

# W.A.S 2002 Annual Conference

August 12<sup>th</sup> to 15<sup>th</sup>, 2002

## Tahoe Biltmore Hotel / Casino

#5 Highway 28, Crystal Bay (North Shore), NV  
1-800-245-8667  
1-775-831-0660

### W.A.S 2002 Annual Conference August 12th to 15th, 2002

#### Tahoe Biltmore Hotel / Casino

The Biltmore offers a 1950's decor, complimentary (3 egg +) breakfast, meetings room on first floor, casino downstairs, heated swimming pool and warmer (Helen-tested) spa, parking (no hook-ups) for inhabited RV's, free evening hors d'oeuvres (5-7 pm) at upstairs bar, a free margarita (4-7 pm) for the ladies at Pub and Grill, 30 micro-brews on tap (Pub and Grill), and free (no "cover") evening live entertainment (Motown).

**Rooms** – Prices vary with size and location – taxes are included in this list

**Motor Lodges** – "Out back" – requires climbing stairs and hills

Single queen bed	\$69.84 (base \$59)
Two queen beds	\$81.04 (base \$69)

**Hotel Rooms** – Elevators to all floors, including meeting and casino

Single queen bed	\$92.24 (base \$79)
Single king bed	\$103.44 (base \$89)
Two full beds	\$103.44 (base \$89)
Two queen beds	\$114.64 (base \$99)
Junior Suite	\$137.04 (base \$119)
King Suite (walk-out balcony)	\$159.44 (base \$139)

### ROOM RESERVATIONS

A "block" of 55 rooms has been contracted. The rooms being "held" are of various more economical types. Although the "cut off" for reserving one of those 55 rooms is July 12th, 2002, if you really want your choice, you should "book" your room right now. You must use the "Group Number" or they will claim they don't know what meeting you are talking about. The number is 0812WAS. They will take a credit card number, but you won't be billed until you stay. You can cancel your reservation up to three days in advance of the meeting (and they definitely will fill every room that we do

Cont. on page 3



# Western Apicultural Society of North America

**PRESIDENT:**

**Eric Mussen**  
1004 Anderson Rd.  
Davis, CA95616  
530-752-0472  
ecmussen@ucdavis.edu

**FIRST VICE PRESIDENT:**

**Hellen Mussen**  
1004 Anderson Rd.  
Davis, CA95616  
530-752-0472

**SECOND VICE PRESIDENT:**

**Jaquie Bunse**  
413-7151 Edmonds St  
Burnaby BC V3N 4N5  
CANADA  
250-512-4493

**SECRETARY:**

**Nancy Stewart**  
2110 X Street  
Sacramento, CA 95818  
916-451-2337  
nstewart@cwnet.com

**TREASURER:**

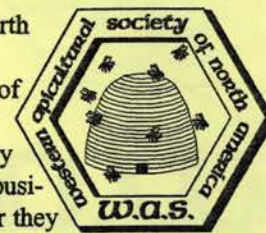
**George Steffensen**  
1634 Fish Hatchery Rd.  
Grants Pass, OR 97527  
541-474-4305

**EDITOR:**

Open

## 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:

**Washington**

**Kari Hallopeter**  
P.O. Box 822  
Redmond, WA 98073  
hallopeter@jps.net

**Oregon**

**George Steffensen**  
1634 Fish Hatchery Rd.  
Grants Pass, OR 97527  
541-474-4305

**Nevada**

**Maycelle Muncey**  
1927 G Street  
Sparks, NV 89431  
702-358-1308

**Idaho**

**Bob Marion**  
PO Box 1007  
Cascade, ID 83611  
208-382-4502

**British Columbia**

**Ian Farber**  
3249 Schubert Rd.  
Kamloops, BC CANADA V2B6Y4  
250-579-8518  
e: Ian\_Farber@telus.net

**Alaska**

**Fletcher Miller**  
6330 E. 9th  
Anchorage, AK 99504  
907-338-4694

**California**

**Thomas L. Chester**  
1972 Tenth Avenue  
San Francisco, CA 94116  
415-665-7520  
e-mail: tlc1@well.com

**Other States/Provinces** Vacant**Advertising Policy**

Advertising is solicited and accepted on a prepaid yearly basis as follows:

Full Page	\$100.00
Half Page	\$ 50.00

Quarter page and smaller ads accepted on a one time or continuing basis at \$25.00 per year. All advertising revenue will go into the WAS general treasury and be used to offset the costs of publishing the Journal. Advertisers must submit camera ready black and white copy or electronic artwork prior to the issue deadline.

**Membership Rate Information**

Individual	\$ 10.00	Commercial	\$ 50.00
Junior	7.50	Life	100.00
Senior	7.50	Couple life	150.00
Couple	15.00	Benefactor	500.00
Associate	10.00	Patron	1000.00

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

**Publication Schedule**

The WAS Journal is published quarterly.

October - following the Conference with a submission date for material of October 1st.

January - with submission deadline of January 1st.

April - 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 by solicited from the membership on a regular or one-time basis.



not use). If your choice of room type is used up from the block, plead with them for a similar room, at a similar price and see what happens. You might have to pay 2002 prices (quoted prices are 2001 prices, extended to next year for our conference). There will be nothing available to you after July 12th, unless you are really lucky (then you should be playing the games, not talking on the phone!).

Although the details have not been ironed out, we will be having a catered BBQ off the premises (hopefully at Sand Harbor Nevada State Park, on the east shore). This is a highly used, very large beach that has some stone-free sand in the water near the ramada. We hope to rent the ramada and its private parking for the day, so that we have something under which to eat. Parking will still cost an additional \$6 per vehicle, so carpooling would be a great idea. You might want to bring your swimming suit and try the cool, exceedingly clear water.

We have contacted the UC Davis Tahoe Research Group. They agreed to have visitors at their lab, show an informative video and take a quick trip on their research vessel in conjunction with our conference. The John LeConte is the vessel on which Bill and Al (that's right - former Pres. and Vice-pres.) took a little cookie trip (The Tahoe Summit), not so long ago. The vessel only holds about 20 passengers, so we may have to go in shifts if interest demands.

## TRANSPORTATION

There is a South Lake Tahoe airport, but if you are going to fly, it is more reasonable to land in Reno and travel by road (35 miles - 45 minutes) to Crystal Bay. You can rent a car in Reno, or make reservations to travel from the airport on the No Stress Express. Their vehicles run on a set schedule and reservations are required. To reserve a \$40 (one way) trip, call 1-800-426-5644. If a bunch of you is arriving at about the same time, cab fare is around \$75-80, but split many ways, it would be cheaper per person.

Amtrak stops in Reno.

North Lake Tahoe is not the thriving metropolis found at the other end of the lake. It is very scenic and more peaceful. There are Factory Outlets on I-80 at the Donner Road Exit, which is one exit toward Sacramento from the town of Truckee. There are a number of shops and eateries around, with some real good ones in Tahoe City. Tahoe City is on the California side, a few miles down the coast. Closer to the Biltmore, there are other Casinos: Nugget, Crystal Bay Club, Cal Neva (with famous state split Indian Room and wedding chapel), and at the Hyatt Regency, just down the road in the community of Incline Village.

If you are into golfing, swimming, biking, sail boating, parasailing, kayaking, peddle boating, lake trout fishing, hiking, and other energetic activities (remember the Lake is about 6,000 feet above sea level), this is the right place to be. If you prefer culture, there is a Shakespeare play each weekday evening at the Sand Harbor outdoor (sit on the sand dune) theater (18.3 miles southeast of the Biltmore). The Lake Tahoe Music Festival is held at various regional venues during that time each year. Each day, the Tahoe Gal leaves from and returns to Tahoe City on four different cruises that may include food and drink for a bit more money. A bit further away (about 45 minutes by car), there are the shows and larger casinos at either South Lake Tahoe or Reno. If you get bored, it is your own fault!

I hope that this bit of information provides the basic when and where information about next year's Conference. I'll be happy to try to answer any questions, if you wish to contact me:

Eric Mussen  
Entomology  
University of California  
Davis, CA 95616  
(530) 752-0472  
ecmussen@ucdavis.edu

## RELATED WEB SITES

[www.tahoebiltmore.com](http://www.tahoebiltmore.com)  
[www.visitinglaketahoe.com](http://www.visitinglaketahoe.com)  
[www.highsierra.com](http://www.highsierra.com)



## President's Message

Time is flying by rapidly. Just weeks ago our colonies in California were in winter locations. Now, they have been utilized for almond pollination and they are headed toward pollinating other fruit trees or looking for some early honey plants, like citrus and sage. That means that summer is coming and the next WAS Conference is not that far away. This issue of the WAS Journal includes the pre-registration form as well as the tentative schedule for the Conference. You can invite neighbors and guests to the meeting, if you wish. Just hand them a copy of the pre-registration form and have them send it in.

Most of the solicited speakers for the Conference have tentatively said, "Yes." You will note that there is a segment of the program devoted to apitherapy. Besides a wonderful video about the subject from the Pine Street Clinic, I am finalizing arrangements with Dr. Christopher Kim (MD), from New Jersey, to present information on an arthritis study he is conducting on 400 patients in S. Korea. Also, you may be surprised to know that there is circulation of air in a beehive sitting in the field, even with no fanning bees inside it. Dr. Jerry Bromenshenk, from Montana, will be explaining that phenomenon during his presentation on colony management considerations. I reserved the Sand Harbor picnic grounds and ramada, from the Nevada State Parks agency, for our cookout. I have found an excellent local (N. Lake Tahoe) caterer who quoted a really good price for a BBQ. But, you never relax until the conference is over!

I'd like to sneak in a reminder to keep your eyes open for potential door prizes, silent and live auction items. We don't use Society money to purchase such items. Instead, we rely upon the members to seek them out and bring them to the conference. If that aspect of the conference is enjoyable to you, please take the time and effort to make it really fun.

Right now, North Lake Tahoe residents are grinning from ear to ear as many feet of snow have fallen this year. Ski resorts and slopes are open and the "chain monkeys" are making good money rolling around in the slush putting chains on cars for travelling city slickers. But, does it make much sense to write about snow sports, since we will be there in the summer?

Squaw Valley (el. 8,200 feet) is one of the premier ski resorts. It hosted a Winter Olympics a while ago. Their activities facility, called "High Camp," is too big to shut down for the summer, so if you take the 15 mile drive from our meeting location to their parking lot, you can take the scenic aerial Cable Car up to the following: 1. ice skating in North America's most spectacular ice pavilion, 2. swimming in the heated Swimming Lagoon and soaking up rays on the sun deck, 3. dining at the poolside Umbrella Bar & BBQ, 4. enjoying the wildflowers as you hike up the canyons to Squaw Peak, 5. intimidating yourself and others on mountain bike trails (single track, double track, and roads; includes a lift ticket-like deal to ride the Cable Cars back up, if you only like riding downhill), 6. playing tennis, or 7. climbing the simulated cliffs of the Headwall Climbing Wall (called the Rocknasium in Davis). Each of these activities requires individual outlays of capital - about \$20 or only half that amount for many of them after 5 pm. If you want to see a spectacular sunset over the Lake, you can make dinner reservations at Alexander's Cafe at the Squaw Valley facility [(530) 583-1742]. If you are not immediately ready to return to the real world following dinner, you can stay for a Star Safari and look at distant portions of the universe through a 30" telescope. We miss the Full Moon Hike by about nine days!

If those activities sound a bit too breathtaking for you, there is a Lake Tahoe Summer Music Festival which features music "From Bach to Blues and Beyond." Their 2002 schedule was not available at this writing, but you can keep track of it at [www.tahoemusic.org](http://www.tahoemusic.org) or by calling (530) 583-3101. Tickets are advertised as becoming available on April 15th. At least some of the concerts appear to be held at Squaw Valley. There also is the Lake Tahoe Shakespeare Festival. That is held at the previously mentioned Sand Harbor (you sit on the sand dune). The evening of our BBQ, I believe the play will be "The Taming of the Shrew." For information and reservations, go to: (no www) [laketahoeshakespeare.com](http://laketahoeshakespeare.com) or call (800) 747-4697. Tickets ranged from \$20-35 in 2001. Or, you can pay double and sit in a chair (Humbug!).

If you really just want to relax, there is the Spa at the Resort at Squaw Creek (a Squaw Valley neighbor). They just expanded their Spa from 5,000 to



10,000 square feet, at a cost of \$3 million. How does this sound? New Spa Director, Erik Glemaker, is ready to take the indulgence level even higher. Currently, he is developing a unique new line of signature products and treatments. "I like to create things that are seasonal and take advantage of the Resort at Squaw Creek's natural surroundings." They have created a Eucalyptus Body Wrap, and a Granite Salt Scrub. But, the epitome is the Tahoe's Hot Stone Massage. Basalt stones from nearby Lake Tahoe and the Truckee River are warmed, oiled, and used to deeply massage muscles. What more could you ask?

The information distributed at the 2001 Conference, about next years' facilities, were included in the last issue of the Journal. Vice-President Helen and I spent a good deal of time checking out the neighborhood, and we think we have selected the best venue in the area. Fortunately, we found something that most members could afford. That is not easy in the middle of the summer crunch in a high tourist area.

I already have been contacted by one of our members who discovered that all the "blocked" (reserved) non-smoking carriage rooms have been spoken for. This surprised me, but when I called I was told that nearly all the casino visitors drink and smoke, so the hotel doesn't have many non-smoking rooms. If you are intending to go to our conference next year, it is time to make your reservation. If you decide later not to go, there is no charge; just cancel. I imagine the smaller, less expensive rooms are going fast, but there are larger ones left in the hotel.

I encourage as many of you as possible to pre-register for the Conference, well in advance of the July 19th cut off. You can send the form (and money) back as soon as you receive it. It is much easier for our Treasurer to assemble the registration packets at his leisure. And, it will be much more enjoyable for you to just come in and pick up your packet rather than stand in line, fill out forms, part with your money, and finally get your packet.

I hope to see you and your guests at our Conference in August.

Eric.

## SACRAMENTO BEEKEEPING SUPPLIES

2110 X Street  
Sacramento, CA 95818  
Phone (916) 451-2337  
Fax (916) 451-7008

THE HONEYCOMB  
313 Judah Street #3  
Roseville, CA 95678  
(916) 773-1693

Owned by Nancy and Fred Stewart. In business since 1985. Carrying candle-making supplies of all kinds - 41 colors of honeycomb sheets for rolling. Books, wicks, molds (metal, plastic, and poly) Paraffin, dyes, scents. Call for price lists.

Complete line of Beekeeping Supplies available in Sacramento. Also delivered in Roseville by order.

# Suckiamute Bee

503-838-2328

11260 Simpson Road, Monmouth, OR 97361  
fax: 503-838-6040 • e: beetools@aol.com  
WWW - <http://members.aol.com/beetools>

Check out our new Website!  
It has our complete catalog, used equipment, and all sorts of tips, links and information for beekeepers

## Honey, Bees, Bee Supplies Beeswax, Candles

Olive L. Jones



1-801-973-8281  
1-801-355-2033  
1-800-382-4233  
Fax: 801-886-1882

Jones Bee Co.  
2586 W. 500 S.  
Salt Lake City, UT 84104



## REGISTRATION

Pre-registration(s) for Full Conference 2 @ \$ 50.00 = 100.00

On-site Full Conference Registration(s) \_\_\_\_\_ @ \$ 60.00 = \_\_\_\_\_

Daily Registration(s) \_\_\_\_\_ @ \$ 20 per day = \_\_\_\_\_

Sand Harbor Barbecue(s) 2 @ \$ 22.00 = 44.00

Awards Banquet(s) 2 @ \$ 30.00 = 60.00

Beverage Break Sponsor \_\_\_\_\_ @ \$ 20.00 = 20.00

\$ 224.00

## MEMBERSHIP DUES

Individual \_\_\_\_\_ @ \$ 10.00 = \_\_\_\_\_

Couple \_\_\_\_\_ @ \$ 15.00 = \_\_\_\_\_

Senior \_\_\_\_\_ @ \$ 7.50 = \_\_\_\_\_

Junior \_\_\_\_\_ @ \$ 7.50 = \_\_\_\_\_



<b>Life</b>	_____	@ \$ 100.00	= _____
<b>Couple Life</b>	_____	@ \$ 150.00	= _____
<b>Associate</b>	_____	@ \$ 10.00	= _____
<b>Commercial</b>	_____	@ \$ 50.00	= _____
		<b>Grand Total</b>	= _____

**Make checks payable to WAS (in U.S. funds) and mail the check and registration form to:**

**WAS  
P.O. Box 956  
Grants Pass, OR 97528**

**to arrive on or before Friday, July 19, 2002.**

## Mason Bees

by Ron Bennett

I get several inquiries each year at this time about other bees, and mason bees in particular. I remember several years ago Bob Ramsey (a legend in Northwest beekeeping) saying, "now that I'm retired I wish I had taken up leafcutter bees - then I could drive my car to a field, open the truck and collect a pollination fee and never lift a single box!" Well, it's not quite that easy (we'll have an article on leafcutter bees soon). There are several non-honeybees in the Valley for pollination that are good pollinators in that they will fly early in the year and day, and in bad weather. Keeping leafcutters, carpenter, mason, and bumble bees can be interesting and helpful with just a few trees to pollinate, but commercial pollination really is a numbers game. A large mason or leafcutter group of bee blocks may yield you 200. In one good flight day, a honeybee hive could put 2,000 bees in the trees. And, honeybees are crop specific, they don't go from a cherry to a plum like the others will.

Subject I: Decline of wild honey bees -  
Since 1994 wild honey bee populations have been

devastated by two species of parasitic mites. Many domesticated honey bee colonies have also been lost.

This is a nationwide problem. Recent estimates are that 90% of wild honey bee colonies have been lost. In previous years wild honey bees have done most of the pollinating of our fruit trees and gardens. It has also been estimated that 30% of our food supply depends on pollination of a wide variety of plants by bees. Douglas County was considered to be an under pollinated area even before the honey bee mite problem arose.

Subject II: Mason Bees -

The Orchard Mason Bee, or Blue Orchard Bee (*Osmia Lignaria*), usually referred to as Mason Bees or *Osmia*, is native to Douglas County. It is a very good pollinator as it collects much more pollen than nectar. It is smaller than a honey bee, black in color with a dark blue iridescent sheen on its abdomen (or rear end). A closely related bee (*Osmia Ribifloris*) has an emerald green sheen on its abdomen. Mason bees are very gentle and will sting only if roughly handled.

They are a solitary bee (no hive or queen) and usually nest in holes abandoned by a variety of wood borers. In the deepest part of their hole they form an egg chamber, collect a

**Cont. on page 9**



## WAS 2002 Tentative Conference Schedule

### Monday, August 12th

- 1:00 pm Exhibitors (and silent auction) set up  
in exhibits room  
Registration (until 3:15 pm)
- 3:00 Exhibits open to the members and the  
general public
- 3:30 Delegates'/Directors' Meeting -  
Balcony or Lecture Room
- 5:00 Dinner on your own
- 6:30 Registration (until 7:30 pm)
- 7:00 "Bee Buzz" (Social) in Exhibits Room

### Tuesday, August 13th

- 7:30 am Registration (until 8:20 am)
- 8:00 Welcome to the Conference - President  
Mussen; local contact  
Exhibits open
- 8:20 Door prizes
- 8:30 **Hive Products for Health**  
1. Positive Effects with Apitherapy -  
Louise Estupinian, Pine Street Clinic
- 9:15 2. Clinical Tests with Bee Venom -  
Christopher Kim, MD, International  
Pain Institute, Red Bank, NJ
- 9:55 3. Allergic Reactions and the Epi-pen  
- Linda Edwards, Dey Pharmaceutical
- 10:15 Beverage break  
Registration (until 11:00 am)
- 11:00 4. Honey in Sports -  
Dr. Liz Applegate
- 11:45 Lunch - on your own
- 12:45 pm Registration (until 1:10 pm)
- 1:10 Door prizes
- 1:15 **Honey Bee Behavior**  
1. Colony Behaviors Affecting Bee  
Management -  
Dr. Jerry Bromenshenk
- 2:00 2. Genetics of Intrinsic Behavior -  
Dr. Robert Page
- 2:45 Beverage break  
Registration (until 3:10 pm)
- 3:15 3. Probing the Nervous System of  
Honey Bees - Dr. Brian Smith
- 4:30 Barbecue - Sand Harbor State Park
- 5:00 Conference Rooms locked for the night

### Wednesday, August 14th

- 7:30am Registration (until 8:20 am)
- 8:00 Exhibits open
- 8:20 Door prizes
- 8:30 **Practical Beekeeping**  
1. Wintering Bees - Dr. Mike  
Burgett
- 9:00 2. Spring Management -  
Dr. Steve Sheppard
- 9:30 3. Keeping Bees in Nevada -  
Mr. Leonard Joy
- 10:15 Beverage break  
Registration (until 10:45 am)
- 11:00 **Keeping Lake Tahoe's Water  
Clear - Dr. Charles Goldman**
- 12:00 Lunch - on your own  
Conference Rooms locked up for  
the rest of the day
- 2:00 pm Tour of the UC Davis Tahoe  
Research Lab or Free Afternoon

### Thursday, August 15th

- 7:30am Registration (until 8:20)
- 8:00 Exhibits open
- 8:20 Door prizes
- 8:30 **Honey Bee Research**  
1. Fungi that Infect Varroa  
destructor - Dr. Christine Peng
- 9:15 2. Increasing Honey Yields from  
Stingless Bees - Dr. Julio Lopez
- 10:00 Beverage break  
Registration (until 10:30 am)
- 10:45 **Nepal - Ten Years Later -  
Ms. Miriam Bishop**
- 11:45 Lunch - on your own
- 1:00 pm End of Silent Auction - Exhibits Close
- 1:15 3. Chemical Use in Beehives -  
Dr. Eric Mussen
- 2:00 WAS Annual Business Meeting
- 3:00 Delegates'/Directors' Meeting -  
Balcony or Lecture Room
- 6:00 Social gathering
- 6:45 Awards Banquet and Auction



# Building Bumblebee (*Bombus*) Nests

By Ron Bennett

Here is a simple set of plans for building your own *Bombus* nests as a Winter project. I've always wanted to try this and I've had several people ask about bumblebee nests and keeping other bees as pollinators, so I searched around and found a couple of different plans for not only bumblebee nests, but plans for leaf cutter bees and mason bees.

## GENERAL INFORMATION

Bumblebees are very efficient pollinators. They work flowers that have no nectar, unlike honeybees. They also grab the anthers of flowers and shake them, which is necessary to free pollen in some blossoms.

Bumblebees will work on cool, overcast days while honeybees remain in their hives.

The accompanying drawings illustrate some of the basic needs of the Bumblebees for an outside nest (nests in greenhouses are slightly different as they are out of the weather and the bees are captive in the greenhouse), but are suggestions only. An "Ultimate" Bumblebee nest will only come about as a result of trial and error and careful observations by interested individuals. A supply of dry insulation material in a dark undisturbed area is the bees basic requirement. Also desirable is limited access - for defense purposes. Two chambers are also helpful. This provides them with a vestibule area where they can defecate rather than contaminating their nest area. Other features that add to the attractiveness are a tunnel entrance, protection from the weather, ventilation and color contrast at the entrance. Several studies seem to indicate that a pattern or "marker" of some type at the entrance helps the bees with orientation and location of the nest. A couple of colors they seem to like are pale yellow and mauve. But again, only time and to experimentation will reveal the ultimate solutions. Last but not least is hygiene. Nest boxes must be sterilized and contaminated

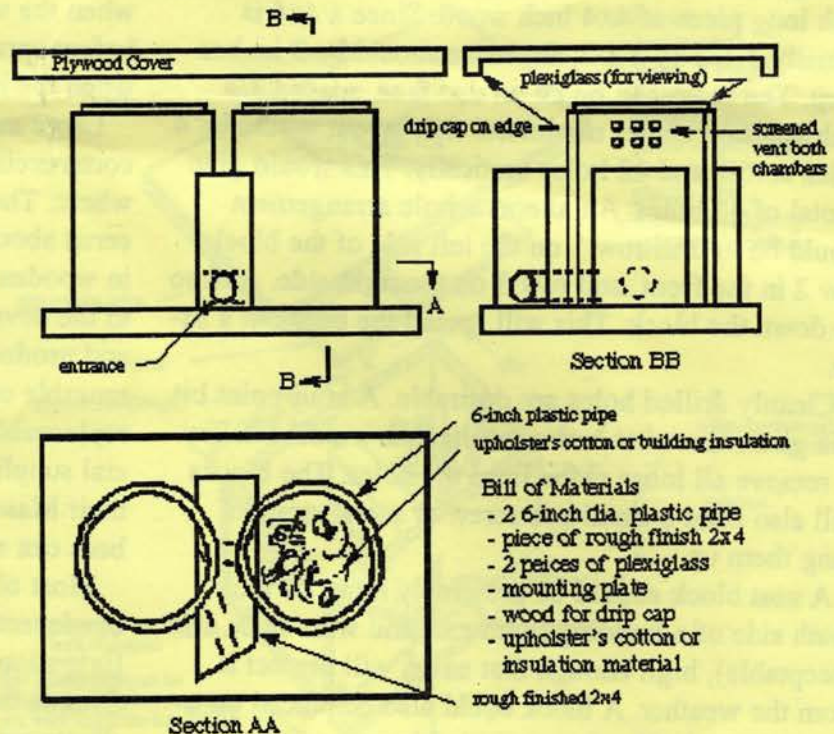
items disposed of each year. Consequently it is suggested that you DO NOT USE PLYWOOD except for tops which are not in contact with the bees, unless you plan to replace it each year. It has been found that plywood cannot normally be properly sterilized.

The drawings show upholster's cotton which is readily available at upholster's shops and is relatively inexpensive. Nevertheless, several people have observed that the Bumblebees seem to be quite happy with fiberglass insulation (in the walls of sheds). This is an area that needs more field trial and observation. It could be that different bumblebees prefer different nesting material.

## NEST

Nests must be dry and well insulated because Bumblebee larvae are very sensitive to temperature extremes. If the temperature drops below 30 degrees C (Bumblebees create their

## Bumblebee Nest Style, One



Notch the plastic pipe to accept the 2x4. Drill 5/8 inch hole from one end of the 2x4 at an angle to form the entrance. In the center of the 2x4 near the top edge, drill a 1-inch hole to provide a connection between the chambers. Drill vent holes in the plastic pipe (to provide ventilation at both ends of the nest). Cover the holes with fine screen. Assemble the pipe sections and the 2x4 on the base plate using silicone sealant (the plexiglass on the vestibule pipe should be left free so it can be removed for cleaning). Place a cut-to-fit piece of disposable corrugated cardboard on the vestibule floor (this will allow for easy clean-up). Place a plywood cover on the top. Weigh down the top with a brick or stone so it will not blow off in a wind.



loaf of pollen and nectar, lay an egg on the pollen and seal up the chamber with mud. They repeat this process until the hole is full of egg chambers. These hard-working little bees only live for up to eight weeks in the spring, usually from the middle of March to the middle of May. This timing is perfect for fruit trees and berries. One of the limiting factors on the Mason bee population is the lack of suitable nest holes. With a minimal amount of effort, we can provide nest blocks that are a proven method of increasing bee populations and assure better pollination of our fruit trees and berries.

### Subject III: Building and placing the blocks -

A Mason bee nest block can be made by drilling a series of 9/32 or 5/16 holes into almost any piece of sound, dry wood that is free of cracks, providing it is not treated wood. The holes can be as much as 10 inches deep, but must not go all the way through the wood.

A typical nest block could be made out of a 12-inch long piece of 4x4 inch wood. Since a 4x4 is actually 3 1/2 by 3 1/2, the holes should be 3 inches deep. The holes can be all on one face, spaced 3/4 inch apart on center minimum. Our layout would be 4 holes across and 12 holes vertically. This would give a total of 48 holes. An alternate hole arrangement would be to drill row 1 on the left side of the block, row 2 in the front, and row 3 on the right side. And so on down the block. This will spread the bees out a little.

Cleanly drilled holes are desirable. A brad-point bit will give somewhat better results than a steel bit. Try to remove all loose chips from the holes. The blocks will also need a small eye screw or metal strap to hang them up.

A nest block should be preferably hung on the south side of a building (with east and west sides also acceptable), high enough that eaves will protect it from the weather. A block could also be placed on a covered porch. If a dry, protected location isn't available, a small roof could be fastened to the nest block itself. The nest block needs to be fastened in place so it won't be jarred or jolted, or knocked over, as this could dislodge the larval bees from their pollen food supply, thus killing them.

Once you have put up your empty nest block, the Mason bees will find it and begin to make their nests

in the holes. A nest block in a well-protected location can be left in place all winter. If it's in a less protected area, it can be moved indoors and stored in an unheated building in the fall (by then the larval bees will be in the cocoon stage and won't be harmed by movement). The nest block would need to be put out the following year about the middle of March.

Because your bee population is expanding, you will need to put out additional blocks next spring. The female bees do all the nest building. They identify their hole by marking it with their scent. When they finish finding a nest hole, unless there is another unmarked empty hole nearby, they will fly away. We can further assist them by planting early blooming plants to assure a continuous pollen and nectar supply, and by providing an artificial mud supply if needed. Another way we can benefit all species of bees is to consider bee welfare when spraying pesticides. Try to follow the general guidelines of not spraying plants when they are blooming, don't spray when the wind is blowing, and mow flowering weeds before spraying them. Try to spray in the evening, when the bees have returned to their nests.

Large numbers of Mason bees are being used in commercial agriculture in Douglas County and elsewhere. The need for more efficient methods, and concerns about buildup of molds and disease organisms in wooden nest blocks after several years use have led to the development of more sophisticated materials and products for Mason bee nests. Six inch long reusable cardboard or fiberglass tubes lined with replaceable paper straws are available from commercial suppliers. For those who don't wish to wait for their Mason bee populations to build up gradually, bees can also be purchased.

Most of the material on this information sheet was condensed from Washington State University Extension Bulletin 0922 and from information from Oregon State University, fact sheet #10. These fact sheets can be obtained at your local Extension Service office.



own heat), the young's growth will be stunted.

As with any collection of bees, cleanliness is very important. This is particularly true with Bumblebees as they will defecate in their nest area. Therefore, the nest should have two chambers; a vestibule chamber where the bees can defecate and a nesting chamber.

Nest chambers should be about 6" X 6" or slightly larger. The vestibule can be slightly smaller.

A landing surface at the entrance is an attraction, particularly for inexperienced foragers.

The use of a tunnel entrance with no steps allows the colony to better protect itself. The ideal entrance diameter is 5/8 of an inch but no larger than 3/4 of an inch.

The inside divider needs to be rough so bees can get a grip when they climb over it.

Make sure adequate weather protection is provided (ie. overhanging roof).

Paint around the entrance hole to provide a color contrast; an "orientation-pattern" seems to be even more attractive.

## TIPS

Let your nest box weather outside for a while before you put it into use. This will allow any paint or caulking odors to dissipate.

Set nest out in the early spring when the first flowers, such as Willows, are starting to bloom.

Bumblebees may search all day long for up to two weeks to find an "ideal" nest site.

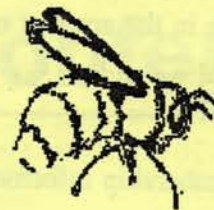
If you are planning to introduce a Queen to your nest, rather than taking a chance that they will find it, it has been suggested that you get a bee without pollen in her "baskets". The theory is that a Bumblebee with pollen in her "baskets" has already chosen a nest site and consequently will not stay in yours. This theory may be true, but still needs some more research.

Bumblebees are very fickle. They may use your nest one year but not the next. Also, if they find a better location before they are really settled in or if they are too

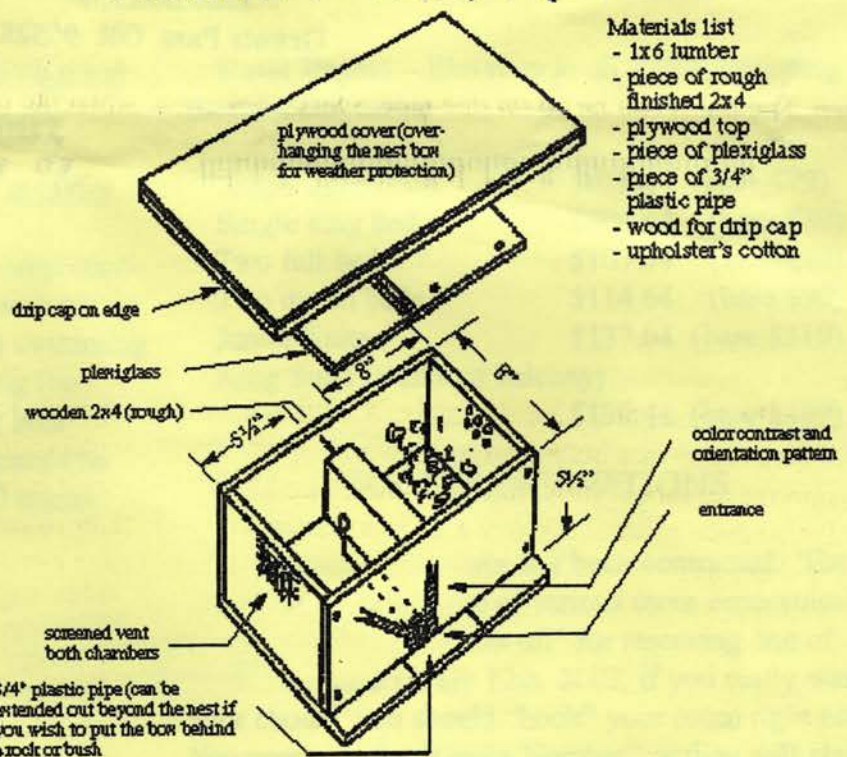
badly disturbed, they will move. If you get one box in three occupied, consider yourself lucky.

DO NOT take the cover off your nest (once the Bumblebees have started nesting) more than once a day or the bees will probably vacate.

This article is taken from a sheet from an unknown newsletter with R. Welland listed as the author. Notes indicate that the source is in British Columbia, CANADA. We are thankful to R. Welland for this information.



## Bumblebee Nest, Style Two



- Materials list
- 1x6 lumber
  - piece of rough finished 2x4
  - plywood top
  - piece of plexiglass
  - piece of 3/4" plastic pipe
  - wood for drip cap
  - upholster's cotton

Construct the lower box using 1x6 lumber. Screw unit together (using a small amount of silicone sealant in the joints). Cut a piece of rough finished 2x4 to length. Secure it in place using silicone sealant. Drill hole to suit and insert piece of plastic pipe. Drill vent holes in both end and cover with fine screen. Put upholster's cotton in the nest compartment. Put a cut-to-fit piece of disposable corrugated cardboard on the vestibule floor (this will allow for easy cleaning of this area). Secure the plexiglass over the nest area with screws. Using tape as a hinge, position the plexiglass over the vestibule area (this will allow access to the vestibule without disturbing the nest area). Place plywood cover on top. Weigh the top down with a brick or stone so it does not blow off in the wind.



# MEMBERSHIP RENEWAL DUES PAYMENT FORM



PLEASE PRINT

Name \_\_\_\_\_  
First Last

Address \_\_\_\_\_  
Street City State/Prov. Zip

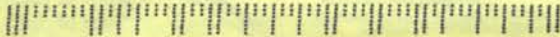
Enclosed is a check in the amount of \_\_\_\_\_ in payment of dues for year's \_\_\_\_\_

Type of membership \_\_\_\_\_ New \_\_\_\_\_ Renewal \_\_\_\_\_

See Page 2 for membership information and make check payable to Western Apicultural Society - mail to:

## Western Apicultural Society

WAS Treasurer,  
P.O. Box 956  
Grants Pass, OR 97528



98277+8436 08