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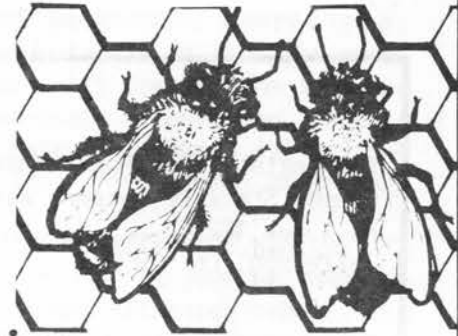
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# THE BEE LINE



## Oregon State Beekeepers Association

AFFILIATED WITH AMERICAN BEEKEEPING FEDERATION

Vol. 3 No. 2

February 1979

## SPRING CONFERENCE COMING MARCH 24

On March 24th at Chemeketa Community College in Salem the OSBA will hold its annual Spring Conference. There will be a number of speakers on aspects of beekeeping that particularly apply to beekeeping in Oregon. The cost is 12 dollars for a single, 18 dollars for a couple and this includes dinner at the Keg and Platter restaurant "if you pre-register" for the conference (so clip the pre-registration form, attach a check, and mail it by March 17). "What a deal!" says Bob Arnold, President of the Tualatin Valley Beekeepers Association, and who can argue with Bob.

The Program for the Conference is as follows:

8:00-9:00 Registration, includes picking up Conference Information Packet, Dinner Ticket, and paying State Dues for 1979.

9:00-10:30 "Queen Rearing In Oregon" -- a talk by Anita and Lucien Alexander, and Orville Basset. Anita and Lucien will speak on the time table for raising queens and Orville will speak on what to look for in a queen.

10:30-11:00 Break for conversation and coffee.

11:00-11:45 Joseph Robertson, lawyer from Salem who handles pesticide cases, will speak on "The laws and regulations that affect the beekeeper."

12:00-1:00 Lunch Break -- At the registration table there will be a map detailing all the local eating places. You can get a hamburger or a steak, just be back in an hour.

1:00-2:00 A discussion on Pollination in Oregon by Mike Burgett of Oregon State University - Pollination from the growers viewpoint.

2:00-2:30 Jim Allen will speak on fees for pollination.

2:30-3:00 Another break.

3:00-3:15 Tom Hennessey will speak on "Pollination of Pear Trees with Gathered Pollen."

3:15-4:00 Vic Palmrose will discuss "The Cost of producing a pound of Honey in Oregon."

4:00-5:00 Business Meeting. Don't Run away, it's painless, and it affects YOU!

Agenda:

- Creating a central agency for collection of pesticide loss information
- Establishing an apicultural library at Oregon State University
- Determining the date and location of the Fall 1979 OSBA Conference
- Changing the membership dues rate for 1980
- Starting new locals
- Studying current legislative proposals for their effects on beekeeping

6:00-8:00 Dinner at the Keg and Platter restaurant with George Moose, the Deputy Director of Agriculture, speaking on "Biological Control of Insects and weed Control: How they affect the beekeeper."

Pre-Registration Form: March Meeting  
Oregon State Beekeepers Association  
Rt 1 Box 162  
Jefferson, OR 97352

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

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

City/State: \_\_\_\_\_

Yes, I would like attend the dinner and conference.

Enclosed is a check for: \_\_\_\_\_ \$12/single

\_\_\_\_\_ \$18/Couple

## Rowland's Report

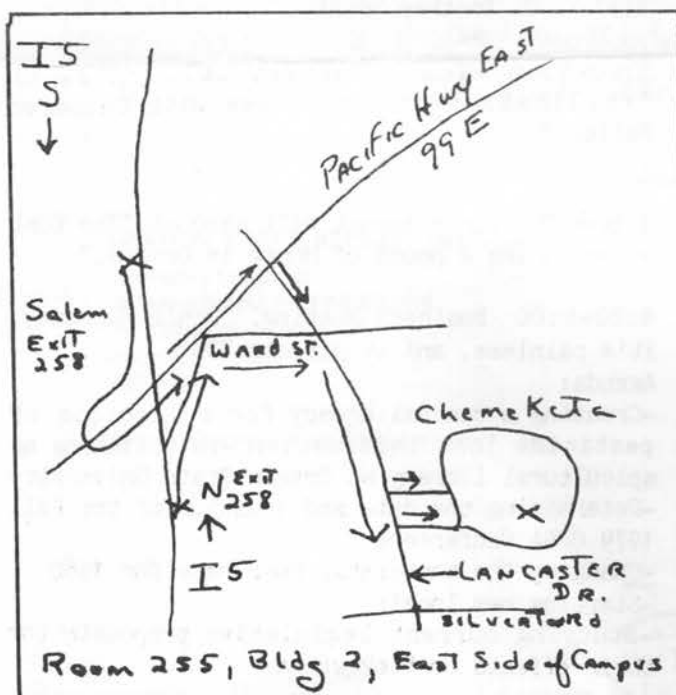
By OSBA President  
Jack Rowland

A proposal to increase the registration fee for bee disease inspection by the Oregon Department of Agriculture was considered at the membership meeting last October. At the January meeting of your board of directors it was considered again along with the possibility of a fee increase in the future for out of state bees and including a penalty for late registrations. An official of the Department of Agriculture has informed us that as of February 21, the budget proposal before the legislature assumes the present fee of \$2.00 for up to 6 colonies and \$0.15 each for additional colonies with no consideration for other changes.

The establishment of commercial oil extraction from agricultural crops in Oregon is important to beekeepers. Rape, sunflowers, and meadowfoam are among the possibilities. At the present time it appears tht oil from these crops is not economically feasible. As the cost of petroleum rises, these crops will become more attractive. Breakthroughs in yield research could make them feasible now. The suggestion this month for action that each Oregon beekeeper can take to improve beekeeping conditions is to write or talk to your legislators urging them to support funds for additional research on obtaining oil from rape, sunflowers, and meadowfoam.

A large membership in the Association is needed to represent beekeepers when negotiating with pesticide applicators, when discussing beekeeping problems with legislators and congressmen, when representing beekeepers to farmers for pollination, and when promoting beekeeping at public exhibits. Compared to the time and expense donated by the officers and committee persons of the Association the cost of membership is nominal. It will reduce the work of the secretary if those who have not already done so, will send in their membership dues for 1979 before they become delinquent.

### How to Get There :



#### Address Corrections:

If we have spelled your name wrong, please let us know. If any part of your address is wrong, it will cause delay in reaching you,---tell us if anything is wrong. And if you don't want to receive The Bee Line at all, let us know that too. We will send it on to someone else who has asked to be on our mailing list.

# Burgett on Bees

Editor's note:

Dr. Michael Burgett, a Ph.D. graduate of Cornell University, is Oregon State University's Apiculturist.

## CONTROLLING WAX MOTHS IN HONEYCOMBS

In 1976 the Greater Wax Moth, "*Galleria mellonella*," caused an estimated \$4 million loss in the U.S. beekeeping industry. Undoubtedly some of the damage attributed to the Greater Wax Moth was actually the work of the Lesser Wax Moth, "*Achroia grisella*." The larvae of both species burrow through the combs, leaving a trail of debris and silken webbed tunnels. Entire supers of comb may be reduced to wood and wire in a relatively short time.

The larvae of the wax moth, not the winged adults, are the destructive stage. Larvae live from 1 to 5 months, depending on the temperature and food supply, and may increase in size twenty-two fold; from one twenty-fifth to seven-eighths of an inch or better. The temperatures most suitable for growth are between 85 and 95 degrees Fahrenheit (29 and 35 degrees Celsius), while no activity is noted below 45 F (7 C). Larvae derive most of their nourishment from impurities such as pollen, cocoons, and honey incorporated in the comb rather than from the beeswax itself. Accordingly, the larvae prefer older, darker brood comb rather than newly drawn comb or foundation. Accumulated cappings and scrapings also may be attacked if not rendered into pure wax. Even comb honey may be infested, given favorable conditions for larval growth.

Most of the damage occurs while combs are in storage, but infestations can develop in the field in hives under stress from starvation, extended queenlessness, disease, or pesticide kill. Wax moths do not destroy healthy colonies in the field, but if colonies are weak, wax moth infestations will hasten their demise.

To protect stored combs it is necessary to destroy existing stages of the moth and prevent reinfestation. The methods most often used include both chemical and nonchemical control and apply to both species of wax moth.

In commercial beekeeping operations, fumigation is conducted in an airtight room. Stacks of supers are left open at the top and bottom to insure adequate circulation. EDB is administered at a rate of 2 pounds (.91kg) per 1,000 cubic feet (30 cubic meters) of storage space.

Carbon dioxide is effective against all stages of the wax moth. It may be used on both full honeycombs and extracted combs. Its use involves careful control of temperature and humidity and requires a relatively airtight facility. Since this type of facility is not generally available to the smaller beekeeper, carbon dioxide is not commonly used as a wax moth control method.

To fumigate with CO<sub>2</sub>, stack supers off the floor, with no cover or bottom board. Maintain a CO<sub>2</sub> concentration of 98% for 4 hours to insure effective fumigation. A temperature of 100 F (38 C) and 50% relative humidity throughout the 4 hour period is also required.

## CHEMICAL CONTROL

**Fumigation:** The fumigant most readily available in moth crystals - para-dichlorobenzene (PDB). **WARNING:** Do not use PDB on combs containing honey intended for human consumption, as honey readily picks up the odor. The gas formed by the volatilization of PDB is colorless, nonflammable, and heavier than air. Volatilization is most pronounced at temperatures above 70 F (21 C) and increases as the temperatures rises. PDB is effective on all but the egg stage of the wax moth and will not harm bees so long as the fumigated combs are allowed to air thoroughly before being placed on a hive.

To administer treatment, stack supers (not more than 5 deep supers or 10 shallows high) on a square of plywood or other firm base. Tape all seams and holes to insure that the heavy gas will not escape through cracks, holes or openings at the base. Sprinkle 6 to 8 tablespoons (170 to 227g) of PDB crystals on a piece of cardboard or wire screen and place on the top bars of the uppermost super in each stack. A tight-fitting cover will complete the preparations.

Check the PDB crystals at monthly intervals and renew treatment if needed to insure protection throughout the storage period. If only a few supers are to be treated, seal them within a large plastic garbage bag, along with an adequate dosage of fumigant. Confinement of PDB fumes will provide effective fumigation.

Continued on Page 4



Another material, 1,2 dibromoethane, commonly called ethylene dibromide (EDB), is also an effective fumigant. EDB is presently under governmental review, however, and its future use and availability is dependent upon action by the Environmental Protection Agency. **WARNING:** Do not use EDB on combs containing honey that are intended for human consumption. EDB is a heavy, clear liquid which forms a colorless, nonflammable gas heavier than air. Evaporation occurs readily at temperatures above 70 F (21 C), and the resulting fumes are effective in destroying all stages of the wax moth. EDB treated supers will not harm bees providing the supers are aired thoroughly before being placed on active colonies.

Administer EDB in a well-ventilated area away from human traffic. Prepare supers in such the same manner as for PDB, and make the stack as airtight as possible. Stack should not exceed a height of 8 deep supers or 12 to 16 shallows. Place a piece of burlap or other absorbent material on the top bars of the top super, and sprinkle with 1 to 2 tablespoons (20 to 40g) of EDB. Add a tight cover and continue fumigation without disturbance for at least 24 hours.

#### NONCHEMICAL CONTROL

**Temperature extremes:** A benefit of nonchemical control is freedom from the risk of chemical contamination of marketable honey. High or low temperatures will destroy all stages of wax moths. However, reinfestation can and will occur if temperature-treated equipment is not stored in moth-free, well lighted, ventilated rooms. Inspect stored equipment periodically for signs of reinfestation, especially if temperatures exceed 60 F (16 C) for any length of time.

**Heat treatment:** In many operations, the honey house may be converted to a hot room by the addition of several electric heater units. To enhance circulation, place one or more ventilation fans about the hot room. Stack supers off the floor with circulation at the top and bottom of the stacks. Efficient exposure times and temperatures for wax moth control are 40 minutes at 120 F (54 C) or 80 minutes at 115 F. Allow combs to reach the required temperature before recording exposure time. After treatment, allow the combs to cool before attempting to move supers to storage. Never expose combs of honey at any time. Heat-softened wax will collapse under the weight of honey.

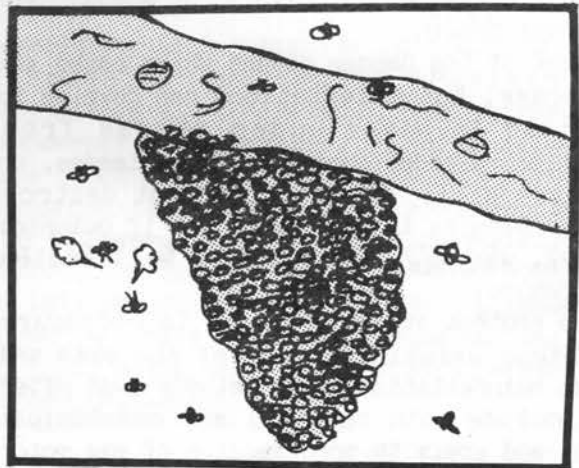
**Cold treatment:** This is a more practical means of protecting comb honey as well as standard combs against infestation. To administer cold treatment, stack the supers in a walk-in or home freezer, with adequate top and bottom circulation. Circulation fans may help in large freezer units. It is important to allow the combs to reach freezer temperature before recording exposure time. Frozen combs will shatter if subjected to impact. After treatment, allow combs to warm up before moving them. Exposure time varies with the temperature of the freezer unit: 2 hours at 0 F (-18 C); 3 hours at 10 F (-12 C); or 4 1/2 hours at 20 F (-7 C).

Wax moths avoid sunlight and fresh air. Combs in supers that are turned on end and exposed to light and ventilation will rarely be attacked by wax moths. Never store combs in heated buildings over the fall and winter months. Since wax moths are repelled by printers ink, place sheets of newspaper between supers in a stack to reduce the spread of larvae from one super to the next. No matter what the form of protection used, frequent inspection of stored equipment is the only sure way to avoid wax moth damage.

## OMSI Bee Show

**OMSI Bee Exhibit:** A number of local beekeeping organizations are pooling resources and talents to put on a show for the public at Portland's OMSI complex from March 10-18. There will be cooking with honey displays, candy-making, honey tasting booths, observation hives, books for sale, equipment demonstrations, and many other items of interest. Local beekeepers will be on hand to answer questions.

## Hive Humor



"But I thought you knew where we were going!"

Please send announcements of whatever your local chapter is doing. What are your problems, accomplishments, goals? By sending in information and sharing it with the other beekeepers, a stronger organization can be knit together. The deadline for an end of the month issue will be the 15th of that month. Copy that is received the 15th will go in the subsequent issue.

Willamette Valley: As an organization we are hosting the upcoming Spring Conference of the Oregon State Beekeeping Association on March 24th at Chemeketa. The cost is 12 dollars for a single, 18 dollars for a couple, and this includes dinner free, if you are pre-registered. If you don't pre-register, the fee covers only registration costs and you buy your own meal. For more details and a pre-registration form, see the article entitled Spring Conference on page 1 of this issue. See also Willamette Valley Bee school article in this issue.

LOCAL NEWS:

Tualatin Valley: Our monthly meeting will be held at 7:30 pm on March 6th at the Hillsboro Library which is located at 775 SE 10th. The program will consist of panel discussion on spring management of hives.

A local meeting of the Willamette Valley beekeepers will be held on March 26th in the conference room in the basement of the Agriculture building in Salem. The March meeting will be a panel of 4-5 beekeepers who will speak on spring management of hives, preparing bees for pollination and honey production.

MEMBERSHIP

Whether you keep one hive for pleasure or are a commercial beekeeper, the best way of keeping up with technological advances and of enjoying the fellowship of other beekeepers is to join the Oregon State Beekeepers Association. At state conventions, seminars, and social occasions members exchange ideas and share experience. You can learn the latest in both research and practical application within the OSBA. The more you participate as a member, the more knowledge you will gain. And that single new idea can both earn you money and enhance your enjoyment in keeping bees. Your membership will also strengthen the Association's ability to work for you. An application blank is attached for your convenience.

DUES:

Dues: 0 to 5 colonies, \$5; 6 to 24, \$10; 25 to 99, \$15; 100 to 299, \$20; 300 to 499, \$25; 500 or more, \$30. Affiliate members: Commercial, \$25; individual, \$5; youth, \$3. American Beekeeping Federation: 0 to 199 colonies, \$10; 200 or more, 5 cents per colony.

MEMBERSHIP APPLICATION (Includes subscription to The Bee Line)

Clip form and mail with your check to:

Secretary Treasurer JOHN & DIANA VAN DRIESCHE Rt. 1 Box 162 Jefferson, Oregon 97352 327-3609

Form with fields for Name, Address (Street, City, State, County, Zip), Telephone, Number of colonies, Occupation, Amount I Have Paid, Date I Paid On, Dues For Year, and checkboxes for local chapter membership and other organizations.

## BILL Ruhl Wins Again

Bill Ruhl was a big winner at the 1979 American Honey Show held in San Diego from January 15-20. Bill came home with a number of ribbons and checks. He captured the Best of Show award along with a trophy and 25 dollars. Within the various other classifications he was chosen as best in extra light amber honey and in cut comb; he also received second prizes in light amber and amber honey. All in all he set a standard for other beekeepers that will be hard to beat. We'll just have to keep on trying.

## WVBA Bee School

The Willamette Valley Beekeepers Association is offering a nine week bee school that will have its first session on Monday night the 5th of March from 7:30 to 9:00. It is held in the basement of the Agriculture building in Salem (or on the corner of Union and Capital streets). The registration fee is \$10.00 for students, \$15.00 for a single person, and 20.00 for a couple.

The program for the course is as follows:

- Week 1: The home of the bee in nature and in the hive.
- Week 2: The life cycle of the bee.
- Week 3: Getting started with the right equipment.
- Week 4: Hiving the swarm; care and feeding of packages.
- Week 5: Swarming and Swarm control management.
- Week 6: How to take the sting out of examining a colony.
- Week 7: Honey Mangement: How to add supers, extract honey, etc.
- Week 8: Diseases and Enemies of the Honey Bee.
- Week 9: Field Trip to an extracting plant.

If you are interested in the school and want further information, please contact George Hansen, 293 Bradley, Woodburn, OR 97071, Phone 982-9826.

Willamette Valley Bee School

## Bee Books

By John Van Driesche

A few days ago I picked up a second-hand copy of an old classic bee book, THE LIFE OF THE BEE by Maurice Maeterlinck. It is a curious book filled with stories about the bee, with moralizing that leaps from the nature of the bee colony to human society, and with accurate observations on the activities of the bee. Above all, even when Maeterlinck is wrong, he is sincere: "I wish to speak of the bees very simply, as one speaks of a subject one knows and loves to those who know it not." Living in Paris, he bases his comments on what he saw in his own observation hive and tries to avoid accepting the unverified comments of others. This is an admirable philosophy for 1979 much alone 1901 when the book was first published. He tries to escape "the charming errors of the ancients" and falls into a few of his own, such as when he states that "hymenoptera... of all the inhabitants of this globe, possess the highest degree of intelligence after that of man."

One of my favorite descriptions in the book is that of the drones of which Maeterlinck is puzzlingly full of rhetorical spleen. In the hive, he says, exist "Three or four hundred foolish, clumsy, useless, noisy creatures who are pretentious gluttonous, dirty, coarse, totally and scandalously idle, insatiable and enormous." One would think he would have more patience with his own sex, but perhaps he is impatient with himself.

If you would like to browse in this book, you can order it Inter-library Loan through your local library. There is a copy at the Oregon State Library in Salem (call number of 595.79), a second copy is at the University of Oregon in Eugene (Science/ Q1 /568/ A6 M3/1935), a third copy at the Salem Public Library (595.7/Maeterlinck), and a fourth copy at Chemeketa Community College (595.799/M26). If you have a child, there is also a children's version called THE CHILDREN'S LIFE OF THE BEE which can be ordered from the Salem Pubic Library (595.7/M26, Children).

### LETTERS TO THE EDITOR:

We welcome letters to the editor and submissions and suggestions to The Bee Line.



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## Free or Nearly Free Publications

By Writing the Extension Secretary, Entomology Department, Oregon State University, Corvallis, OR 97331, you can get single free copies of the following items:

Two-Queen System of Honey Bee Colony Management -- PRR #161, USDA

Nesting Media for the Propagation of Leaf Cutter Bees -- FS 175

Alkali Bees: Their Biology -- PNW 155

Improving Bee Pollination of Cane Crops -- Ext Circ # 953

Diseases of the Honey Bee -- Ext Circ #629

Controlling Wax Moth -- FS 240

Stone Fruit Pollination -- FS 172

Constructing a Beehive -- WRAES 26

Beekeeping -- PNW Bull #79

Trapping Pollen From Honey Bee Colonies PRR #163

Controlling the Greater Wax Moth -- FB #2217

By Writing Dadant & Sons, Hamilton, Ill. 62341:

\*Honey Cookery

\*Pollination for the Home Gardener

\*These two items are free if you are subscribing to the American Bee Journal

### BEE MAGAZINES INCREASE RATES

Subscriptions rates have increased for both the American Bee Journal and Gleanings in Bee Culture.

However, members of the Oregon State Beekeepers Association can subscribe for reduced rates.

Send your subscriptions with your membership renewal.

Gleanings in Bee Culture of Medina, Ohio offers a 25 per cent discount on one-year subscriptions, or \$6 per year, and 20 per cent discount on two-year subscriptions, or \$12.56.

American Bee Journal, Hamilton, Ill., no longer accepts three-year subscriptions.

The journals rates are:

#### Regular rates

1 year	\$8.00
2 years	15.50

#### Association rates

1 year	\$6.00
2 years	11.63

(Canadian and foreign country residents add \$2 per subscription)

## CLASSIFIED ADS

### TOLLETT APIARIES

Italian Queens -- Breeder Stock Selected in Canada and Northern California for Honey and for overwintering. May thru June \$4.00 per Queen. Minimum shipments 25 Queens. 4422 Honey Lane, Millville, CA, 96062. 916-547-3387.

Foundation traded for wax and cappings. Rendering done. David Kerr, 535 W 10th, McMinnville, 97128. Phone 503-472-5497.

Beehive loading Boom. Custom-made to fit your truck. Write or call for an appointment. David Kerr, 535 W 10th, McMinnville, OR 97128. Phone 503-472-5497.



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# CLASSIFIEDS:

Do you have beekeeping equipment or supplies that you wish to sell, swap, or give away? If you do, send an ad to The Bee Line, Rt. 1, Pox

162, Jefferson, OR 97352. The price is \$1 for members; \$1.50 for nonmembers. Please be concise.

### OREGON STATE BEEKEEPERS ASSN.

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**JOHN & DIANA VAN DRIESCHE**  
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