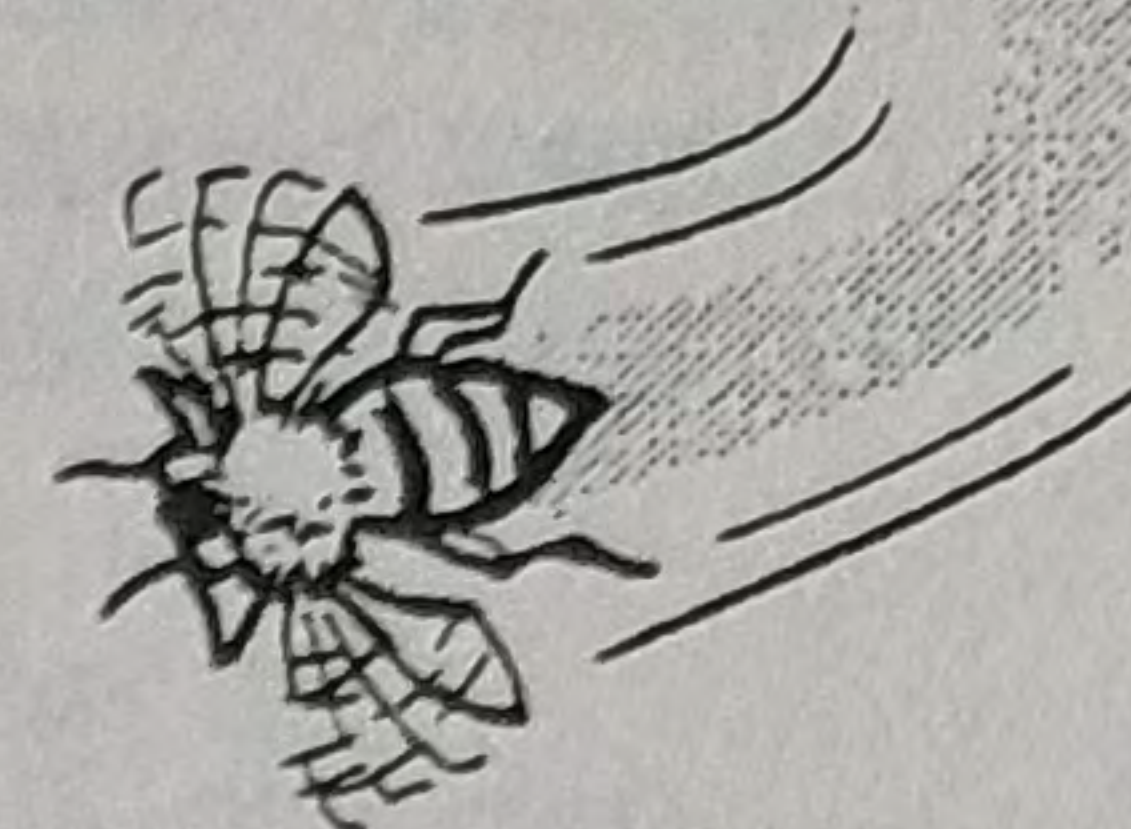


from the

U. C. APIARIES University of California

November/December 1995



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Carelessness

It takes only a few minutes to make a mistake that you are apt to remember for sometime, especially with honey bees. A few weeks ago I was bringing some specimen honey bees to a sixth grade class in Sacramento for a lab study of external (and, with some, internal) anatomical features of workers. Previous experience had demonstrated that leaving the bees in a kill jar overnight led to too much tissue breakdown. It is best to work with fresh specimens.

Class started, for me, at 9:30 A.M. The school is about 45 minutes away, so there is adequate time for me to visit the Bee Biology Facility in the morning, snatch the bees, and go. I had done this a number of times before and it was easy.

At Bee Biology I loosely slipped a veil on and put on leather bee gloves before surveying the hives. It was a good honey

year around here this summer and the single deep looked like an easier choice than the others that were stacked three deep. Since this was a quick trip, smoke wasn't necessary.

Lifting the lid, I saw more than the few bees I needed on the top bars. I opened the kill jar and tried to scrape a handful of bees into it. They stuck like glue to the top bars and alarm pheromone was noticeable. Oh well, I'll have to go inside. The outer comb was clogged with honey and "rolled" quite a few bees as it came out. Now there were a number of not too happy bees in the air, bouncing off my veil and gloves. There weren't enough bees on that outer, or the next, frame to accomplish my goal so I set them on end on the ground and took out the third comb.

About that time, the bees from the combs on the ground found my ankles. They also didn't care for my black slacks. I spent a couple of seconds trying to brush them off, but things only got worse. It

takes a few seconds to focus on the job at hand and to realize that the longer you stay, the worse it gets. I swept bees into the jar and covered it up, replaced the combs, put back the lid, and placed the brick over the feeder hole in less time than it took to read about it. Then I retreated.

It wasn't a pretty sight. Two University maintenance workers were driven off the Bee Biology Facility roof into their truck. A significant contingent of bees followed me around the facility grounds. Most of them left when I moved into the lower limbs of an olive tree. A couple bees found their way past my loose veil. A number were roaming around in my pants.

After shedding as many bees as possible (lost my helmet in the retreat), I headed for Sacramento. Every so often, the hyaluronidase would work its wonders and introduce a new pain cell ending to melittin (or is it mellitin, I've seen it spelled both ways). By the time I reached Sacramento, the burning pain was gone; displaced by extreme tenderness and red blotches. The sixth graders were impressed. Also, finding live bees in my shirt and pockets got their attention.

Swelling set in sometime in mid afternoon. Back at my desk, sitting on the veins and arteries to my lower extremities, my circulatory system was not capable of flushing out the venom components quickly enough. About the time that my ankles were hanging out over my shoes, I called it a day and went home. Oral and topical antihistamines, some aspirin, plus ice packs reduced the swelling fairly quickly and I also became groggy. Then something

happened that I will never know whether it was sting related or not. I spent a very short time having the most severe chills that I have ever had. My whole body shook like an earthquake while Helen (my wife) piled blankets, etc. halfway to the ceiling, over me. In less than an hour that was all over and I was back on my feet.

My lower legs and ankles were pretty tender that night. There was no comfortable way to place them on the bed. The next morning the swelling was reduced, but my ankles did not like socks or shoes. The swelling returned the next afternoon, but it went down when I got back on my feet and started to move around. Another day, or so, and it all became a fond memory.

Kim Fondrk, colony manager at Bee Biology, returned to the Facility while I was entertaining the maintenance workers. He wanted to know why I had selected that particular hive of bees. It wouldn't have been his selection; he had just removed the queen about 20 hours previous to my visit.

So, a little bit of smoke, better personal protection and a different colony probably would have led to another non-reportable trip to the classroom. Often, one can get away with taking ill advised shortcuts with bees, but every so often you learn your lesson in a big way.

CA Labor Laws

It is a good idea, from time to time, to review the federal and state labor laws to ensure that you are in compliance in your business practices. Plowing through all the written material can be extremely time consuming and the language

often makes you wonder what is being explained. So, it is easier to ignore the mess, altogether.

Knowing that you are likely to feel that way, our extension specialists reduced all the information to 188 pages (still a lot) of easier to read and understand materials. Labor Management Laws in California Agriculture, 2nd Edition, is describe as "a compact, integrated guide to federal and state regulation of labor management in California agriculture. It is intended both to inform managers and the managed about laws that apply directly to them, and to help lawmakers, public agency staff, and interested observers better understand the nature of existing legal influences on farm business operations."

This is a brand new book from ANB Publications, 6701 San Pablo Avenue, Oakland, CA 94608-1239. Eventually, these books should be available in the UCCE county offices, but right now you should be able to order one for about \$15.00 from ANR Pubs at (510) 642-2431. To speed the process, please have a major credit card handy.

Almond Pollination Handbook

This is the time of the year when almond growers become very interested in honey bees. They hope to get top value for their dollar, but hope to keep the dollars as low as possible. Rumors of abundant colonies and resistance to price increases over 1995 levels fill the winter phone lines. It is the perfect time to remind your long time business associates of what it is that you actually do for a living and how much it costs.

Need documentation? Use Joe Traynor's booklet, "Almond Pollination Handbook." Joe covers a great breadth of information including orchard design, renting bees, pollination management, bee removal, and a sizable section on "Considerations" that covers many of the problems encountered in almond pollination.

This comprehensive 86 page paper cover book is a steal at \$7.00 per copy (CA residents add \$0.40 each, for sales tax). Besides, Joe accumulates \$4.00 per copy and uses the funding for honey bee mite research. He augmented the research efforts of Dr. Marla Spivak, who is breeding bees for mite resistance in Minnesota, in 1995.

Direct your book orders to Kovak Books, P. O. Box 1422, Bakersfield, CA 93302 [(805) 327-2631].

Protection Folder

The Manitoba Beekeepers Association has developed a full color, heavy stock pamphlet reminding the reader of the benefits of bees as pollinators and a few ways to reduce the risk of bee poisonings. The color photographs of apples, cherries, strawberries, bushberries, blueberries and sunflowers are very eye catching. Even the photo of the spray plane is as aesthetically pleasing as possible.

If you can think of a grower, applicator, advisor, or regulatory representative who might need reminding about things like: 1. Avoid spraying insecticides on crops in bloom, 2. Apply insecticides when bees are least active,

3. Contact the beekeeper before spraying, 4. Avoid insecticide drift and 5. Use insecticides and insecticide formulations that are least toxic to bees (each topic with some detailed explanation), then this is the pamphlet for you.

Pamphlets can be ordered for \$0.25 each (minimum order of 100 = \$25.00 plus shipping and handling) from Don Dixon, 204-545 University Crescent, Winnipeg, Manitoba, Canada R3T 5S6 [(204) 945-3861].

OR Winter Loss

Dr. Michael Burgett, at Oregon State University, Corvallis, has a "split appointment" as a Professor of Apiculture and Extension Apiculturist. In those capacities, Mike has been surveying Oregon beekeepers for a number of years. Pollination prices and overwintering success are two of his primary interests. In the October 1995 issue of The Bee Line (Newsletter of the OR State Beekeepers Association) he relates the changes in overwintering success since the arrival of tracheal mites in 1985 and Varroa mites in 1989.

For the past eight years, losses of commercial colonies have been in excess of 20% annually. The 1993-94 winter was worse, with 25% loss but 1994-95 was only 1% better. Semi-commercial (sideline) beekeepers had greater losses, reaching a high of 38% last winter. (See table for details.)

Mike also heard about colonies collapsing right after the honey flow. In his survey, both commercial and semi-commercial holdings did not suffer much loss before September. By December about half the losses had been realized, the rest occurring progressively from January to March. One other statistic of interest was what happened to colonies that received no treatments for mites - 66% were lost.

Summary of Winter Losses for the period 1989-1995

	Commercial Colonies (>300)	Non-Commercial Colonies (<300)	Nos. Col. in survey
1995	24%	38%	50,058
1994	25	37	39,405
1993	17	33	21,791
1992	22	13	17,418
1991	19	17	20,624
1990	21	22	25,352
1989	22	13	10,812
AVG.	21.4%	24.7%	

Apitherapy

Each year an International Conference on Bee Products: Properties, Applications, and Apitherapy is held, sometimes in the U.S. or often in countries where such holistic approaches to medicine are practiced. In 1996, the meeting is scheduled to be held in the Dan Panorama Hotel & Convention Center, Tel-Aviv, Israel, from Sunday, May 26th, through, Thursday, May 30th. This year's organizers, The Israeli Honey Production and Marketing Board and The Israeli Beekeepers' Association, have divided the program into four major parts:

1. Bee Products (composition; biological properties; pharmacology; nutritional value; allergy and toxicity)
2. Medical Applications - Apitherapy (conventional, complementary and folk medicine; herbal medicine)
3. Use of Bee Products in Cosmetics
4. Bee Products Marketing (quality control, sensory evaluation of bee products; newly developed products).

Presentations will include lectures; panel discussions; film, video, and oral demonstrations, and posters. English and French will be the official languages, with simultaneous interpretation in Hebrew, as well. For the

adventurous, there are pre- and post-conference tours to Israel, Jordan and Egypt.

For more information contact: Conference Secretariat, Dan Knassin Ltd. P. O. Box 1931, Ramat-Gan 52118, Israel [Tel - 972-3-6133340 or FAX - 972-3-6133341].

Almonds Rank Third

According to CDFA, almonds were the third ranked California agricultural export item. Beef products were first: \$989 million; cotton lint second: \$979 million; almonds: \$718 million; grapes were fourth: \$590 million; followed by fish: \$334 million. One favorable aspect of NAFTA is that exports of CA commodities to Mexico increased by 59%, to a total of \$1.03 billion, in 1994. (Extracted from California Almond News, An Almond Board of California Newsletter, November 1995.)

Community Food Systems

Attempts have been made in several regions of California to organize and promote local or regionally produced crops in order to benefit, specifically, the regional producers and consumers.

Examples of those groups are:

Placer GROWN, Sonoma Select, Arcata Farm and Education Project, Humbolt Harvest, Gardena Market Basket Project, AgComm Project of Santa Cruz and Monterey Counties, Marin Food and Ag Policy Group, etc.

The Sustainable Agriculture Research and Education Program (SAREP) on the UC Davis campus, hopes to profile as many of these groups as it can find in an upcoming publication. Their definition of a community food system is "a compact collaborative effort to intergrate agricultural production with food distribution in order to enhance the economic, environmental, and social well-being of a particular place (i.e. a

neighborhood, city, country or region.") If you are aware of such an effort in your area, please contact Dave Campbell or Gail Feenstra at (916) 752-7541 or 752-8408 receptively, or FAX a message to UC SAREP at (916)752-8550. Net users can find them at dave.c.campbell@ucdavis.edu and gwfeenstra@ucdavis.edu.

Methyl Bromide

It may not be foremost on your mind, but the federal government intends to phase out the use of methyl bromide by January 1, 2001, under the Clean Air Act. The substance was listed as "contributory to depleting the ozone layer" in the Montreal Protocol of 1991. However, under California regulations, methyl bromide use will be terminated March 30, 1996. California SB 808, designed to postpone the prohibition is alive, but languishing, in the Senate. By the time you read this, the decision will have been made. Almond growers, strawberry growers, producers and handlers of many exported commodities, and some beekeepers are likely to be impacted by these decisions.

Dates to Remember

Just less than four years from now, September 14-18, 1999, the 36th Congress of Apimondia will be held in Vancouver, British Columbia, Canada. Apimondia, the International Federation of Beekeepers' Associations, is headquartered in Rome, Italy. The organization sponsors a congress every other year, on odd calendar years.

Each congress brings international speakers and beekeeping supply vendors to the host country. It is an ideal meeting for beekeepers to learn about research and beekeeping from the other side of the globe. Also, the meeting provides an opportunity to examine

beekeeping equipment from around the world. The equipment may be purchased or, as is usually the case, copied and modified to meet the needs of U.S. beekeepers. Keep this unique opportunity in mind.

IPM Innovation Awards

In addition to its registration and enforcement roles, the California Department of Pesticide Regulation (DPR) is required by law "to encourage the development and implementation of pest management systems, stressing application of biological and cultural pest control techniques with selective pesticides when necessary to achieve acceptable levels of control with the least possible harm to non-target organisms and the environment." To help fulfil this obligation, DPR's Pest Management Analysis and Planning Program set up a project to award futuristic approaches to dealing with agricultural and urban pest problems. Winners for 1994 were:

Agricultural - Lodi-Woodbridge

Lodi-Woodridge Wine-grape Commission, based in Lodi, has brought IPM practices to about 180 grape growers since it was first formed in 1991. Some of these practices include using cover crops and encouraging owls for gopher control.

Randall Island Regional Management Project in the Sacramento-San Joaquin Delta pear-growing region is a three-year project by Randall Island pear growers who organized a region-wide experiment, involving five growers and 760 acres of pears, to reduce pesticide use and residues, increase worker safety, and advance the use of IPM by evaluating

alternative controls, such as sex attractants for the codling moth.

Fillmore Citrus Protective District organized a non-profit cooperative in 1926 to rear and release natural enemies on 9,000 acres of citrus for 350 growers. They have achieved nearly complete natural control of pests in citrus.

California Processed Tomato Foundation is a statewide organization of growers and processors who deal with environmental and food safety issues. They emphasize grower education about IPM, including seminars and field demonstration plots.

Biological Integrated Orchard Systems Project (BIOS) provides customized orchard management plans and a comprehensive pest monitoring program for almond growers who want to reduce the use of pesticides and chemical fertilizers.

Urban - East Bay

East Bay Regional Park District started an IPM program in 1984 in response to concerns expressed by employees about pesticide use and the public's desire for pest control without pesticides. The District established a public oversight committee for pesticide use; tracks and maps numbers of major pests; and researches alternatives to pesticides for pest control.

Fremont, Los Angeles and San Diego City Unified School Districts have all developed and encourage policies that include in-

spection, pest identification, record-keeping, assessment of damages, and selection of reduced-risk alternatives to control pests.

The Getty Conservation Institute researched and introduced methods which are less toxic than previously used methyl bromide to fumigate museum artifacts. The Institute has established cooperators and provides free training on IPM to conservators, collection managers and other museum personnel.

PACE Turfgrass Research Institute is a private organization working with 25 golf courses to coordinate and fund research on major pest problems in turfgrass and to provide technical support for

identifying and monitoring turf diseases.

San Luis Obispo County Department of Agriculture, headed by the Agricultural Commissioner, organized a network of land managers, parks personnel, local researchers, and citizens to release natural enemies of pests, and to spread information about reduced-risk methods of pest control.

There is limited funding available to help offset expenses of organizing and conducting these alternative pest control projects. Contact David Supkoff, DPR, Environmental Monitoring and Pest Management Branch, Room 161, 1020 "N" Street, Sacramento, CA 95814-5624 (916) 324-4100] for further information. Those of you on the "information super highway" can find David at: dsupkoff@empm.cdpr.ca.gov.

----- Cut Here -----

APIARY NEWSLETTER SUBSCRIPTION RENEWAL FORM

I want to start the new year off in a proactive way, by renewing my subscription to the newsletter. I checked the other side of this page to see when my subscription expires (December of the year enumerated). Now, I want to extend my subscription by using the form below to make any address corrections, by writing a check to the **Regents of UC**, and sending the form and check to Eric Mussen, Entomology Extension, University of California, Davis, CA 95616. The subscription rate remains \$7.50 per six issues a year.

Enclosed please find a check for \$ _____ in payment for a _____ year subscription to the UC Apiaries newsletter.

_____ My name and address are correct as printed.

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Name _____
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Bee Schools

Early this spring, the Sacramento Area Beekeepers Association will be offering two beekeeping courses. The first, Beginning Beekeeping, will be conducted by Randy Oliver, a commercial beekeeper and queen producer from Grass Valley. Randy's one-day workshop will be held Saturday, March 23, 1996, from 8 A.M. to 4 P.M.. The meeting place is the Sacramento County Cooperative Extension Auditorium at 4145 Branch Center Road in Sacramento. The cost is \$25 per person, or \$40 for family (two or more).

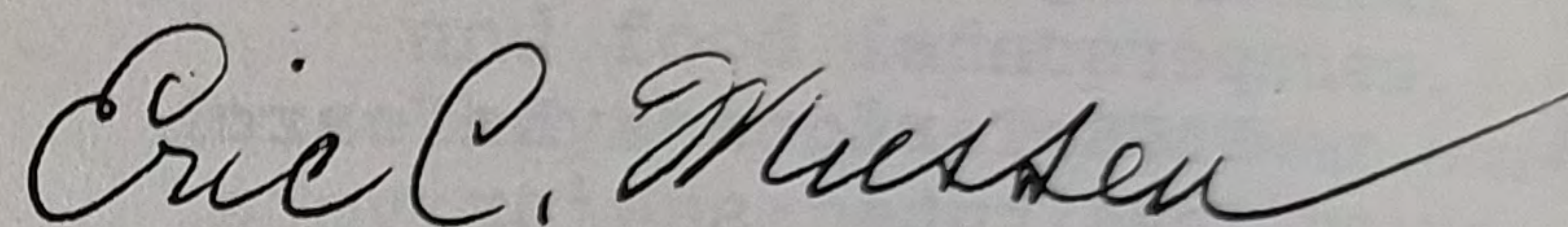
The second course, Intermediate Beekeeping, will be conducted by Eric Mussen, extension apiculturist from UC Davis. Eric's one-day lecture will emphasize specific areas of beekeeping which tend to be problematic and convey

Eric Mussen
Entomology Extension
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advanced information on beekeeping and honey bee research. The second session is scheduled for Saturday, March 30, 1996. The hours are, again, 8 A.M. to 4 P.M. at the same location that is mentioned above. The cost remains \$25 per person and \$40 per family.

Registration and program particulars are being handled by Pamela Hill and Nancy Stewart at (916) 451-2337; Tuesday through Saturday, 10:00 A.M. to 4:00 P.M. Please register as soon as possible.

Sincerely,



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