New York state but common elsewhere in the East.

So, when a beekeeper-observer becomes puzzled about the roar of his bees on a odd looking rough barked elm, while passing other elms by, he should recall that it is probably the Hackberry, odd name, odd tree!

The Hackberry or Sugarberry Tree — by Hayes.

Three or Four Brood Chambers

By STANLEY L. LOYER
Winthrop, ME

How many brood chambers should one use for maximum honey production and successful wintering? The latitude we live in certainly has some input. Whether you are a hobby beekeeper or professional, and whether a 50%, 15%, or no loss is the wintering goal. Can a single story hive be successfully wintered here in Maine? Is successful to mean to have a handfull of bees and a queen or does it mean three brood chambers full of bees which will replace their winter consumption of 60 lbs. to 80 lbs. of stores when the first trees and dandelions bloom?

My goal is to bring every colony thru the winter so they are as great in numbers April 1, as they were the previous October. In my experience, a one brood chamber colony can be successfully wintered if success is defined as still having a queen and a couple thousand nosema infected workers which will never build up in time for the honey flow. If the weather is inclement during May and June so the workers seldom fly; a three or four brood chamber hive will be raring to go in July; while the two and single brood chamber hives will have perished unless extensive feeding of syrup and pollen has been attended to.

One of our largest beekeepers here in Maine uses two deep brood chambers, but its for economic reasons, three would be better but two are cheaper and he expects a 15% winter loss. It must be discouraging to have a colony starve to death in March or April after they have consumed 60 lbs. to 70 lbs. and are one of your best colonies.

The late Dr. Clayton Farrar, probably the most prestigious Bee Research Scientist of our time strongly advocated three deep Lanstroth brood chambers or their equivalent in area[1]. Dr. Farrar recommended 100 lbs. of stores and 500 square inches of pollen.

One brood chamber may be great in Texas, but here in Maine NEVER.

Reference — 1. Productive Management Of Honeybee Colonies. 1968 USDA Bulletin. Page No. 7. Farrar Overwintering Of Honeybee Colonies. USDA Research Report. No 169 Moeller.

This hive will have four deep and one 6¼" brood chamber for winter and at least 100 lbs. of stores. I lost my last hive wintering in 1925.

Beekeeping at China's Great Wall

By JAMES E. BUGH
Cortland, New York

AN INVITATION TO LECTURE on geology at the Beijing (Peking) Teachers College took me to the Peoples' Republic of China in May and early June, 1982. Flying from New York City to Beijing with only a short fueling stop at Tokyo after crossing the international dateline, this jet-lag cost me a day in an otherwise busy schedule. Between lecture assignments, I did have ample time to be a tourist and my interpretor, Zhang, made every effort for me to see as much as my brief visit would allow. In addition to the standard sights, the Peking Opera and Ballet, the Forbidden City and Summer Palace, Zhang wanted to know what special interests I may have in seeing or doing.As an amateur beekeeper and regular reader of *Gleanings in Bee Culture*, I suggested a visit to a Chinese Beeyard.

Zhang reported to me on the following day that no beeyards were known to be in the area at that time of year. I was surprised that the effort was made to satisfy my request and then I forgot all about it. But the next Saturday on the way to the Great Wall, we passed a beeyard. Zhang was even more pleased than I with the discovery. However, the winding mountain road provided little space to pull off the road for even a short photo session. Less than a mile up the road we came across still another and again another beeyard for a total of three all within sight of the Great Wall and the third beeyard was near a wide shoulder of the road.

After climbing the Great Wall and the usual tourist photo sessions (and geological observations with a geologist from the college), we made our way back to the beeyard. Our driver wanted nothing to do with bees so he stayed with the car. I later found that interpretor Zhang and my geologist friend also wanted no part of the bees, but out of consideration for me, they bravely ventured toward the beeyard.

A skeptical beekeeper came to us wondering what we were doing.

Examining a colony in Peoples' Republic of China.

Through my interpretor, I asked to study his hives. "Go ahead," he replied with a tone of voice that further implied: "If you are not afraid." When he saw that I wasn't afraid and knew enough to open a hive without being stung, he became a little more friendly. I asked permission to take his picture among the bees and then I gave him the Polaroid print which prompted a "thumbs up" sign.

While we were discussing honey production, a young assistant ran over to see what was happening. Seeing the photo, he wanted one too. Receiving his photo he actually jumped with joy seeing it develop before his eyes. Still another beekeeper came to investigate when he heard this commotion. Of course he wanted a picture too. Before leaving New York, I was advised to buy an instant camera because of the ice-breaking ability of such cameras. This one experience essentially paid for the camera when the beekeepers invited us into their tent to talk bees.

We quickly learned that the beekeepers were from southern China, Canton, and they ship their bees in by train each spring. I asked about the bees and their pollination of apple trees, which provide seemingly the most popular dessert of the Chinese.

"We keep the bees away from apple trees!" was the quick response, "The apple trees are sprayed with insecticides."

The language barrier prevented me from learning what plants were being worked by the bees. The beekeepers pointed to a tree which looked much like our black locust. They indicated that this was the currently important honey plant. Aster-like wildflowers abounded but I didn't observe any bees working them.

Fifty hives each produce 100 kilograms of honey per year and the Chinese haven't had the experience of losing a hive through swarming or disease. The honey is sold to local chemical (possibly food processing) companies and little or no honey is sold by the beekeepers for family consumption.

I asked about extraction of honey but my interpretor didn't understand the question to translate into Chinese. All of the combs that I inspected, although well filled with brood or honey, were old so I suspected that they had access to some extraction equipment instead of selling comb honey. Then I noticed a Root 2-frame extractor that was

A Chinese beekeeper and his bees.

almost exactly like my own — all the more excitement!

Northeastern China was experiencing a drought and I expressed concern about water but the beekeepers assured me that a stream was nearby and the bees were doing quite well. Further discussion about beekeeping led to whether beekeeping was more difficult than teaching. They stood three feet taller when I told them that they lead a harder life than I do. Finishing the film in my instant camera, we left three of the happiest beekeepers I have ever met.

We still had many miles to go to study the magnitude of the drought, but in those miles I soon learned that both interpretor and geologist were never before near a beehive. For their first encounter with the bees, they were remarkably brave.

The Great Wall is on the tourist route and my interpretor most likely has been there at least a dozen times already this year but this time was different. Later conversation indicated that he'll probably visit the beeyard again.

Chinese beeyard within sight of the Great Wall (barely visible in the upper left of photo).

Mobile home of the beekeepers. Young beekeeper in the foreground is holding ointment in case the visitors get stung.

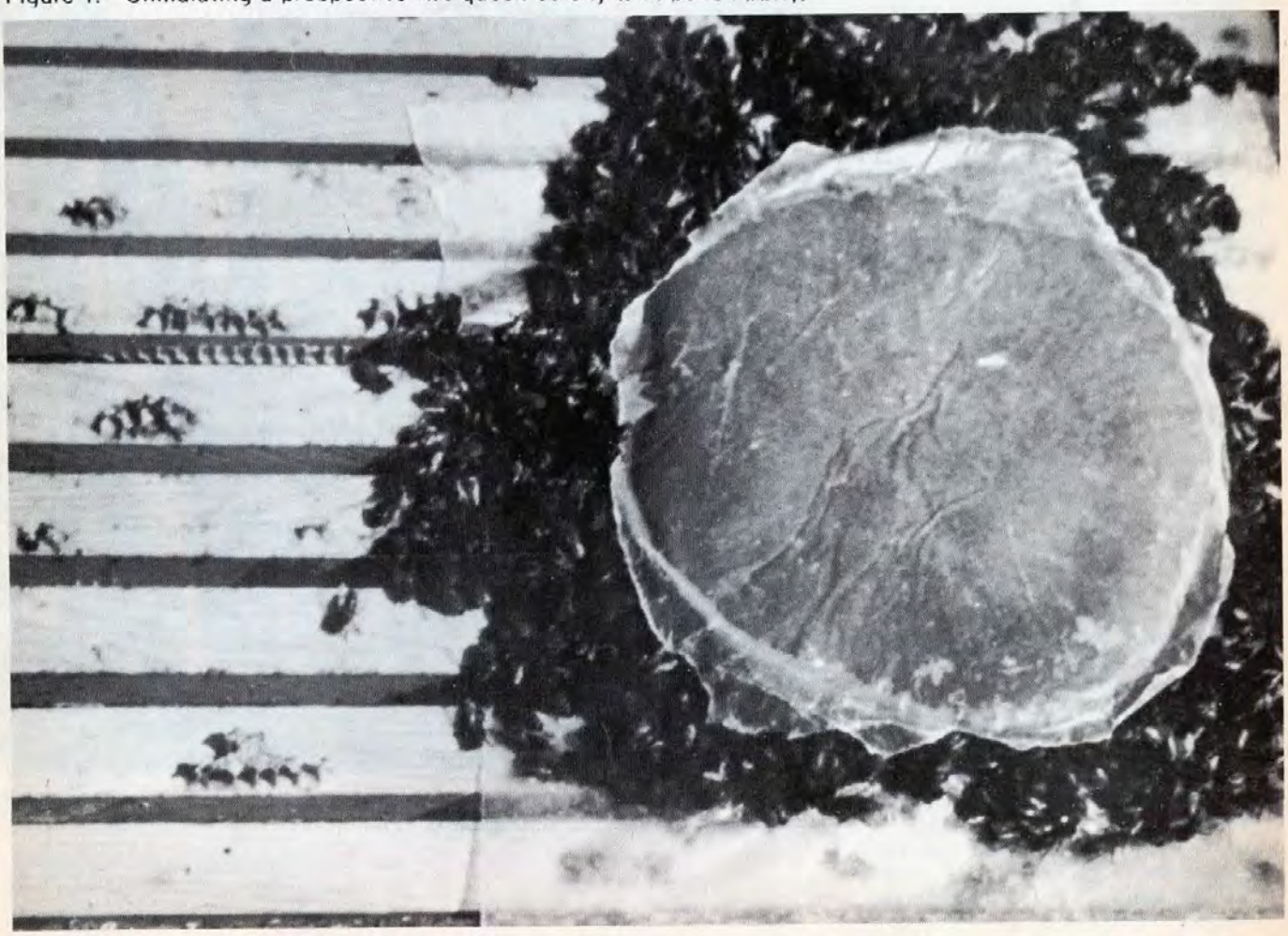
Two Queens, or Not Two Queens — That is The Question — Part I

By SANFORD MOSS
Westport, MA

A FEW YEARS AGO I became fascinated with the idea of two-queen colonies for producing large crops of honey. The idea sounded great—double the normal colony strength to produce more than twice the surplus from a single queen colony; and this with only a single bottom board and cover! I read what published material I could find on two-queen colonies, and then started several of them. I had some initial success, so for each of the past five years I have run about twenty two-queen colonies in my apiaries. During this time I have made just about every mistake I could possibly recognize — and some I'm sure I'm not smart enough to have noticed. The results have been mixed. I have had some real booming colonies that have put up amazing surpluses. And I have also had some simply enormous swarms! I have concluded that there are some definite advantages presented by the two-queen system that have a place in many systems of rational bee culture. And there are some deficits in this system that have to be taken into account as well. In this article I hope to discuss some of the pros and cons of this subject, and then outline what I have learned about managing two-queen colonies of honey bees.

Two-queen colonies are not for everyone. The successful colonies are hard work! A productive unit will have four (or more) deep brood

Figure 1. Stimulating a prospective two-queen colony with pollen patty.



chambers under nine or ten shallow honey supers. Working such a stack means getting up high — on a ladder, scaffold or truck body — and heaving honey-laden supers overhead. This is not an exercise for weak hearts or bad backs! Also the extremely large populations of bees in these colonies can be disconcerting at best, and at times, downright intimidating. When the queens must be located for proper management of these colonies, you must have sharp eyesight as well as patience, muscles and a good ticker.

These drawbacks are true if your two-queen management is for maximum honey crops. There are advantages to two-queen techniques, however, that virtually any beekeeper can enjoy — particularly with respect of requeening and building colonies for specific honey flows. Also, two-queen colonies provide ideal units to use for comb honey production and for providing splits and nuclei for making increase.

Setting up a two-queen colony.

A two-queen colony is generally started as an overwintered colony split in half around a double screen. A new queen is given to the queenless (usually the upper) half. Of course, a two-queen unit could also be started with two swarms, or two packages for that matter, hived around a double screen. In my management system these splits are made in late April here in coastal New England. Because we experience a cold, late Spring near the ocean, I generally build my colonies toward division by stimulating them with pollen patties about the first week of March (Figure 1). This would be risky, of course, if I didn't split the colonies, for I would surely get swarms from these stimulated colonies. When the new queens arrive, I select the strongest colonies in my apiaries and carry out the following operations.

First, the old queen is found and set aside on her frame. Then most of the sealed brood plus at least two good frames of honey and pollen are placed in one deep brood chamber, which will be given the new queen. Next, the open brood and the old queen are placed in a second deep. This is put on the bottom board and topped with a new brood chamber filled with empty combs or foundation. For a couple of reasons I'll touch on later, it is important to have only nine frames in each of these brood chambers (unless foundation is used, then ten frames must be present).

Figure 2. Double screen placed above parent colony with old queen, unsealed brood and a second, empty, brood chamber.

A double screen, entrance to the front, is then placed over the second brood chamber of the parent colony (Figure 2). The queenless sealed brood and honey is placed on top of this screen and the new queen in her mailing cage is introduced in the standard way (Figure 3).

The new queen will almost surely be accepted by the nurse bees and emerging brood of the division, for the field bees will have returned to the parent colony below. The division can be checked in a week or ten days to make sure that the new queen is laying well.

The two-queen colony will finally be established by removing the double screen, and replacing it with a queen excluder — thus uniting the two separate colonies (Figure 4). In theory, after a sufficient length of time separated by the screen, both colonies will attain the same hive odor. After this occurs, the separate queens will not recognize that the other exists on the opposite side of a queen excluder, so fighting will not occur through it. I have learned the hard way that "a sufficient length of time" is about three weeks, even though the books tend to say two weeks. One Spring some business commitments forced me to pull the double screens after only twelve days from queen introduction. When I checked these colonies a few days later I found that in 40% of them the queens had fought through the excluders. In each case it was the new queen that had been killed. The one other case of queens fighting that I have experienced occurred in a colony that had been reversed around the double screen. When the screen was removed the queen that was killed was again the young one — this time on the bottom.

After what my wife calls "The Twelve Day Debacle", I have come to think that two weeks does not give a good margin of safety, so I now like to leave my double screens in for three weeks before replacing them with queen excluders.

There is a problem with this longer period, however, and that is the parent colony may become so strong underneath the double screen as to begin swarm preparations. This is less of a problem if the second brood chamber given them is filled with foundation; but it still requires a close watch.

I inspect these colonies top to bottom two weeks after the division. If the parent colony is beginning to

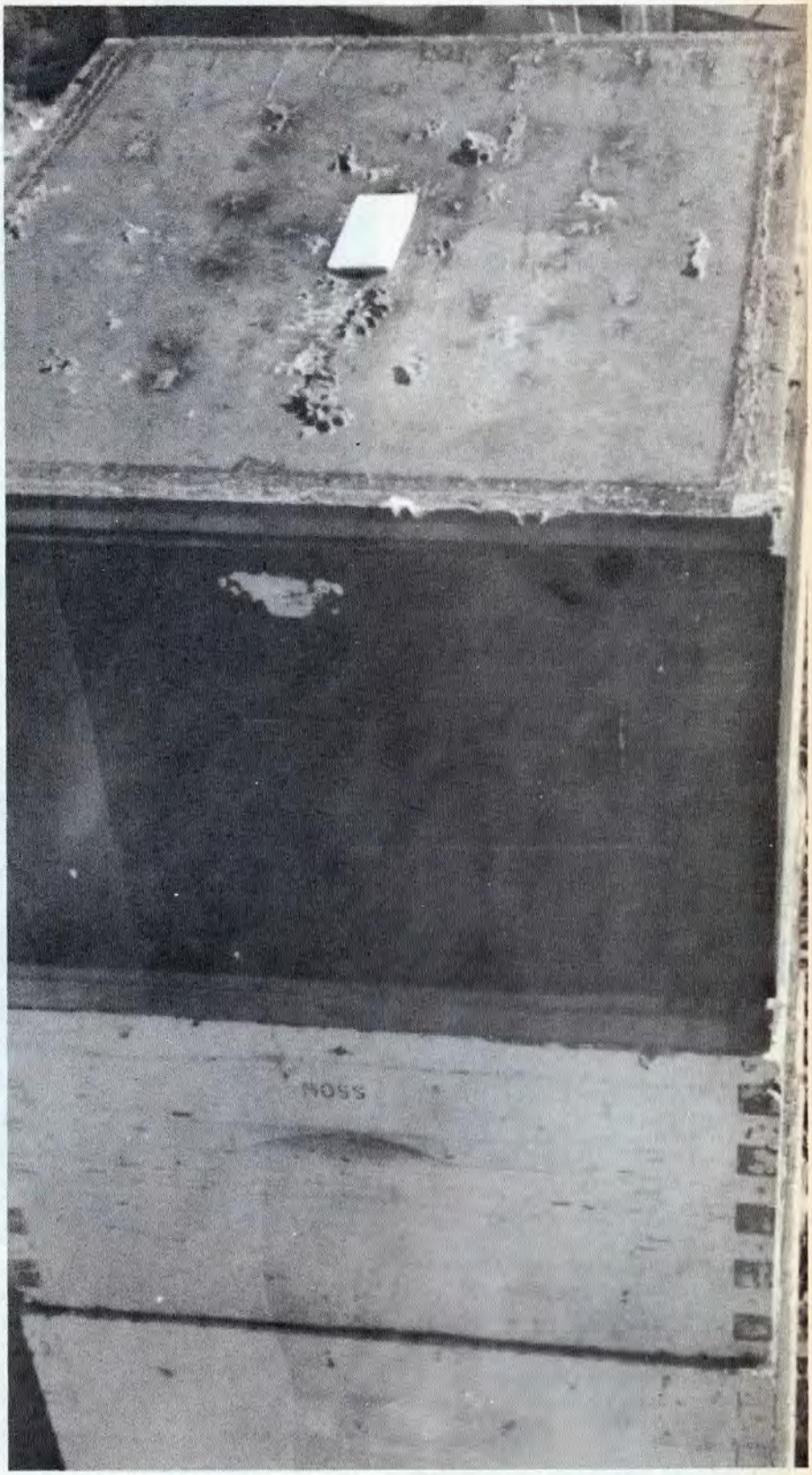


Figure 3. Queen cage placed in top colony with sealed brood, bees and honey.

build queen cells, I then reverse the colonies around the double screen. Thus the parent colony goes on top and loses its strong field force to the division which is now below the double screen. The parent colony will be weakened sufficiently to reconsider the idea of swarming. Because the hive odor is now all the same, the field bees from the parent colony will not bother the young queen.

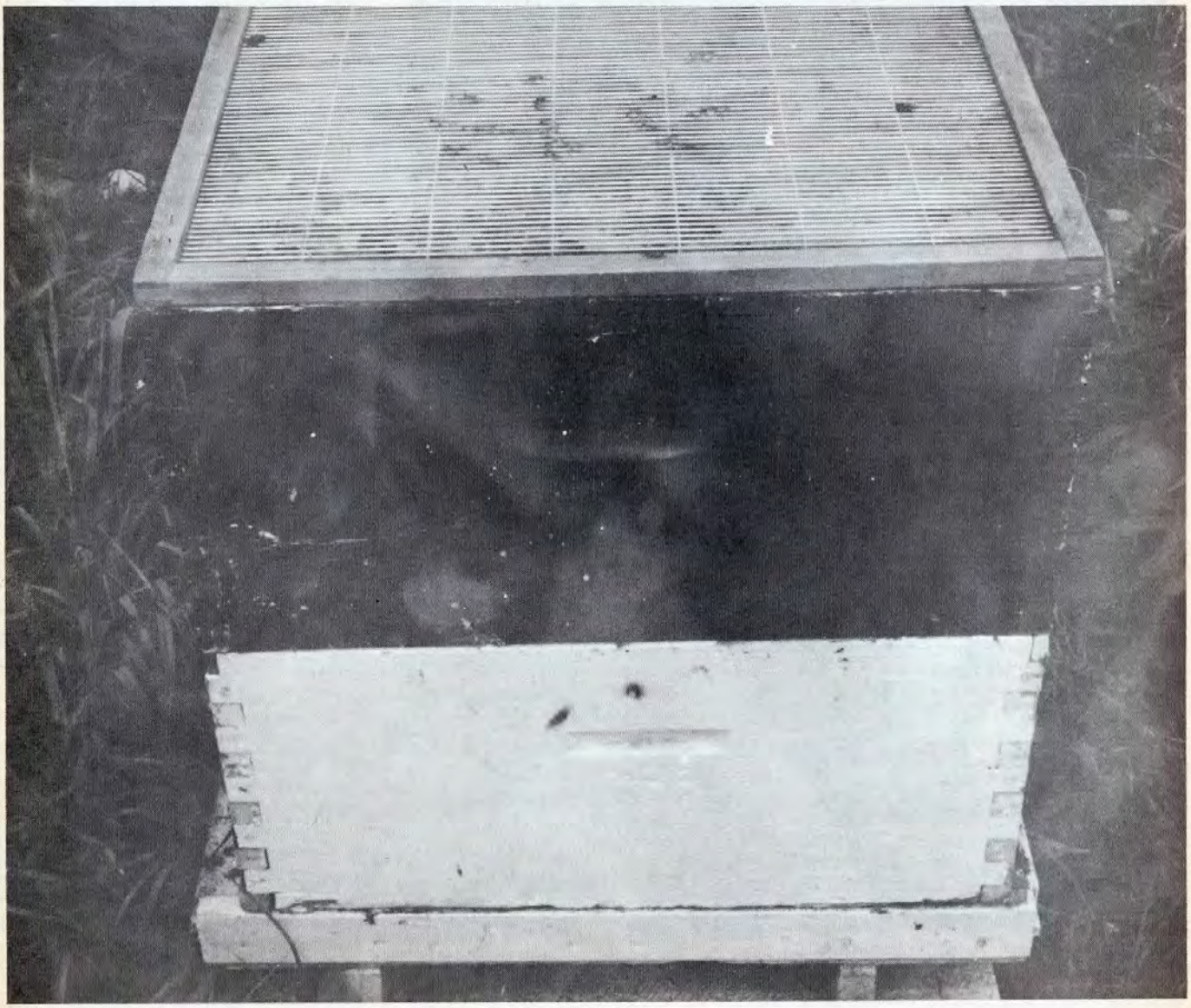
If the parent colony has filled both brood chambers available to it after two weeks and is not preparing to swarm, supers can be given to it underneath the double screen. When the screen is replaced by a queen excluder later on, these supers can be placed on top of the united unit.

When, after three weeks from queen introduction, the double screen is replaced by a queen excluder, an entrance must be given to the upper colony to allow drone flight. This can be done in many ways. I have experimented with all of the following: 3/4" holes bored in the hive bodies of the upper colony (but not through the hand holds!); wedging the hive body above the queen excluder by about 3/8"; building a 3/8" rim around the top of the queen excluder, leaving the front edge open; and staggering the hive bodies back one inch above the queen excluder. I now usually opt for wedging the front of the upper colony up 3/8' above the queen exculder. This gives the upper colony some important ventilation, and also provides a use for used queen mailing cages. Split lengthwise with a hive tool, these make wedges of just the right size.

"Two-queen colonies are not for everyone."

Next month Part II will discuss supering, swarming and preparation for wintering.

Figure 4. After three weeks the double screen is replaced with a queen excluder.



News and Events

MINNESOTA

Perian Norskov, the 1982 Minnesota Honey Queen is on a busy schedule of events throughout the state. She has attended numerous local festivals, parades and fairs, helping promote Minnesota honey.

Perian enjoys talking with people from school age to senior citizen groups about the values and uses of honey. Cooking demonstrations and sharing her recipes, as well as answering questions about honey are some of her favorite activities.

Perian is the daughter of Mr. & Mrs. George Norskov of Brainerd, MN. While attending St. Cloud State University, Miss Norskov has been living in St. Cloud, MN. Some of her hobbies include sewing, cooking, swimming, bowling and dancing, but her real interest seems to be in helping others discover the wonders of beekeeping and the great taste of beautiful Minnesota honey.

OHIO

Ohio State Beekeepers Association

The Ohio State Beekeepers Association will hold its Annual Fall Meeting and the Election of Officers on Saturday November 20, 1982, at Capital University, 2199 East Main Street, Columbus, Ohio. The meeting will be held in the south dining room of the Campus Center with registration beginning at 8:30 A.M.

HAWAII

1983 American Beekeeping Federation Convention

Ever dream about escaping from the snow and ice in January and spending a few days in a warm tropical area? If so the 1983 American Beekeeping Federation Convention is just what you've been looking for!

Meeting in Honolulu at the Sheraton-Waikiki January 18-22nd and then reconvening in Kona on the "big" island of Hawaii at the King Kamehameha Hotel this convention offers something for everyone! Although being held in one of the best known resort areas in the world this will be a *working convention* and not all "fun and games"! Wanting to leave as much time as possible for sightseeing and touring the business part of the convention will be limited to the morning and early afternoon hours and the rest of the time you will be free to do as you please.

Judging from the number of registrations that have already been processed by GTU, Inc. our official travel coordinator, the attendance is going to be quite high. If you haven't already made your plans I urge you to do so as quickly as possible! If you didn't receive or have misplaced the Convention Brochure, write us and we'll be glad to send you a copy. Also remember that *significant* savings can be realized by making your arrangements through GTU rather than making your own plans. These savings include reduced registration fee, complimentary Luau and bus tour to Kona Queen and Powers Apiaries on Hawaii, as well a lower inter-island and West Coast to Honolulu air fares!

So send in your registration form and deposits today and get your plans set without waiting until the last minute.
Frank A. Robinson, Secretary-Treasurer, American Beekeeping Federation, Inc., 13637 N. W. 39th Ave., Gainesville, FL 32606

NEW YORK

Empire State Honey Producers Assoication

The annual meeting of the Empire State Honey Producers Association will be held at the Hilton Motor Inn in Syracuse, NY at the junction of Interstate route 81 and the N.Y.S. Thruway Exit 36. The dates are Friday and Saturday, December 3 and 4, 1982

COLORADO

Colorado Beekeepers Association

Steve Taber, an internationally recognized bee researcher and queen breeder, will be the featured speaker at the annual meeting of the Colorado Beekeepers Association (CBA). The meeting is scheduled for December 4th and 5th, and will be held at the Denver West Holiday Inn located at 14707 West Highway 40, Golden, Colorado (Colfax Ave. at I-70). A program of speakers and exhibitors will begin at 9:00 A.M. December 4th. The annual business meeting of the CBA will begin at 8:30 AM December 5th. There will not be a banquet at this year's meeting. However, there will be an informal gathering Saturday evening, December 4th, at 8:00 PM at which beekeepers can meet socially.

The program Saturday will include presentations of interest to both hobby and commercial beekeepers. There will be no registration fee for the meetings and all beekeepers are welcome to attend. Only dues-paying members of the CBA may vote at the business meeting.

Further details of the meetings may be obtained by sending a self-addressed stamped envelope to: **Randy Fischer, 3007 Moore Lane, Ft. Collins, Co 80526, Ph. (303)226-5383**

NEW MEXICO

New Mexico Beekeepers Association

The best annual convention ever is planned for the New Mexico Beekeepers Assoc. for 1982. The meeting will start with registration at twelve noon, Friday, Dec. 3rd and the meeting will run through Dec. 4th.

Four Season's Inn in Alburquerque, which has excellent facilities, will be the site of the convention. The location is just off I-40 at 2500 Carlisle N.E.

Featured among the speakers will be nationally known Dr. Elbert Jaycox. He is noted for his work and talks on practical beekeeping and will talk on beekeeping in Yemen and on providing water for bees in the desert. Also a presentation on the Africanized Bee in South America is planned.

A luncheon banquet will be held Saturday noon. Everyone is welcome and invited to attend.

ARIZONA

American Honey Producers

"Beekeepers!! Take your Honey to Phoenix, Arizona. Plan now to attend the 1983 American Honey Producers Convention Jan. 10-14 in the 'Valley of the Sun.' For room reservations contact the Ramada East Resort, Phoenix, Arizona 85008. (phone 602-275-7878).

Room rates are $36.00/single or double occupancy.

An excellent program is planned. Some of those who will be speaking are: 1. Tom Ed Burleson — 'The Future of the Honey Industry from the Packer's Perspective.' 2. Don Olson — 'Packaging of Government Honey.' 3. Ralph Gamber — 'Honey Promotion.' 4. Dr. Dick Nunemaker — 'Isoelectric Focussing Process for Positive Bee Race Identification.' 5. Dr. Ross Nielson — 'Contracting for the Iradication and Control of the Wax Moth.'

There will be many more industry, government, and research people speaking on a variety of topics ranging from 'The Government Price Support Program' to 'Hybrid Cotton.'

A tour of Stewart Honey Co. is planned as well as an old west trail cookout. Jim Smith of Yuma, Arizona will host a tour of the Yuma Valley on Friday or Saturday.

Other attractions in the area are; shopping, live music and concerts, sports, horse racing, museums and wild west fun.

Plan now to attend the Phoenix Convention!!

For further information contact Jack Meyer, Jr. or Glen Wollman, Box 61 Winfred, South Dakota 57076.

OHIO

Ashtabula County Beekeepers Association, Inc.

The regular fall meeting of the Ashtabula County Beekeepers Association, Inc. will be on October 23rd starting at 12:00 noon with a picnic lunch. Everyone is welcome. The featured event will be a presentation by Robert Miller of the Jefferson 4-H Club who won an Outstanding Achievement Award at the Ohio State Fair with his demonstration of "The Nectar Collector".

For more information call O.G. Soule, President, Rt. 307 Geneva, Ohio or A.L. Westcott of Kingsville, Secretary.

The picnic and meeting will be at the Henderson Memorial Library in Jefferson, Ohio.

TENNESSEE

Tennessee State Beekeepers' Association

The Southern States Beekeeper's Federation and the Tennessee State Beekeepers' Association will have a joint meeting in Chattanooga, Tennessee on October 29 and 30, 1982. The meeting will be in the Read House Hotel in Chattanooga, and all beekeepers are welcome to attend.

MASSACHUSETTS

Middlesex County Beekeepers Association

The November meeting of MCBA will take place on the 27th (Saturday). Location for all winter meetings will be at the Waltham Field Station in Waltham, Mass. A potluck supper is planned for 6:30 with a business meeting to begin promptly at 8 pm.

If there are any questions regarding meetings or membership, please call Ruth MacNutt (667-5695) address 24 Governor Hutchinson Road, Billerica, MA 01821

CANADA

Alberta Beekeepers Association

The Alberta Beekeepers' Association is pleased to announce that Mr. Gong I Fei will be the keynote speaker at the Association's 1982 Annual Convention.

Mr. Gong, an entomologist, is Dean of Beekeeping and Associate Professor at Fujian Agricultural College in the People's Republic of China. His presentations will include "The Preventive Measures on Two Asiatic Mites Parasitized on Honeybees" and "The Natural Beekeeping Conditions and Honeybee Races in China."

The 49th Annual Convention will run November 3,4, and 5 at the Mayfield Inn, Edmonton, Alberta, Canada.

For more information and registration, please contact Louise Zwaenepoel, Secretary-Treasurer of the Alberta Beekeepers' Association at 5908 — 137 Avenue, Edmonton, Albert T5A 1C9 or by phone at 403-475-3314.

ILLINOIS

Illinois State Beekeepers Association

The Illinois State Beekeepers fall meeting will be held on Nov. 6th at the State House Inn, 101 East Adams St., Springfield, Ill., with a short business meeting to be held Friday night Nov. 5th.

good, have sold 300 lbs. to local customers. Bees in good condition in Texas. Broomweed, goldenrod and queens crown in bloom in early October. Most of state needs rain. Honey sales steady.

Region #8

Snow in Montana first part of September stopping all bee activity. Have extracted nearly 100 lbs. per colony average, which is a little better than 1981. Winter preparations underway with some colonies transported to California for wintering and return in the spring as splits with new queens. Other colonies are wrapped for winter or killed off and restocked from packages in the spring. Extracted good crops in most of Colorado. Bees in good condition for winter. Moisture above average in Colorado. Honey has been moving well at consumer level. Major markets have been running specials as more people are using it for canning a preserving.

Region #9

Honey sales slow in Oregon. Expected to pick up when cooler weather comes. (Need reporter in California and Washington.)

Say you saw them in *Gleanings.*

By L. Goltz

Wonderful World of Bee Pollen by Joe M. Parkhill. County Bazaar Publishing Company, Rt. 2, Box 190, Berryville, AR 72616. 84 pages, soft cover $6.95 plus .95 postage. This prolific author (*The Wonderful World of Honey; Here's To You, Honey; Wonderful World of Whey Lovers; God Did Not Create Disease or Sickness; Honey, God's Gift for Health and Beauty*) has added another contribution to information on bee products and their health-giving properties. No matter what your views on the subject you must admit that here is someone who, instead of merely talking endlessly about the problems of beekeeping, does something about them.

Packed into this little book is the author's and others' evaluations of pollen as a human food. It lists recipes using honey and pollen and contains many comments on honey, propolis and on beekeeping in general, including references in the Bible to bees and honey.

Even if you are intuitively skeptical about the value of certain bee products in nutrition or medicine you may find it harder to remain unconvinced after reading Joe M. Parkhill, Honeyologist, Nutrition Consultant and Professor of Apiculture.

Sting Allergy

Reprinted By
Courtesy of Beekeepers Association of Northern Virginia
Newsletter, Sept. 1982
Artwork By BOB WANTZ

Medical specialists at John Hopkins have come up with a virtually 100% effective treatment for severe reactions to insect stings — venom therapy. Periodic injections of venom desensitize a patient against sting allergy.

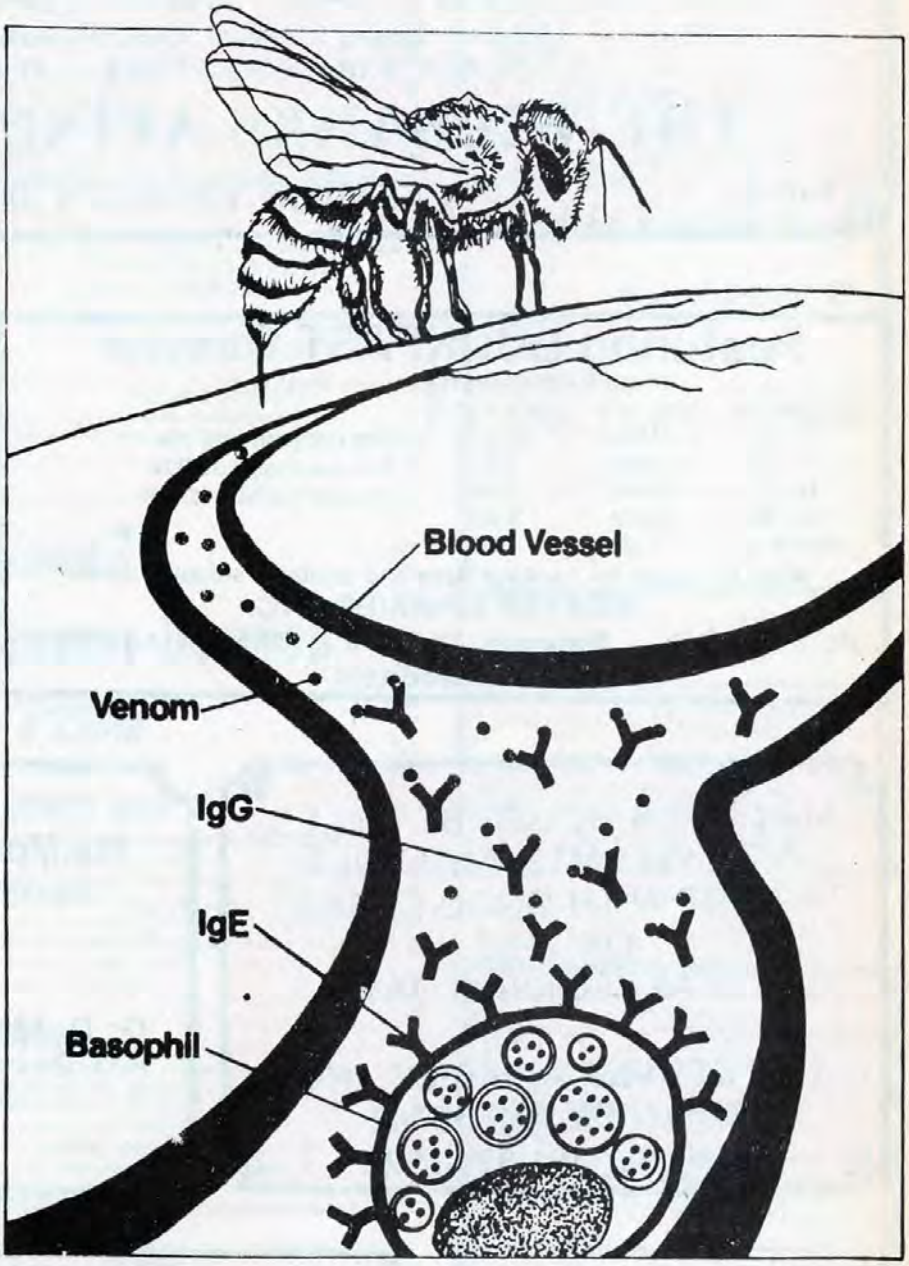
Venom builds up the body's reserve of IgG antibodies which protect against an allergic reaction by intercepting antigens in the venom before they bind to allergy — triggering IgE antibodies.

Allergy sufferers have an excess of IgE antibodies. Attached to basophils and mast cells in the blood, the Y-shaped IgE antibodies (hundreds of thousands per cell) grab onto an insect sting antigen and then trigger a change in the cell surface that causes the release of irritating chemicals. These chemicals, such as histamine, cause the wheezing, sneezing, and hives common to allergy sufferers. Histamine also causes blood vessels to expand and leak fluids, producing the characteristic swelling that often surrounds the sting, and the redness, as blood moves easily through the widened vessels to the skin surface. If the leakage in the vessels is not arrested, it can lead to a drop in blood pressure and anaphylactic shock.

For More Information

Insect Allergy and Medicine for the Layman: Alleries, available without charge from the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20205.

Insects and Allergy and What to Do About Them, a 264-page paperback by Claude A. Fraizer, M.D. (who served on the medical faculty in 1946) and F. J. Brown, published by the University of Oklahoma Press.



Allergy sufferers treated with venom therapy have raised levels of IgG antibodies which trap the insect sting antigens before they bind to the IgE antibodies that cover basophils and mast cells in the blood. If antigen binds with IgE antibodies, histamine is released from the basophil or mast cell, causing symptoms of allergy including swelling, itching, pain and in more serious reactions, a drop in blood pressure, anaphylactic shock and perhaps death.

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 ONR, England. TF

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BEEKEEPING. A West Country Journal—written by beekeepers—for beekeepers. 1.50p inland or 1.80p ($4.00 Overseas). 10 issues yearly. Editor, R. H. Brown, 20 Parkhurst Rd., Torquay, Devon, 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.

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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

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South African Bee Journal
Bi-monthly publication of the S.A. Federation of Beekeepers' Associations. Primarily devoted to articles on *A. mellifera adansonii* and *A. m. capensis*. Foreign subscriptions at 10 South African Rands per annum (payable in South African currency only). Subcriptins to: Prof. H. R. Hepburn, Dept. of Physiology. University of the Witwatersrand. Johannesburg. RSA.

"To know what to do, how to do it, and to do it at the right time, is the great secret of success in beekeeping as well as in every other calling."
From *Annals of Bee Culture For* 1872, by D. L. Adair.

A hive containing about 30,000 bees was placed in each of 4 one-acre plots in each of four cantaloupe fields. There were 10% more fruits on these plots than on control plots.
Apicultural Abstracts 1982 Vol. 33 No. 3

In 1981 the Master Beekeepers Certification Program was initiated in conjunction with the New Jersey EAS Conference. Of the 53 applicants, 11 successfully completed all three phases of the testing.
From *The New Jersey Beekeepers Association News.*

There is a strong belief in Holland that tobacco smoke, or rather the nicotonic effect of tobacco smoke actually kills the Varroa mite without harming the bees.
From the *British Bee Journal* No. 4440 Vol. CX, August 1982.

Index to Display Advertisers

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