

# W.A.S.

## Western Apicultural Society Journal

Volume 7 • No. 3

July 1985

# Corvallis — Can You Get There From Here?

Dr. Burgett ("Mike" to his friends) tells me that everything seems to be under control (Something's Wrong!) as he serves as President and Program Chairman for the next W.A.S. Conference. In response to a request for written instructions on the best ways of reaching Corvallis and the meeting site, Mike provided a map (found on page 296) and the following:

"From the east, from which most people will be coming from the freeway, I-5--you are traveling on Oregon Hwy. 34 which becomes Harrison Street once you cross the Willamette and enter Corvallis. Continue west on Harrison until you come to 2nd, 4th, 5th, or 6th Street--take a left and head south on these numbered streets until you encounter Western--turn right on Western until you come to the Conference Center at 26th Street.

From the south you will enter Corvallis on Hwy. 99W which turns into Third Street once you get into the main part of town--turn left at the intersection with Western and go to the Conference Center at 26th Street.

From the north you will come into town on 99W or Hwy. 20, both of which become numbered streets and intersect with Western, where you turn right and continue west to 26th.

Parking will be directly across from the center in the main lot of the Parker football field stadium, and will be at no cost. Housing will be at the closest dorm directly north of the center, about 100 yards distance."

### EDITOR'S CORNER

I think everyone now has all of the information to preregister for the conference and to prepare entries for the competition. The last issue contained the preregistration forms and rules for the competitive exhibits as well as a complete program. The China tour was also described at length. Dr. Cressler reports that about a dozen persons are now going and that he has room for several more. A trip like this would be a once-in-a-lifetime experience.

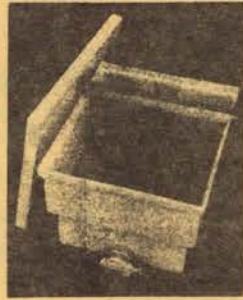
This pre-conference issue of your Journal is primarily meant to remind you that conference time is upon us and that we need your attendance at the conference to enhance its success. Mike has been able to keep the costs of attending to a minimum, with a very reasonable meal and lodging package and nominal registration fees. He tells us that those who wish to take an R.V. will be able to park very close to the conference center. While there are no hook-up facilities, you may live in the R.V. as long as it is self-contained.

This has been a very busy spring and summer--for the Journal staff. Eric, Zandy and I had schedules that often didn't mesh, so the publication schedule was somewhat erratic. Each year we try to correct this and maintain a consistent time of issue, but it never seems to happen that way. We will keep trying. To those of you who have called or written asking, "What happened to the Journal?", let me assure you that it was our publication schedule, not the post office, causing the delay, and if your membership is current you are still on the mailing list. We do appreciate your concern and your calls and letters. Especially welcome are the newsletters and items from the local member associations. It helps us keep current on your interests and doings.

## UNCAPPING TUB/DRAINER



The Uncapping Tub in use. Please note the upward stroke used to make the knife work properly.



The No. 251 Model has a Tub made of two pieces and accepts a wood bound Queen Excluder (without wood) to drain cappings. The two piece construction allows the beekeeper to remove the upper part to dump the cappings. The bottom part holds 5 Gal. of Honey and has a standard 1/2" threaded outlet.

Available at your distributor

- Will hold cappings from approximately 100 standard frames
- Honey quality will be the same as extracted honey
- Made of FDA approved Polyethylene
- Crossbar permits uncapping directly into tub
- Gallon calibrations for easy reading of honey volume
- Filtering accessories available soon

### Pierce Manufacturing, Inc.

Manufacturer of Quality Bee Supplies  
2536 A East Fender Ave., Fullerton, CA 92631  
(714) 447-3855

autumn honey flow. There was a single 11 kV electric line on wooden poles, with wooden cross arms, about 75 m away from the apiary. This line did not pose any problems to the bees until the onset of the honey flow, when thousands were killed as they clustered on the dark brown insulators which were situated across their flight path. Electrical engineers were unable to explain this effect. Bees left the insulators safely when the electricity supply to the lines was switched off, but returned to die when the supply was switched on again. The bees appeared to die as a result of accumulating charges from the line rather than being electrocuted by the passage of an electric current through their bodies. This unnecessary mortality was only prevented by painting the insulators white."

### ILLUSTRATED CATALOG OF AUDIO-VISUAL MATERIAL

The International Bee Research Association has issued a new edition of its catalog, Audio-Visual Material. These visual aids can be purchased from IBRA and include teaching courses, with illustrated text, filmstrips and cassette commentary, wall charts, slide sets, posters, wooden hive fronts, postcards and study prints, and illustrated catalogs. All the material from the UK, the USA, Germany, Belgium, Japan and Yugoslavia is in color.

The catalog is illustrated with black and white photographs of some of the items available, and this will help beekeepers, teachers and others when choosing aids for study and exhibition.

### NEW AWARD

According to the May 17th newsletter of the Puget Sound Beekeepers Association, the A. I. Root Company has agreed to sponsor the first annual "Roy Thurber Memorial Award for Inventiveness in Beekeeping." Although I am not sure of all the details, I would assume that the award will be given to the person who enters the best item in the Gadgets categories of the competitive exhibits.

Do you have a gadget that you have found useful to your beekeeping tasks? Gadgets from as small as a one-piece metal bracket to hold a book of matches on a smoker bellows, to as large as a trailer have been exhibited and won prizes in the past.

Who knows? Your prototype may be the fore-runner of a world famous item. If not, don't worry about it. Just bring the item or items, as Roy always did, and discuss it/them with your peers. The purpose of a W.A.S Conference is to share ideas, particularly with a group of friendly peers.

### MISC. BEE NEWS

F. A. Shah reported on the following in Vol. 66, No. 1, 1985, of Bee World:

#### Honeybee Fatalities from High-tension Power Lines

"In 1978 we moved one of our apiaries to a migration site at Kullan, India, to exploit the

A copy of the 8-page catalog, List 3: Audio-Visual Material Obtainable from the International Bee Research Association (1985/86), may be obtained from IBRA, Hill House, Gerrards Cross, Bucks SL9 0NR, UK, for \$.45 (free to members of IBRA).

### WESTERN APICULTURAL SOCIETY OF NORTH AMERICA, INC.

President	Michael Burgett	Entomology Department (503) 754-4816 Oregon State University Corvallis, OR 97331
Vice-President	Diana van Driesche	3286 Talbot Road S. (503) 327-3609 Jefferson, OR 97352
Secretary-Treasurer	Zandy Neese	711 College (916) 661-3659 Woodland, CA 95695

### EDITORIAL STAFF FOR W.A.S JOURNAL

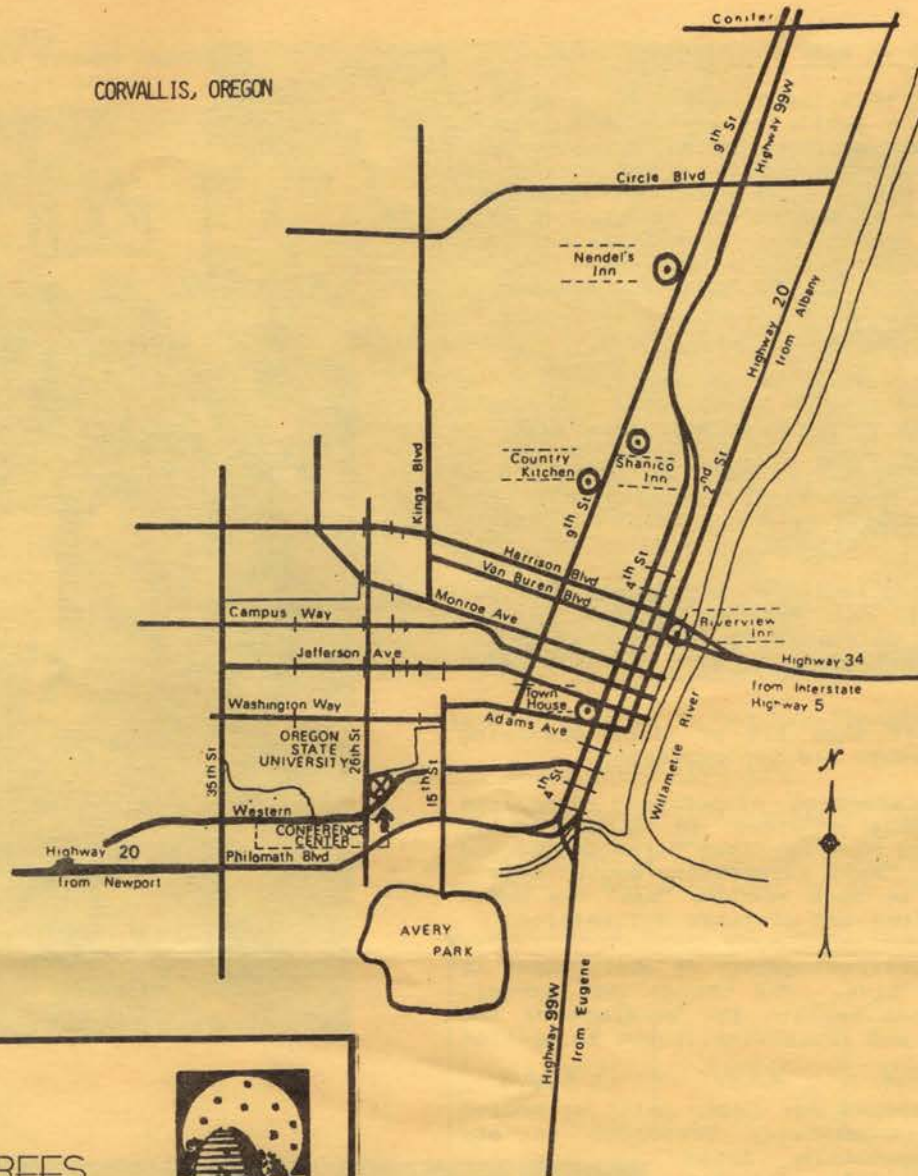
Editor	M. "Burt" Spangler	451 Mill Street (916) 273-0736 Grass Valley, CA 95945
Managing Editor	Eric Mussen	Dept. of Entomology (916) 752-0470 Univ. of California Davis, CA 95616

Individual .....	\$ 10	Advertising Rates: 1/4 page.	
Couple Membership.....	\$ 15	One Year.....	\$ 50
Assoc. (Club) Membership.....	\$ 10	Single Copy.....	\$ 25
Commercial Membership.....	\$100	Business Cards:	
Life Membership.....	\$100	(Supporter) for One Year....	\$ 20
Couple Life Membership.....	\$150	Single Copy.....	\$ 5
Benefactor .....	\$500	Patron .....	\$1000

Payments in foreign currency should be adjusted to reflect current rate of exchange (U.S.).

Copy deadline is the 10th of the month. Send all copy to the Editor. Information must reach the Editor at least one month in advance of the copy deadline.

CORVALLIS, OREGON





**BURTS BEES**  
 MANFORD "BURT" SPANGLER  
 451 MILL STREET  
 GRASS VALLEY, CA 95945

PHONE  
 (916) 273-0736

**BEES  
 HONEY  
 EQUIPMENT**

Ph. (801) 245-4018

**WILLIAM P. NYE**  
 BEE POLLINATION CONSULTANT  
 U.S.D.A. Retired

HONEY BEES  
and  
WILD BEES
459 VALLEY VIEW DR  
HYRUM, UTAH  
84319

ALASKAN WILDFLOWER HONEY    BEEKEEPING SUPPLIES



**Hives & Honey**

S.R. BOX 80632  
FAIRBANKS, ALASKA 99701
DAVE TOZIER  
(907) 488-6484

PUBLIC RELATIONS--A MUST

Sonoma County Harvest Fair

A portion of this issue of the W.A.S Journal is devoted to the public relations effort of a California beekeeping club which is working to disseminate information on bees and beekeeping to the general public. The goal of the Sonoma County Bee Club, as stated in the mast of each issue of their newsletter, "Monthly Extractor," is "To increase interest in and knowledge of bees and beekeeping for the hobby and commercial beekeeper, and to educate the general public in the value of bees."

In response to my request, the Club sent the following information and photographs concerning some of their extracurricular activities:

"Our community offers many different functions in which we actively participate. Of course, these activities are carried out solely by our membership and paid by our Club treasury.

We have rented booths at both the Sebastopol Gravenstein Apple Fair Festival on April 13 and 14, and the 4-H Chickenque in Santa Rosa on May 5. Both of these functions were "first-timers" for our Club.

We gestimate that 99% of those observing these type of events are non-beekeepers.

We enjoy presenting elaborately decorated booths, with space provided for selling honey (if allowed), and have received First and Second Place awards for "Most Interesting Booth" several times. Two or more members "man" the booth to answer questions and dispense information.

A terrific interest-getter at every event is the Observation Hive. The crowds that gather, while our members explain the workings of the Hive, are large and impressive....not to mention impressed.

Our Club-financed Bee Cage, built by member Chuck Sharp, successfully premiered at the Sebastopol Gravenstein Apple Fair in August, 1984, and has been a "hit" ever since. In fact, Chuck's Bee Cage presentation was included in the Honey-bee Program sponsored by the San Francisco Hobby Beekeepers Association on February 16, 1985, in San Francisco. The participants and visitors observing this program were mostly beekeepers."



ERIC MUSSEN  
Extension Apiculturist

Department of Entomology  
University of California  
Davis, CA 95616



BEARS, BLOSSOMS AND BEES

The Sebastopol Apple Blossom Festival was held in the downtown area of Sebastopol on the weekend of April 12th and 13th. After the parade came into the main festival area, by the Veteran's Memorial Building. Due to the nature of security regulations, etc., it was not possible to put up a booth and leave it over Saturday night. This necessitated making the display mobile by mounting it on a truck and driving it to Chuck's home that evening. With minor adjustments after the overnight trip, the table was ready again Sunday morning. As usual, the observation hive was the big attraction, with members on hand to explain all to the onlookers.

Mike Gnau was the only honey salesman, and George had some candles to offer. The usual give aways were available, including a Bee Coloring Book, a joint effort between the Honey Advisory Board and your club.

With several people en- vincing interest in the club, applications were handed out with copies of the Extractor. All in all a successful exposure for your club.



Beekeeper About to End Bear Damage

MORE INFORMATION ON CHALK BROOD FROM IBRA

The International Bee Research Association has just reprinted a 7-page article from Bee World, No. 1, 1985, by Dr. L. A. F. Heath (Dept. of Biological Sciences, Plymouth Polytechnic, Devon, UK), entitled, "The Occurrence and Distribution of Chalk Brood Disease of Honeybees."



Sebastopol Gravenstein Apple Fair

PACIFIC	WAX	WORKS
---------	-----	-------

DEEP CELL FOUNDATION  
FOR  
THE BEEKEEPER  
WHO DEMANDS THE BEST  
AT  
VERY COMPETITIVE PRICES  
PLAIN OR WIRE  
WAX RENDERING  
Write for prices  
Route 3, Box 272  
Newberg, Oregon 97132  
(503) 538-5591

The reprint describes how the disease *Ascospaera apis* first became known and summarizes the information Dr. Heath has received on its present distribution in north and south temperate regions. Reports have been received of the presence of chalk brood in many European countries and also in Tunisia, Japan, China, North America, Argentina and New Zealand, as well as in the tropical regions of southern Mexico, Belize, Honduras and the Philippines. Many reports fail to indicate whether a single colony only is involved or whether the infection is widespread, and Dr. Heath suggests that more accurate measures of chalk brood disease frequency and importance in various parts of the world are needed. Recent experiences in New Zealand, Australia and North America indicate that strains of honeybee resistant to the disease exist and could be used in selective breeding programs.

This reprint (M115) is available direct from the International Bee Research Association, Hill House, Gerrards Cross, Bucks SL9 0NR, UK, price \$1.45, post paid.

Dr. Heath's 17-page reprint on chalk brood published in 1982 is also available from IBRA. The title is M110: Reviews: Development of Chalk Brood in a Honeybee Colony: Chalk Brood Pathogens. The price is \$2.45, post paid.

**POTENTIALLY FATAL RESPONSES TO HONEY BEE STINGS MAY OCCUR AT ANY TIME**

The following two articles describe systemic allergic responses to bee stings encountered by two different beekeepers located 2500 miles away from each other. But notice the similarities of their reactions. Anders Jarne's report was in the July 1985 issue of the Nevada County (CA) Beekeepers Association Newsletter and William Disney's account was in the March 1984 issue of Dr. John Ambrose's "Nectar Guides."

**Bee Sting  
by Anders Jarne**

"I knew I could get stung anytime, but since I'd been stung before I didn't give it much thought. In fact, while installing packaged bees one had crawled up my pant leg and left its calling card on my calf. I did experience swelling to the point that I could not wear my usual shoes, but all was forgotten until 6 weeks later.

My wife was away in Sacramento so after work I decided to see how the new foundations were looking. It was hot, and I wore only a short sleeve shirt, my veil, gloves, and long pants tucked into my boots. I followed the methods I learned in our bee class and in books I'd read. Working smoothly, yet quickly, I lifted the eighth frame when suddenly I was attacked. One got me on the stomach through the shirt, another on the bare arm above the gloves and below the sleeve. I backed away and smoked myself. Order was quickly restored, and I continued to investigate my hive. Within 2 minutes there was a ringing in my ears, then an itching on my feet, groin area and armpits. I knew something was amiss so I quickly closed the hive and made for the house. Then things really happened quickly. I had become so itchy that clothes were uncomfortable. I stripped and noticed my skin had raised bumps all over, like hives, and my skin color had turned a lovely shade of red. My breathing was becoming labored and painful, and I had the distinct impression that I was going to vomit. My breathing became even more difficult and a throbbing, like when a finger is smashed by a door, began all over my body. I knew I was having a serious reaction, and I attempted to get help. My first attempts were failures. I could not concentrate on dialing and made several incorrect calls. I finally reached Burt Spangler and Randy Oliver, and each confirmed my experience as being serious and suggested showers to relieve the itching as well as getting emergency aid. After 20 minutes had elapsed and I was beginning to feel somewhat better, I called Kaiser emergency and was glad to hear someone say that I would be alright but that I should come in soon for testing in their allergy clinic.

I am now scheduled to take a skin reaction test to see if I am one of those rare ones who can have fatal reactions to stings. If the test proves positive, I will begin a long series of "stings" via hypodermic needle that in time will build up to the intensity of two bee stings.

Dr. Watts of Kaiser's Allergy Clinic told me that it is a costly process for the hospital, \$150 per full injection, and that the venom has only a 24-hour shelf life. I will have to go



**VACA VALLEY  
APIARIES**

**CARNIOLAN QUEENS**  
**ITALIAN QUEENS**  
**CORDOVAN QUEENS**

**INSTRUMENTAL INSEMINATION**  
**SERVICE**

**CUSTOM INSEMINATION  
BREEDER QUEENS  
PERSONAL II TRAINING  
I.I. EQUIPMENT**

**WRITE FOR DESCRIPTIVE  
BROCHURE AND DETAILS**

**6745 BUCKTOWN LN.  
VACAVILLE, CA. 95688  
(707) 447-6723**

**ALL COLONIES FED FUMIDIL-B**

weekly at first to get venom shots, and gradually the schedule will slow down to monthly visits some 7 months later. Each visit has a mandatory waiting period of 1 hour after the shot is given.

I was also prescribed a sting kit, which I was given instructions in using. I have to keep this close by at all times.

I want to continue with the bees so I'm willing to go through the long immunization process. But I certainly hope that I never go through that reaction experience again."

An Allergic Reaction to a Bee Sting  
From the Victim's Perspective  
by William Disney

"On a Sunday afternoon following several consecutive mid-spring rainy, chilly and overcast days, the weather became ideal for the internal inspection of a hive of honeybees. I had been both encouraging and helping a friend getting started with bees, and we used this convenient and appropriate time to inspect his recently hived nucleus colony. My friend received the thrill and further encouragement in beekeeping by locating the unmarked queen. After closing the hive we joined our wives, who were enjoying the comfort of the patio, to allow my friend to talk about his just-concluded experience.

Some 10 minutes later into our continued beekeeping discussion, I changed my position in the chair and immediately received the sensation

of a single sting on my right leg just above the knee. From a standing position, I coaxed the insect from the cuff end of my trousers, and identified it as a honey bee. Undoubtedly, this honey bee crawled up my leg during our colony inspection, and I did not remove the stinger until I returned to my home about 30 minutes later.

At a time I estimate to be 45 minutes from having received the honey bee sting, I began to feel a slight dizziness which very rapidly intensified and was coupled with a vision change--spots before my eyes, if you will--as well as some tightness in my throat and slight difficulty in breathing. With these abnormal physical changes continuing, I deemed it prudent to relocate from my present position outside to inside my home. As I entered our home, my wife observed me and before I could speak, she matter of factly stated in an alarmed tone that my facial color was blood red and without hesitation inquired what had happened. Enroute to a nearby room, where I assumed a prone position on my bed, I enlightened my wife about the unusual physical sensations I was experiencing. At this point other changes added to those previously mentioned occurred. Alternately, I began chilling and sweating and on two separate occasions I became extremely nauseous with relief coming only after vomiting. Intermixed with all the unusual and frightening experiences, I started violent and uncontrollable shaking and with the most excruciating pain I have ever had as a result of muscular cramps in both legs and feet. By now, some 30 minutes later from the first noticeable abnormal feelings, our neighbors, she a registered nurse and he with First Aid and CPR training, were assisting my wife and daughter in the decision process of what to do for my benefit.

It is indeed most interesting that even though I have on many occasions received singular or multiple honey bee stings without any resulting problem, there was never a question, with either my wife or me that I was having a reaction to an insect sting rather than some other physical problem, the symptoms of which would have been similar or identical to those being experienced. Members of the medical profession who later attended me did confirm, in fact, my problems started from the single honey bee sting.

With the continuing breathing difficulty, violent shaking of my entire body, including teeth chattering so rapidly I could hardly speak, and the muscular cramps still at an unbearable pain level, I quite suddenly realized I needed professional medical help--fast! What I did not know, and for whatever reason, my four adult attendants could not make me understand for some time, was the fact my doctor had been notified of my condition by telephone and an emergency rescue vehicle to take me to the hospital had been summoned. The arrival of the rescue vehicle seemed an eternity and in fact was prolonged because the one based nearby was in use and a substitute vehicle based at a further distance from my home was dispatched.

Following the arrival of the rescue vehicle and a check of my vital signs by the trained attendants I was helped to the garage, placed on the waiting stretcher and rolled down the driveway to the awaiting vehicle. During the 30

## GLEANINGS IN BEE CULTURE



**SUBSCRIPTION:**  
**Only \$10.35 for 12 Issues**

**WE'LL GIVE YOU A HAND WHEN YOU NEED HELP!**

— Since 1873, GLEANINGS IN BEE CULTURE has been helping beekeepers succeed. Now, to meet demanding contemporary needs, GLEANINGS offers even more practical beekeeping help.

**THE A.I. ROOT COMPANY**

823 West Liberty Street P.O. Box 706 Dept. WAS  
Medina, OH 44258-0706 PH: (216) 725-6677

Look To



# Maxant

For the Finest  
in Honey Processing Equipment

Extractors - 7 Sizes Power - 3 Hand  
Bottling Tanks - 3 Sizes  
Clarifiers - 3 Sizes  
Capping Spinners - 3 Choices  
Un-capping Trays - 2 Sizes  
Filters - Pumps  
Float Switches - Sump Tank  
Storage Tanks  
Capping Pumps - 3 Sizes  
Motorized Chain Uncapper

A COMPLETE SYSTEM  
for the  
LARGEST or SMALLEST  
BEEKEEPER

MAXANT INDUSTRIES, INC.  
P.O. Box 454 Ayer, Mass. 01432 617-772-0576

second stretcher ride from home to the emergency vehicle and for the first time in my life, I realized I was losing consciousness and absolutely knew death was imminent. I vividly recall my neighbor demanding I remain coherent and, of all things, not wanting my death to occur in a manner that would increase the number of the few annual insect sting fatalities. Oxygen administered by my attendants and turning my thoughts to the continuing leg pains circumvented my thoughts of dying. My emotional state did not improve by learning during the radio transmission of my vital signs from the emergency vehicle to the hospital, my blood pressure was at a fatal low level. My feelings further deteriorated on two additional occasions when the emergency vehicle motor stopped. I suppose I will forever continue to vividly recall the grinding sound produced by the motor during the re-starting process and the intermixed conversation among the attendants regarding the advisability of requesting an alternate vehicle. Except being apprehensive, our trip continued without incident following the second re-start of the motor.


My feeling upon entering the hospital emergency room was of astounding mental comfort. The several people who surrounded me, all dressed in green and wearing funny shower cap-looking head covers, emphatically radiated competence. With sharp scissors and quick movements, all of my clothing was removed with my anatomy completely exposed to allow needles, tubes and monitoring device sensors to be inserted or placed without restriction. Following a simple question to

determine if I was allergic to or currently taking any medication, there was virtually no conversation between or among my attendants except an occasional announcement of my blood pressure reading or pulse rate. The waste from my becoming nauseous was quickly analyzed and pronounced negative. Negative from blood, I learned later. Gradually, over a time span of what I believe to be approximately an hour, my abnormal physical changes subsided and my blood pressure was increasing. My leg cramps continued, however, with almost unbearable pain. For the first time I was verbally addressed by my doctor who stated I was being relocated to the Intensive Care Unit for overnight observation and that soon my blood pressure level would allow the introduction of medication to relieve my leg cramps, the latter accomplished a short time thereafter. Undoubtedly, part of the ICU observation procedure is to not allow sleep. Most of the night the nurse kept me awake by asking questions about honey bees and beekeeping and I answered with long verbal dissertations on the wide spectrum of this subject. I would predict there is a nurse in the area who, after a full night's conversation on one subject, either is now interested in becoming a beekeeper or doesn't have any taste whatsoever for honey! By midnight, I had completely stabilized and felt normal, yet I was not permitted to sleep.

The following morning during a pre-discharge consultation with my doctor, he confirmed I did have a near fatal reaction from the honey bee sting and recommended I stop my beekeeping hobby and retain on my person a prescription issued "Insect Sting Emergency Kit" for immediate use in the event of an insect sting. In addition,

## Everything for the Beekeeper



 **DADANT & SONS,  
INC.**

P.O. Box 7996  
2534 Airways Drive  
FRESNO, CALIF. 93747  
Phone 209-292-4666

Conveniently  
located dealers  
over most of  
the Western U.S.



he suggested I consult a cardiovascular specialist because of the extreme leg cramps were the result of a circulatory problem. I have stopped the active beekeeping portion of my interest in honey bees, carry the emergency kit and have had major surgery to eliminate the circulatory blockages found in my aorta and iliac arteries.

I am of the opinion my reaction from the single sting was the result of poor blood circulating prohibiting the injected venom from being dissipated by normal neutralization of my blood chemistry as had occurred with past stings. I also feel it would not be prudent to test my opinion for the simple reason it could be wrong and fatal. As an alternate, I am investigating a desensitizing program. In the meantime, I am enjoying working with another fascinating product of the hive--beeswax.

#### NEW ITEM ON THE MARKET

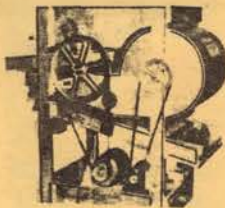
*Insul-hive*--Echoing the claims of former manufacturers, another company has entered the bee box business with rot-proof, termite-proof, vermin-resistant plastic hives. In this case, the hive bodies are primed for painting (which is necessary) and plastic bottom boards and "migratory" covers are included with one deep hive box for \$39.95 each, with discounts for larger quantities.

Their advertisement that "propolis does not stick as well as with wood" is likely to be true, but we found that to be disadvantageous, since the top super would slide off the bottom one when it was tipped up to examine for swarm cells.

For more information on supers, migratory tops and bases, etc. please contact J. L. Cox Enterprises, P.O. Box 468, Rockdale, TX 76567.

(714) 768-7750

## New Pollen Cleaner



22"x38"x41" hi

- new design cleans fresh or dry pollen
- combined multiple screens/vacuum system
- fast production with only one man
- separate discharges for debris types
- non-clog hopper holds over 50 lbs.
- separate air motor for fine air control

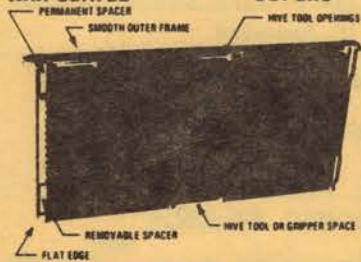
\$585 — Please allow 4 weeks  
Freight Collect from Midwest USA

MR. 'B' BOX 1066 EL TORO, CA 92630

# perma-comb

"The new tool for beekeepers."  
**FULLY DRAWN CELLS**  
At The Natural Angle  
(1/2" Deep)

- PLASTIC COMB & FRAME (one unit)
- ALL WORKER CELLS
- WAX COATED
- BOILABLE
- NO WAX MOTH DAMAGE
- FITS ALL STANDARD SUPERS



Extract  
Without  
Uncapping



SAMPLES POSTPAID (Continental U.S.A. only)	
#918 (9"x18")	\$ 6.00 ea.
#618 (6"x18")	\$ 5.00 ea.
1 pc #918 and 1 pc #618 @	\$10.00 pr.

Write for literature and prices



Perma-Comb Systems Dept. 284

22543 Ventura Blvd., Suite 214 • Woodland Hills, CA 91364 (818) 982-0389

# FUMIDIL\*B

WITH THE 'MITE' PROBLEM  
ITS MORE IMPORTANT THAN EVER  
TO KEEP YOUR BEES HEALTHY  
AND IN TOP FORM.

USE 'FUMIDIL B' IN THE FALL  
AND IN THE SPRING TO CONTROL  
NOSEMA DISEASE.

SEE YOUR LOCAL BEE SUPPLY DEALER FOR FUMIDIL B,  
OR PHONE MID-COX COLLECT AT 818/408-1676.

Reg'd T.M. ABBOTT LABORATORIES.

MID-COX authorized user.

## "THE MASTER FAMILY"



- **ELECTRIC UNCAPPING KNIFE**

Adjustable Thermostat  
 "The 600 Watt Knife"  
 For 115V or 230V Service  
 Now UL Approved

- **QUEEN GRAFTING TOOL**
- **QUEEN MARKING KIT**
- **FRAME WIRING AND EMBEDDING BOARDS**

at your dealers  
 OR WRITE FOR BROCHURE

### PIERCE MFG. CO.

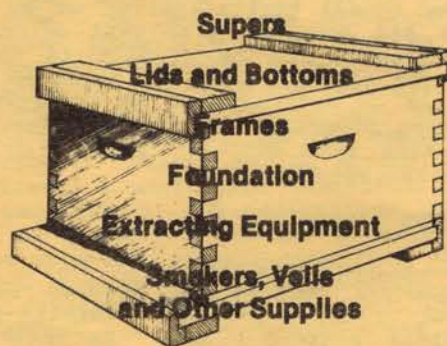
1320 -A- N. MILLER  
 ANAHEIM, CALIF. 92806



**BEE SUPPLY, Inc.**

Box 991, Walla Walla, Washington 99362

1-800-541-8908



**A FULL-SERVICE BEE SUPPLY MANUFACTURER.**

**Quality Products That Are Guaranteed!**

WRITE FOR FREE CATALOG.

### SUBSCRIBER ASSISTANCE

Use of this form will help us make accurate adjustments to your subscription. Otherwise, you should copy the full name, address and codes from the address label on your most recent issue.

- CHANGE OF ADDRESS**     **RENEW MY SUBSCRIPTION**     **DUPLICATE COPIES**

Please state month address changes (6 weeks advance notice required) and write in new address below.

Check your current label and list any corrections in blank below.

Should you receive duplicate copies send both labels. Subscriptions will be combined.

**New Subscription**

PLEASE PRINT

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Mail to: **WAS c/o Zandy Neese, 711 College, Woodland, CA 95695 USA**

Receipt of first issue on new subscription may take up to 6 weeks, depending on time of month ordered. Issue date - first of month.



FIRST CLASS MAIL