

W.A.S.

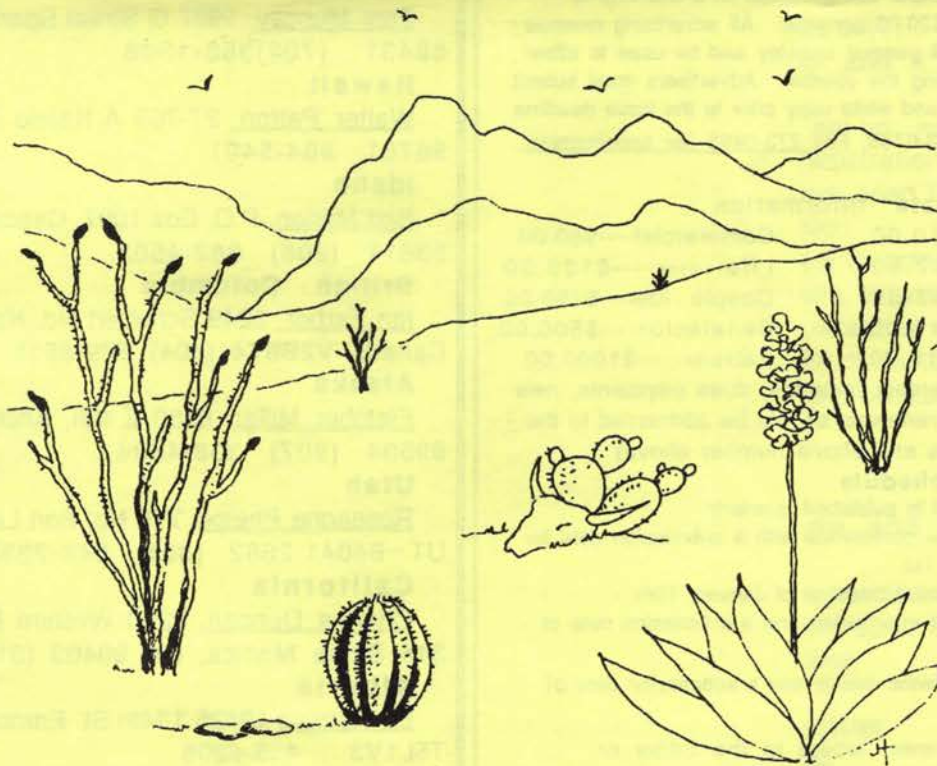
JOURNAL

THE WESTERN APICULTURAL SOCIETY
OF NORTH AMERICA

VOLUME 17 NUMBER 2

APRIL 1997

LET'S GO TO TUCSON !
AUGUST 18th THRU 21st
The Windmill Inn
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**Western Apicultural Society
of North America**

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All membership inquiries, dues payments, new memberships and renewals should be addressed to the treasurer. (Address and phone number above)

Publication Schedule

The Journal is published quarterly.
October following the conference with a submission date for material of October 1st.
January with submission deadline of January 10th.
April with conference information and a submission date of April 1st.
July with final conference details and a submission date of June 15th.

Articles, news, letters to the Editor or President, or other items of interest are not only welcome but solicited from the membership on a regular or one time basis.

Western Apicultural Society

**of North America
Board of Directors**



Each state/province in Western North America is entitled to elect one Director on the governing board of the Society. Directors meet before and after each general meeting and set policy and guidelines for the operation of the business of the Society. Throughout the year they serve as the liaison between the Society officers and the members in their respective states. They are responsible for recruiting new members, keeping track of state concerns and advising the membership of their activities through this Journal. The board currently consists of the following members:

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Vacant.

W.A.S. is On-line ! !

You can reach W.A.S. (Ron Neese, Treasurer) on the internet at: was@mother.com. If you have any suggestions or ideas about how to use our internet connection to better benefit, send an e-mail note to the above address. The Journal Editor can be reached at burtsbs@nccn.net and items for publication can be submitted by E-mail. Fax is available by appointment only. Call (916) 273 0736.

THE EDITOR'S CORNER

The mailing list: Please keep us informed of your *current* mailing address. We would like to insure that you receive your Journals and must have a correct mailing address to get it to you. If you move, change addresses or post office boxes, don't forget to send us a change card. Some names have had to be deleted from the mailing list as we have no valid addresses. This includes several "Life" members.

Contributions: The editor would appreciate receiving articles in scannable form--plain text font, upper-lower case, if typed--a good ribbon and a minimum of strikeouts or corrections. You may submit them by E mail. (burtsbs@nccn.net)

Advertising: We are looking for more advertisers too, so those of you who would like to run an ad or just your card as a booster item, send your camera ready black and white copy and check to the editor.

Dues: Don't forget to send in your WAS dues and to notify us of any change in your mailing address-- Send your dues to Ron Neese but please also send any change of address to me. Burt Spangler, (916) 273-0736, Fax (916) 273-0495, e-mail: burtsbs@nccn.net

Next Issue: The next issue is scheduled for July, 1997 and I will need any material to be included by **June 20th, 1997**, but please get it to me as early as possible but no later than that.



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LET'S ALL GO TO TUCSON !

The Conference In Summary (as we now know it):

Dates: Monday, August 18 through Thursday, August 21.

Place: The Windmill Inn, Tucson, AZ.

Theme: Beekeeping in the 21st Century: A glance back and a look ahead.

Registration costs : Preregistration and all activities \$80.00 per person. See prereg form.

Transportation: *Air* - Tucson International Airport with shuttle service available via The Stagecoach. *Train* - Amtrac services Tucson. *Car Rental* - being arranged

Recreational Vehicle Spaces: available in many commercial campgrounds at off season rates.

Preregistration deposit: \$25.00 by 5/15

Program Chairman, Dr. Eric H. Erickson
2000 E Allen Road Tucson AZ

PRELIMINARY PROGRAM

Western Apiculture Society Conference

August 18 - 21, 1997

BEEKEEPING IN THE TWENTY-FIRST CENTURY:

A Glance Back and A Look Ahead

Monday, August 18

- 8:00-noon Exhibitor set-up: no visitors
- 1:00-5:00 On-site registration
Exhibit room open for visitors and silent auction
- 3:30-5:00 Delegates & Directors meeting,
Board Room, Windmill Inn
- 7:00 Welcome reception at Breckenridge
Brewery Southwestern finger food,
free pool and cocktails at happy hour prices.

Tuesday, August 19

Parasitic Mites now and In the Future

- 8:00-noon On-site registration
- 8:00-noon Exhibit room open for visitors and silent auction

Moderator: Kim Flottum

- 8:00-8:15 Door prizes
- 8:15-8:30 Greetings from the Mayor or...???
- 8:30-9:15 Dr. Diana Sammataro, Ohio State

University, Wooster, OH: The Effect of Vegetable Oil on the Behavior of Tracheal Mites.

- 9:15-10:00 Dr. Bob Danka, Honey Bee Breeding, Genetics, and Physiology Laboratory, Baton Rouge, LA: Good News About Genetic Resistance to Tracheal Mites.
- 10:00-10:15 Refreshment break
- 10:15-11:00 Dr. G. Allen Wardell, S.A.F.E. Pest Control Co.: Essential Oils: Their History and Potential for Controlling Honey Bee Parasites and Diseases.
- 11:00-11:45 New Research on Varroa mites TBA
- 11:45-3:00 Lunch on your own, Swim and Sun
- 3:00-7:00 Depart Windmill Inn for Old Tucson for an afternoon of fun, gun fights, shopping, show, western barbecue and return. Many western movies and television series have been filmed at Old Tucson.

Wednesday, August 20

Africanized Honey Bees. Fact not Fiction

- 8:00-noon On-site registration
- 8:00-noon Exhibit room open for visitors and silent auction
- Moderator: Dr. Jim Tew**
- 8:00-8:15 Door prizes
- 8:30-9:00 Dr. Steve Thoenes, Bee Masters Inc., Tucson AZ: The Status of Africanized Honey Bees in the Arid Southwest.
- 9:00-9:30 Mr. Leonard Hines, Sunny Bee Honey Products, Sierra Vista, AZ: An Arizona Beekeeper's Experience with Africanized Bees and Parasitic Mites.
- 9:30-9:45 Refreshment break
- 9:45-10:15 Dr. Gloria Degrandi-Hoffman, Carl Hayden Bee Research Center, Tucson AZ: Queen Development Time and It's Influence on the Africanization of European Honey Bees.
- 10:15-10:45 Dr. Justin Schmidt, Carl Hayden Bee Research Center, Tucson AZ: Africanized Bees, Bee Stings, and the Public: Are We at Risk?
- 10:45-11:00 Ms. Chris Heintz, Almond Board of California: TBA
- 11:00-1:30 Lunch on your own, Swim and Sun
- 1:30-5:00 Field trip to Africanized Honey Bee apiary departing from the Windmill Inn. Participants must bring their own bee suit with zip in veil, bee gloves and boots.
- 5:00 Dinner on Your Own, Swim or Shop

Thursday, August 21

Whither Beekeeping Beyond 2001

- 8:00-noon On-site registration
- 8:15-8:45 Exhibit room open for visitors and silent auction
- Moderator: Dr. Diana Sammataro**
- 8:00-8:15 Door prizes
- 8:15-8:45 Mr. Kim Flottum, A. I. Root Co., Medina, OH: The Future of Beekeeping.
- 8:45-9:15 Dr. Jim Tew, Ohio State University, Wooster OH: Beekeepers - Who Are We and Why Are We?
- 9:15-9:45 Dr. Hayward Spangler, Carl Hayden Bee Research Center, Tucson AZ: Research Directions and Control Opportunities for Wax Moths.
- 9:45-10:00 Refreshment break
- 10:00-10:30 Ms. Kathy Heasley, Integrated Marketing Solutions, Fountain Hills, AZ: Integrated Marketing: A Formula for Success in Beekeeping.
- 10:30-11:00 Dr. Steve Buchmann, Carl Hayden Bee Research Center, Tucson AZ: The Forgotten Pollinators: Ecosystem Services Provided by Bees.
- 11:00-1:00 Lunch on your own, Swim and Sun
- 1:00-5:00 Open house at the Carl Hayden Bee Research Center.
- 3:00-4:00 Annual Business Meeting, Conference Room, Carl Hayden Bee Research Center
- 4:00-5:00 Delegates and Directors Meeting, Carl Hayden Bee Research Center, Conference Room,
- 6:00-7:00 Mixer with Mariachis
- 7:00 Banquet/Awards/Auction

Friday, August 22

- 9:00-5:00 Travel to Nogales, AZ for a day of shopping in Old Mexico, or Travel to the World Renowned Arizona-Sonora Desert Museum and Saguaro National Monument to explore the geography of the arid Southwest, or Travel to Benson, AZ for train ride along the San Pedro River past ghost towns to the old mining town of Bisbee and tour of the Copper Queen?? copper mine.

(Your program committee will provide assistance with arrangements at registration.)

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Dr. Stephen Buchmann joined The Carl Hayden Bee Research Center in 1979 after earning his doctorate at the University of California at Davis. Since that time he has specialized in the biology and pollination ecology of honey bees, and non-*Apis* species like carpenter bees which might be used for greenhouse pollination. Steve is co-author of the book, "The Forgotten Pollinators". Presently, he is on sabbatic at the Arizona-Sonora Desert Museum where he is co-directing the Forgotten Pollinators Campaign, designing exhibits, and studying the nesting biology of non-*Apis* bees.

Dr Bob Danka is a native of Pennsylvania who, according to his parents, has had a peculiar fondness for insects all his life. His bee research experience began at Pennsylvania State University and continued at Louisiana State University where he received his Ph.D. Since 1987 he has been a staff scientist at the USDA Bee Laboratory in Baton Rouge where he has conducted studies on pollination, the biology and control of Africanized Bees, and on using resistance to combat parasitic mites.

Dr Gloria Degrandi-Hoffman received her Ph.D. from Michigan State University. She joined the staff at the Carl Hayden Bee Research Center in 1985, specializing in computer simulation modelling of insect populations and honey bee behavior. She has created software packages like PC-REDAPOL, BEEPOP, and BK-ECONOMICS that provide information for beekeepers and growers to aid them in their decision making. Currently, she is studying factors that contribute to the Africanization of European Honey Bees and non toxic control measures for varroa mites.

Mr. P. Kim Flottum received a B.S. in Horticulture from the University of Wisconsin after which he assisted researchers in Horticultural Entomology with the U. of W. Experiment Station. He then worked for four years at The North Central States Bee Research Laboratory, Madison WI where he participated in research on crop pollination and the effects of pesticides on honey bees. Thereafter he managed an apple orchard and row crop farm for two years. For the past 11 years Kim has served as Editor for Gleanings in Bee Culture.

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Ms. Kathy Heasley is a graduate of Pennsylvania State University with a BA in Advertising and Marketing, and over 15 years experience helping clients maximize profits by identifying potential new markets, developing strategies for reaching those markets, and measuring success. Before Kathy founded Integrated Marketing Solutions, Inc. in 1994, she held executive positions with clients like Coca-Cola USA, Dr Pepper/7-UP, Discover the World Marketing, British Midland Airways and Ryland Homes.

Mr. Leonard Hines is a native of the Phoenix, AZ area who has kept bees continuously since the seventh grade. After a stint in the Army Air Corps during WWII he graduated from Arizona State University and then attended the University of Arizona. Leonard worked for 10 years for the USDA Soil Conservation Service, then taught school for 22 years. Since that time he has been a full time commercial beekeeper. Leonard is a highly respected authority on the bee plants of Southern Arizona.

Dr. Diana Sammataro received her Ph.D. from Ohio State University where she currently works as a postdoctoral scientist developing an IPM program to manage bees and parasitic mites. Diana, well known and respected by beekeepers, has been associated with beekeeping for nearly thirty years, working in a variety of capacities with organizations like the Peace Corps, The North Central States Bee Research Laboratory, and The A. I. Root Co. The third edition of The Beekeeper's Handbook, which she co authored, will be available from Cornell University Press in December.

Dr. Justin Schmidt, even as small child, always loved bees and wasps. When he was about 10 years old a 4-H opportunity helped him translate that love in becoming a beekeeper with two hives. That interest remained through college studies of chemistry and entomology with emphasis on

behavior, toxicology and pharmacology. "After receiving my Ph.D from The University of Georgia, I was fortunate to get a job doing just what I wanted, conducting research on the chemical communication, behavior and physiology of my old friends, the honey bees.

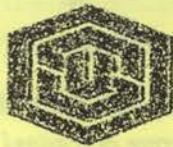
Dr. Hayward Spangler came to the Carl Hayden Bee Research Center after completing his Ph.D in Entomology at Kansas State University in 1967. His research has included greenhouse pollination, circadian rhythms of bees, the use of sound and activities, and information transfer during the waggle dance. He discovered the first acoustical mate calling system known for moths in the lesser wax moth and described the dual sound signal system used by male and female greater wax moths. Currently he is exploring the feasibility of using hormones, parasites and predators to control wax moths.

Dr. James Tew is an associate professor of Entomology at Ohio State University where he teaches, provides extension services and conducts applied research on honey bees and pollination. From 1987 to 1995 he served as the National Program Leader for Beekeeping for the USDA Extension Service, Washington, D.C. Currently, Jim is also responsible for a regionalized cooperative extension beekeeping project with Auburn University in which he carries out basic Alabama extension responsibilities from Ohio.

Dr. Steve Thoenes comes from a well known beekeeping family in Southern Arizona. He received his Ph.D. from the University of Arizona while working as a Research Technician at the Carl Hayden Bee Research Center where he subsequently worked as a Postdoctoral student. Currently, Steve is president of BeeMaster Inc., a local honey bee control company.

Dr. G. Allen Wardell received his Ph.D. in Entomology from Michigan State University after which he designed and developed the first Apiculture Research Center in Sumatra, Indonesia. While on the Faculty of the University of Maryland, Gordy remained active in International apiculture through contacts with USAID, The National Academy of Science, World Wildlife Fund and the Nature Conservancy. Currently he is Director of S.A.F.E. Pest Control Company, Tucson, AZ, and is consulting on International Apiculture Projects in the Philippines, Indonesia and India.

MICHAEL BURGETT, Ph.D.
Professor of Entomology



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PRESIDENT'S MESSAGE

Boy, does Eric Erickson know how to throw a party! Not since the whopper effort in Ohio, for an Eastern Apicultural Society Annual Conference, have I seen this many apicultural speakers gathered at a single meeting. There are experts from all over the country sharing their expertise on mites and mite control, Africanized honey bees and the effects they really are having on U.S. beekeeping, and a glimpse into the future of where U.S. beekeeping may be headed. This is an excellent selection of topics.

Have you ever visited a well equipped and staffed federal honey bee research laboratory? This is an opportunity to see your tax dollars at work. The Carl Hayden Bee Research Center has all sorts of honey bee research being conducted. The scientists are going to open the doors to their labs and share with you their current research projects. I know the researchers, and every one of them is friendly to the general public and very capable of explaining what is going on in terms that can be understood.

Obviously, I'm looking forward to visiting the colonies of Africanized honey bees that are locked up behind the chain link fence, out on the edge of the desert. Until recently, it looked like AHBs were pretty much done with expanding their population in the U.S. We relaxed, but they didn't. Just like our well managed colonies, the AHBs have felt a lot less pressure from Varroa mites, recently. I theorize that the loss of nearly all our feral or poorly kept colonies has reduced the reservoir of mites and collapsing colonies to the

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point that feral bees will be back in our environment in limited numbers. The mites will get them eventually, but they'll live for a while. And, a while is all it takes for AHBs. They find food, build up, and swarm surprisingly quickly. They may have what it takes to stay ahead of the mites. Numerous swarms (absconding type, probably) of AHBs have been found in southern California, recently. Many of us in the warmer climates may have to watch out for this new neighbor, after all.

If you have a spare day, I still cannot say enough about the Arizona-Sonora Desert Museum and Saguaro National Monument. They are examples of a specific type of environment that is quite limited and very different from the rest of the country. The animals and the plants adapted to live in that area are unlike others you are ever likely to see elsewhere. Transplanted to arboretums and zoos, neither the plants nor animals do that well. This is your opportunity to see them, real and right up close. I suggest that you take advantage of the proximity of these facilities and include a visit in your itinerary. (Remember, naturally occurring colonies of AHBs like to live out there around areas providing water.)

Keep looking for door prizes, silent auction items, and regular auction items.

I hope to see all of you, and a number of your friends and acquaintance, at the meeting.

Eric C. Mussen.



HONEYBEE DISEASE AND PEST CONTROL

RANDY OLIVER --REVISED 3/97 [revisions *in italic*]

The two diseases of most concern are Varroa mite and AFB. Learn to recognize the symptoms of each. Be alert, and timely with treatments, or Varroa will kill all your colonies!

SPRING (Late March or early April)

1. **Varroa Mite:** You can easily spot springtime infestation by seeing mites on broken drone cells when you lift the supers. *If you see any mites at this time, I'd treat the colony immediately, allowing at least 30 days before the honey flow starts in May (Note "A").*
2. **AFB:** If you suspect robbing, place a TM patty in the broodnest (Note "B").
3. **Tracheal Mite:** Colony buildup will usually outpace the mite at this time of year. Use biologically resistant bee stock. (Optional: Test sample of bees for mite; if over 20% infestation, treat with 50 grams of menthol in a bag when weather is over 70° F).
4. **Wax Moth:** Once weather gets over 70°F, store supers in a cool, well-ventilated place (promote air flow through supers); separate white combs from dark; for longer storage, use Paradichlorobenzene crystals to fumigate honey-free combs.
5. **Skunks:** (Any time of year) sprinkle 1/4 tsp. lye crystals onto skunk-scratched dirt in front of hive, repeat after rains.

LATE SUMMER: AUGUST/SEPT (after star thistle, honey surplus removed)

1. **Varroa mite:** *Eric Mussen recommends Apistan treatment now, to protect the bees that will form the winter cluster; this may be the only treatment you'll need for the year.. Apistan can only be used when you're not storing honey to extract (see Note "A").*
2. **Robbing:** reduce entrances in weak colonies; don't spill honey in beeyards.
3. **Tracheal Mite (Optional)** Have a sample of bees tested for mites in late August. If infestation is over 20 -30%, treat with 50g menthol while weather is between 70° and 85° F.

FALL (Late September or early October-- prepare strong, healthy colonies for winter)

1. **Varroa:** *Remove the August-installed Apistan strips after 50 days.*
2. **American Foulbrood (AFB):** Inspect for symptoms. Destroy and burn diseased colonies. Feed healthy colonies one or two Terramycin/Crisco patties (see Note "B"). This will also help control tracheal mite if fed while the last rounds of brood are emerging.
3. **Build stores:** Give honey-filled combs or feed heavy syrup for 40 pounds of stores.
4. If no Fall pollen flow (check for pollen stores), feed pollen patties or pollen substitute.
5. **Nosema (optional):** Feed 2 gal heavy Fumidil syrup before weather cools (Note "C").
6. **Wax Moth:** Not a problem in cool weather. Protect stored combs from mice.
7. **General Health:** Winter only strong, heavy colonies full of pollen stores and young bees. Reduce entrances; use mouse guards; winter in sunny, dry, well-drained location.

NOVEMBER: Queens stop laying.

1. *Varroa*: Remove Apistan strips. If you didn't do a late-summer treatment, insert strips now and remove them about January 1st.
2. It's generally too cold to feed or manipulate colonies from now to February.

MIDWINTER (FEBRUARY 1st; when colonies are rearing brood in earnest)

1. Check all colonies for queenrightness, brood rearing, strength, disease, and adequate stores (strong colonies may starve between now and April—check hive weight during poor weather). Suspect that any weak colony may be diseased, has mites, or has a poor queen.
2. American Foulbrood (AFB): Feed healthy colonies one or two Terramycin/Crisco patties (see Note "B"). This will also help to control tracheal mite. Inspect colonies for AFB symptoms (salt & pepper brood, foulbrood odor, perforated cappings, roping of dead larvae, scale). Destroy and burn diseased colonies. You can test for genetic resistance to brood disease (pinprick-killed brood test) and requeen in spring with resistant stock if necessary.
3. European Foulbrood: Feed a Terramycin/Crisco patty; consider requeening.
4. Nosema: If indicated (dissect), feed 1 or 2 gallons of light Fumidil syrup (see Note "C").
5. Chalkbrood, Sacbrood, or Bee Paralysis: If bad, requeen with resistant stock.

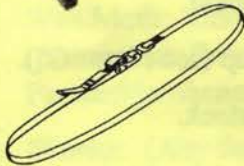
NOTES & FORMULAS

- A. *Apistan*: Distribute 2-4 Apistan strips throughout the broodnest (look for brood)—1 strip per every 5 bee-covered frames; leave in for 42 to 56 days. Strips must be placed so that max. no. bees will rub over them. Can be used right up until placement of honey supers. Don't try to reuse Apistan strips—the Fluvalinate's gone! Don't forget to remove them.
- B. Terramycin/Crisco patty: Mix 2 to 3 lbs granulated sugar, 1 lb. Crisco or vegetable oil, 1 - 6.4 oz packet Terramycin Soluble Powder. Makes 16 patties. It is wise to use a Terramycin/Crisco patty whenever there is robbing. Place patties on the top bars of the broodnest, in contact with the cluster of bees. Terramycin treatment must be discontinued 30 days prior to supering for honey.
- C. Fumidil: First dissolve 1 rounded tsp. of powder in a cup of warm water. Then stir solution into 1 gallon of cooled heavy or light syrup as indicated.
- D. Feeding Syrup: Place syrup feeders immediately above the cluster; cover feeder and reduce colony entrance to lessen robbing. (Don't use Boardman entrance feeders).
 1. Heavy Syrup (for stores): 20 # granulated sugar, 5 qts boiling water. Makes 2-1/2 gal.
 2. Light Syrup (for stimulation): Equal parts (by weight or volume) sugar and hot tap water.
- E. Pollen or Brewer's Yeast (protein) Patty:
 1. Trapped pollen moistened with heavy syrup to doughy consistency, or
 2. 1 lb. brewer's yeast, 1 lb. sugar, mix in approx. 1 cup hot water, a little at a time, or
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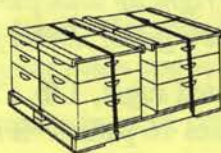
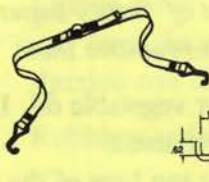
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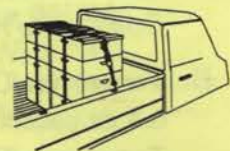
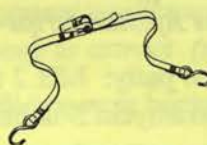
For easy transportation of Beehives, made especially for pallets. 1" pallet hook attached to each end. (Hooks are low profile and fit snug against pallets.) See detail A above.

7 ft. strap (4 to a box) \$35.95/box

10 ft. strap (4 to a box) \$40.95/box

Ask about quantity discounts!

TRUCKLOAD STRAP WITH RATCHET BUCKLE



1" vinyl coated S-Hooks attach to eye bolts, slots or rods in order to secure your beehives in a truck. Available in 15 ft. (suitable for pickup trucks) and 25 ft. (suitable for flatbed or other large trucks).

15 ft. strap (2 to a box) \$30.95/box

25 ft. strap (2 to a box) \$35.95/box

Ask about quantity discounts!

TO ORDER: Call 1-800-995-5590.

We accept VISA, MasterCard or American Express.

We also pay all continental U.S. shipping charges (excludes Alaska and Hawaii).

AZ and CA residents add 7% tax. All orders are shipped within 24 hours.

UNCONDITIONAL LIFETIME GUARANTEE - NO QUESTIONS ASKED!

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W. A. S. IN TUCSON

AUGUST 18-21, 1997

Cowboys, Indians, and Old Mexico in the beautiful Southwest!
Count me in for Tucson!! Enclosed is my pre-registration of \$_____

NAME _____

ADDRESS _____

PHONE _____

PRE-REGISTRATION FEE IS \$25.00 PER PERSON IF PAID BY MAY 15.
REGISTRATION AFTER MAY 15 WILL BE \$35.00 PER PERSON. The following
Costs are figured per person and are in addition to the registration fee.
Total cost for pre-registration and all activities is \$80.00 per person.
Total cost for late registration and all activities is \$90.00 per person.

Monday, August 18:

Breckenridge Brewery
Mixer 7:00 - 9:00 p. m.

\$5.00

Tuesday, August 19:

Tour of Old Tucson, Studios (shops, old west gun
fight etc.), Western BBQ dinner, Private Can Can
Show, and Cash Bar:

\$37.00

Thursday, August 21:

Mexican Food Banquet, Mariachi band, Open Bar

\$13.00

MAKE CHECKS PAYABLE TO: WAS

MAIL TO: WESTERN APICULTURAL SOCIETY
RON NEESE, TREASURER
268 PEARL WAY
WOODLAND, CA 95695

**MEMBERSHIP RENEWAL
DUES PAYMENT FORM**



PLEASE PRINT

NAME _____
FIRST LAST

ADDRESS _____
STREET CITY STATE/PROV ZIP

ENCLOSED IS CHECK IN THE AMOUNT OF _____ IN PAYMENT OF DUES FOR YEAR/S _____

TYPE OF MEMBERSHIP _____ NEW _____ RENEWAL _____

Make checks payable to Western Apicultural Society and mail to:

Western Apicultural Society
Ron Neese, Treasurer
268 Pearl Way
Woodland, CA 95695

Western Apicultural Society Journal
Burt Spangler, Editor
451 Mill Street
Grass Valley, CA 95945



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