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W.A.S. Journal

The Journal of the Western Apicultural Society of North America

The Northwest Corner Beekeepers' Conference Report

At the end of October, the Idaho State Beekeepers Association, the Oregon State Beekeepers Association, the Washington State Beekeepers Association and the British Columbia Beekeepers Association held a joint meeting at the Best Western Hood River Inn in Hood River Oregon.

The meeting opened with welcoming remarks from Torey Johnson, president of the OSBA, and Robert Stump, president of the WSBA. The first speaker was Dr. Hachiro Shimanuki of the USDA Beltsville Bee Lab titled "Terramycin Resistance and other Bee Diseases Status." Dr. Shimanuki stated that Terramycin (trade name for oxytetracycline - OTC) resistance was an emerging problem for beekeepers. The fourty years use of a single antibiotic was unprecedented and the development of resistance was to be expected. Resistance foulbrood was first noted in Argentina in 1989 mixed in with European Foul Brood, possibly *Paenibaccillus alvei,* and showed different clinical symptoms than here in the United States. The suspected problem here in the U.S. stems from the use of under-strength extender patties. We still need to determine how much and how fast the antibiotic is delivered to the larvae.

Some of the replacement possibilities being tested are Tylosin (which has a half-life of 186 days, compared to OTC's half-life of 7 days), and Lauric acid (found first in distilled chalkbrood mummies), and radiation - both gamma and high-voltage electron beams.

In the mean time, if you use extender patties, Dr. Shimanuki suggested a formula of 150g of vegetable oil (Crisco), 300g sugar, and 12.5g TM25 OTC.

Dr. Shimanuki said that the coming formic acid gel packs are not a replacement treatment for Varroa, but they will support treatments for Varroa. He also spoke on the current situation with the small hive beetle.

The second speaker was Dr. Lynn Royce of the Oregon State Bee Lab on "Integrated Pest Management for Varroa." Dr. Royce explained in-depth what an Integrated Pest Management (IPM) system is how beekeepers might implement such a plan. She showed data from the last two years of her research on Juniper wood for the treatment of Varroa which showed that Varroa populations climbed dramatically in August. Then she showed data of the egg laying frequency of a queen on a month-by-month basis which showed a dramatic drop-off in laying in August. And she showed the honey flow for the same location, which indicated that the honey flow was over by August. She tied this all up by noting that the eggs the queen was laying in early August were going to be the bees that wintered over. Bees that have been attacked as larvae by Varroa have been shown to have 30% less body mass and only survive about a day as field bees. Her conclusion, for the hive location tested, is that honey crops be pulled by July 31st and treatments for Varroa started no later than August 1st.

The third speaker was Mr. Jamie Strange of

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Individual	$ 10.00	Commercial	$ 50.00
Junior	7.50	Life	100.00
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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.

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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Pollination on Mars

By Anton G. BRANZ
20th Oct.1999
Postfach 2966
67617 Kaiserslautern Germany

As a part of my ongoing work with Dr. Lynn Royce of OSU on drones, we are constantly looking for information on rasing drones out of season and/or in a closed environment. I stumbled upon this interesting paper and thought I'd pass it along. If it seems a little stilted, that may be because it was translated from German by software. I've made some minor changes in the text to make it flow a little better. ed.

A manned mission to Mars (including landing) will take about 2 years. A one way trip will take about 8 months, but depends heavily on the trajectory flown. The length of stay on Mars might take one to three months.

The crew consists of two to three members. The crew needs among other thing food, oxygen, and water.

The freshness of the food decreases certainly over time. To eat canned food for duration of two or three years is not only a matter of taste, but can cause physical as well as mental health problems.

The weight of the mass of the food plus packaging/containment is to be transported, and they need oxygen plus containment as well.

The required water quantity is somewhat less because of its potential to be recycled.

The biological waste can be entrusted to the infinite deepness of space as a hidden message from Earth.

Biological Cycles.

A reduction of the masses as planned in this first version, can be reduced by usage of three biological cycles, which have food plants as a central point.

The first loop is the oxygen-carbon dioxyde loop: Humans breathe in oxygen (O^2) and exhale carbon dioxide. Plants take in this carbon dioxide and release oxygen.

A sufficiently large quantity of plants can be used as oxygen generators, which reduces the required amount of oxygen and related containers considerably.

The second loop is the fruit-compost loop: humans eat the fruits of plants and leave digested "compost" as fertilizer for the plants.

A sufficiently large quantity of plants can be used not only for oxygen production but also as food producers, which would reduce the quantity of food to be transported.

These two loops reduce waste to a minimum. The plants take the exhaled carbon dioxide and oxygen is released.

Similarly, compost is converted by the plants to appetizing tidbits such as cabbage, spinach, radish, onion, dry bean, rice, carrot, chard, tomato, sweet and white potato, peanut, lettuce, wheat, or soybean. And by the way, everything is quite fresh.

The third loop is the water loop: Used water can be cleaned and used for watering plants. Plant soil can do the cleaning to a certain extent as happens here on the ground as and it becomes drinking water.

Part of the water is taken from the plant's roots and released via the leaves (as oxygen is released). That water can be condensed (and after mineral enrichment of course) and used as drinking water as well.

Here we make use of the symbiosis of plants and humans.

But why does a little beekeeper take a remote interest in something like a trip to Mars?

Pollination.

When plants bear fruits they must first bloom and get pollinated. Originally, this was done by the wind.

Some plants are wind pollinated which needs a fan when they are grown in a closed space as in a greenhouse.

Some plants need other means to be pollinated such as insects, hummingbirds

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WAS Alaska Program Announced

The preliminary program for the W.A.S. Conference in Anchorage, Alaska on July 13 - 15, 2000 has been announced. Dr. Michael Burgett of Oregon State University Bee Lab and W.A.S. Program Chair has put together a program that will include several noted guest speakers as well as extensive presentations from local (Alaska) beekeepers on the special problems and condition of keeping bees in the Alaska environment.

The list of presenters include one of our most entertaining (a very fitting adjective) members, Dr. Norman Gary, U.C. Davis (ret.). Norm regaled us at the Reno Conference with his presentation on the use of bees and insects for the entertainment industry including the "how-to" of the World Record Bee Beard. He also showed us many of the special inventions and gadgets he developed over the many years of his research in beekeeping.

For Alaska 2000, Norm is going to a more "serious" presentation, FORAGING BEHAVIOR OF BEES.....DISTANCE, DISTRIBUTION, AND RESOURCE PREFERENCES. When asked about this topic, Nrom said, "I will provide insights gleaned from a decade of foraging studies using the magnetic recapture system methodology. I will also discuss the implications of foraging behavior on exposure to pesticides, diseases, and pollination efficiency."

Also on the program will be Dr. Nick Calderone, Cornell University speaking on INTEGRATED PEST MANAGEMENT FOR PARASITIC MITES and THE CORNELL UNIVERSITY HONEY BEE RESEARCH PROGRAM. Nick is one of the world's leading bee researchers and we are very fortunate to have him on our program.

Also part of our program will be our own Dr. Eric Mussen, of U.C. Davis speaking on PLASTICS IN BEEKEEPING, and our Program Chair and Vice President, Dr. Michael Burgett, of Oregon State University speaking on BEEKEEPING IN THE LAND OF MAN-EATING TIGERS.

For those of you who might want to experience BEEKEEPING IN THE LAND OF MAN-EATING TIGERS firsthand, see the associated article on page 8 of this issue.

Alaska Cruise Package Available

July 12 - 15, 2000
Western Apicultural Society
Meeting in Anchorage, Alaska

Optional tours and cruises are available before or after your stay in Anchorage. For those that may not get the chance to visit this beautiful area often enough, you may want to consider extending your trip while in Alaska and adding a special vacation package.

Paul Heins has put together the following cruise package: July 16, 2000: Sail that evening southbound from Anchorage/Seward to Vancouver BC on Holland America's Ryndam. Arrive in Vancouver BC on the morning of July 23 after cruising the inside passage. Transfer to Seattle for your flight home.

Since this is "high-season" for Alaska travel, prices start at $2331.00 USD

Price is based on availability and is per person based on double occupancy. The prices are also based on a group booking of at least 10 persons. Pricing includes land transfers, taxes, port charges, and travel insurance. Once onboard the ship, your meals and onboard entertainment are included. Gratuities, alcohol, carbonated beverages, personal expenses, and shore excursions are additional. If you want something different, please don't hesitate to ask us to put a special package together for you.

Space is extremely limited on these very popular cruises, so if you are interested we need the form below filled out and sent with a $250 deposit per person ASAP in order to guarantee space. Please send to Fern Anderson or Paul Heins at Aventuras Mexico; P O Box 392 (811 Century Drive, NE) Albany OR 97321. Or call in your credit card information to us at 541-924-9210 or 800-900-1062 fax 541-924-3807 email MexicoAven@aol.com

Special Airline Fares Available for WAS Members

Alaska Airlines has agreed to offer a discount for your flights to and from Anchorage for the meeting. The discount is 5 - 10% off the published air. In addition, if there are 10 or more people traveling on the same itinerary, there are group rates available.

So, to insure we can meet the group requirements, we need to know ASAP who is flying from what cities.

Legal names of passengers and ages if there are any children or senior citizens

_____

Convention air only? Yes___ No___

Travel dates and departure city _____

Cruise or cruise/tour? Yes___ No___ If yes, please specify which one_____

Are those traveling U S citizens? Yes___ No___ If no, please specify_____

Please send to Fern Anderson or Paul Heins at Aventuras Mexico; P O Box 392 (811 Century Drive, NE) Albany OR 97321. Or call in your credit card information to us at 541-924-9210 or 800-900-1062 fax 541-924-3807 email MexicoAven@aol.com

or humans. Pollination by humans can be done by using a small brush from bloom to bloom or by applying vibrations which make the pollen float and let them find their way to their destination (bloom...).

Nowadays it can be even more modern: Bumblebees (lat.: Bombus) can be bought in a cardboard box and put into a greenhouse to do their job. Bumblebees are more cost-effective and reliable than human pollinators.

Pollination does not necessarily have a binary result: Pollinated or not. There can also be an intermediate result: poorly pollinated by too little pollen. A prerequisite for proper fruit production is a proper pollination. Insects do this quite well in nature.

During long distance and long duration space flight one might use astronauts with a little brush in their hand as pollinators of their own food to avoid not undangerous boredom.

Pollination by bees in a closed green house with transparent walls and ceiling is apparently not possible.

A larger experiment of this kind was done by the American Biosphere II test installation.

In a bee flight room (BFR) with non-transparent walls and artificial illumination, bees can do their job very well.

First Steps towards a Mars Mission.

Survival in a closed bee flight room (BFR).

Successful experiments on the survival of bees in a separate, from nature enclosed bee flight room over a longer time were done by the Niedersächsischen Landesinstitut für Bienenkunde in Celle, Lower Saxony, Germany, by J.P. van Praagh.

Bees were fed with sugar solution, plain water and fine ground pollen outside the hive. The bees did the harvest directly. A high air humidity caused a high brood rate. Swarming impulse was low. Experiment duration was 18 months.

At the Research Centre for Insect Pollination and Beekeeping, "Ambrosiushoeve", in Hilvarenbeek, Netherlands, similar experiments were done with bumblebees by Ing. J. van den Eijnde.

Here bumblebees are reared for pollination in greenhouses.

Survival of bees under micro gravity.

The influence of the absence of gravity on the survival, behavior, and comb building capability of bees was already researched during the NASA Space Shuttle Mission STS-13 in April 1984.

For this purposes two identical beehives were made: one for the actual shuttle flight and one as reference model on the ground. These bee-tight hives had an aluminum case and a transparent cover. The size was 12x38x46cm. Three wooden frames were contained, one with a 7.5x7.5cm drawn-out comb, two with comb foundation of the same size but without imprinted cell pattern (with a smooth surface).

At the one side of the hive there were the 3 frames, on the other side a feeder (with sugar syrup). The space in between served as flight room. Additionally there were two ventilation holes, a fan and two thermometers.

Beside the queen there were 3400 worker bees. About 200cm2 comb were built during this space flight and part of the sugar syrup was gathered.

The queen filled the comb with 35 eggs. They tried to rear these eggs later on the ground but without success. During the total flight duration only a few bees died.

The cell densities of newly built combs were 860 cells per 100cm2 in orbit, 800 cells per 100cm2 at ground.

After first trials under micro gravity conditions the bees learned to take off properly, fly and land between the feeder and frames.

Next steps to be taken towards Mars.

For bumblebees such experiments are still to be conducted. Pollination

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under micro gravity conditions. As well as pure survival in orbit, pollination of blooms by bees or bumblebees, under micro gravity conditions has yet to be researched.

Propolis.

In a bee flight room no propolis can be collected when the necessary plants or special trees are not present. Maybe a new breed of such trees such as bonsai types or bonsai size might be a solution.

Duration.

As survival and active duration of three years is not a problem for a queen bee.

A bumblebee colony has a lifetime of several months. How an overlapping running of several bumblebee colonies over such a time duration can be achieved needs to be found out.

Plants/crop rearing Tests.

Presently tests with the following plants, as mentioned already before, are going on at NASA: cabbage, spinach, radish, onion, dry bean, rice, carrot, chard, tomato, sweet and white potato, peanut, lettuce, wheat, and soybean.

Mission constraints are: crew time, shelf life, safety, storage, power, and food processing like flour grinding, baking bread, pressing oil from soybeans.

Reference list:

/P_72/
Praagh, J.P., van, (1992)
Towards a controlled-environment room suitable for normal colony life of honeybees.
J.apic.Res.,11: pp77-87.

/Pa75/
Praagh, J.P., van, (1975)
Light-ripple and visual acuity in a climate room for honeybees (Apis Mellifera L.).
Neth.J.Zool.,25(4): pp506-515.

/Pb75/
Praagh, J.P., van, (1995)
Die Feuchtigkeit der Stockluft und die Bruttätigkeit der Bienen (Apis Mellifera L.) in einem Flugraum.
Apid. 6: pp283-293.

/V+85/
Vandenberg, J.D., et al, (1985)
Survival, behavior and comb construction by honey bees, Apis mellifera, in zero gravity aboard NASA Shuttle Mission STS-13.
Apid. 16: pp369-384.

/P_87/
Praagh, J.P., van, Brinkschmidt, B., (1987)
Pollen Collecting Behavior of Apis mellifera in a Bee Flight Room.
Eder/Rembold, Chemistry and Biology of Social Insects, Verlag J.Peperny, München 1987, pp571-572.

/E_90/
Eijnde, J.v.d., (1990)
Ganzjährige Züchtung von Hummelvölkern für die Bestäubung in Gewächshäusern: eine rasche Entwicklung.
ADIZ 6: pp12-14

/WS92/
Witte, Günther R., Seger, Juliane, (1992)
Hummelmanagement.
Unterricht Biologie 174: pp52-53.

http://pet.jsc.nasa.gov/foodtech_nut.html

Tour Thailand

Attend the Fifth Asian Apicultural Conference March 14-28, 2000

Paul Heins of Albany, OR is again leading a bee-keeping tour to Thailand. Many of you have seen and heard Dr. Michael Burgett's presentation on these tours and what a wonderful experience they are for all attendees.

Thailand is the only place where of all the *Apis* exist, and is the genetic source of all *Apis* today (as well as our "friend," *Varroa)*.

Time is very short to book your space and these tours are very limited in the number of people that can attend, so book NOW. Paul has put together an extensive itinerary:

March 14th - Leave Los Angeles at 1:10 pm and arrive in Bangkok at 11:59 pm March 15th (you are crossing the dateline). Spend the night at Hotel Intra.

March 16th - Leave for Cambodia, arrive in Siem Reap late afternoon. For those traveling to Phuket, leave the same day. Bring 1 photo and $20 and a visa. Our guide, Jesse Elliot, and I will go with each group. Jesse has done the local guiding for me on the last two trips.

March 17th - Tour temples of Angkor Wat (a UNESCO World Heritage site) the world's largest religious monument.

From the 18th to the night of the 24th: We will stay at the Night Bazaar Inn in Chiang Mai and have a chance to visit Dr. Burgett and see his work in Thailand.

March 18th - We will tour Siem Reap, then fly to Chiang Mai. We will tour in and around Chiang Mai, including the Queen Siriti Garden and the Krisidi Doi Garden. Also a trip to the Elephant Camp, then off to the Golden Triangle to visit hilltribe and tour home industries: woodcarving, umbrellas and thai-silk farm.

March 24th - A late ride by sleeper train, with sleeper to Bangkok. Arrive in early morning. Bus to the bridge over the River Kwai in Kanchanaburi. Visit the WWII Museum and Allied War Cemetery. Spend the night at the Intra Hotel in Bangkok.

March 27th - Visit the Grand Palace, go for a long boat ride, and visit Jim Thompson's house. Dinner as a group in the Baiyoke Sky Hotel. Stay at the Intra Hotel.

March 28th - Depart for home at 8:30 a.m. and arrive the same day at 10:55 am at LAX.

The total cost per person is only $2,136.00 pp dbl/Cambodia. from LAX; or $1,986.00 pp dbl/Phuket, from LAX; add on airfare from the East Coast is $300.00 plus tax. Single supplement is $300.00.

Cancellation fees (per individual):

45-21 days prior to departure: 20% of total tour cost.

20 days or less prior to departure: 50% of tour cost.

Day of departure, no shows or while on tour: 100% of tour cost.

To book a spot on this wonderful tour opportunity or for more information, contact Paul Heins, P.O. Box 517, Albany, OR 97321 - Phone 541-926-6336.

Beeswax Cleaner for Copper

Parts by weight.

2.4	parts	beeswax
9.4	parts	mineral oil
42	parts	vinegar, 5% to 7% acetic acid
42	parts	citric acid, USP crystals
42	parts	soap flakes

Combine the soap and vinegar to make a paste. Melt the beeswax and mineral oil together in a microwave or a double boiler. Stir in the soap mixture and the citric acid. Let the cleaner set overnight before using it.

Apply the polish with a clean, damp cloth. Rinse the copper and wipe it dry with a clean cloth.

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Washington State University speaking on "Timing is Everything - Varroa mites studies." He described the research he has done at WSU and concluded that one treatment a year was adequate, but that spring might be a better time in his area for Varroa treatments.

Deborah Delaney of the OSU Bee Lab, described a proposed research study titled "Drone Potency Deficit - Causes and Effects." Ms. Delaney describe how important drones are to the breeding of bee stock and how little we really know about this half of the equation. She described several experimental setups and data target for drone research.

One of the most interesting presentations was by Lilia DeGuzman of the USDA Baton Rouge Bee Lab. Lilia described the development and evaluation of stock from queens collected in the Primorski region of eastern Russia. This is the area where *Apis Meliffera* has been in contact with Varroa for the greatest amount of time. She describes the characteristics of the bee stock, which show great promise in resistance to Varroa mites. The new queen stock has been released to selected queen breeders around the country for testing and open breeding to see if the Varroa resistance carries through in normal queen rearing practices.

There followed a report on the current working of the American Beekeeping Federation by Patrick Heitkam and Judy Gulleson told of the new direction for promotion by the National Honey Board. The NHB will be focusing its effort on teaching the public the health benefits of honey and honey products with support to local and national media. She showed the meeting several video spots produced with the support of the NHB that have already aired. These included a news spot on the health benefits of honey and programs like "Barney the Dinosaur" featuring beekeeping and honey.

The banquet speaker was Dr. Shimanuki on the topic "Beekeeping in the New Millennium." Dr. Shimanuki spoke of new technologies like microelectronics that will help beekeepers and researchers better understand honeybees.

The next morning, Dr. Steve Shepard of the Washington State University, led off with a presentation titled "New Horizons: Bees, Genetics and Mites."

Dr. Michael Burgett of the OSU Bee Lab followed with a review of his annual survey of bee pollination rental rates which gav an over view of the pricing trends in the industry. This annual survey is the only extensive record of the business-side of pollination. It lists the prices charged and the number of hive rented year-by-year, and crop-by-crop. The current survey and many past surveys can be accessed at *http://members.aol.com/beetools* websites for those with Internet access.

Jack Thomas of Mann Lake gave an update on the current status of Checkmite and explained that they now have available Checkmite packages for the treatment of the small hive beetle.

The Annual Research Luncheon featured Dr. Michael Burgett speaking on his experiences as an advisor in a AID project in Armenia. The project was to increase the number of people keeping bees in the Carnolian mountain area. The Armenian people have a long history as beekeepers, but use hives that are longer and deeper that the Langstroth hive we use. The project funded the building of thousands of Langstroth-type hives and Dr. Burgett was to "teach" people how to keep bees in these hives. Dr. Burgett gave a wonderful presentation of the Armenia area and felt that the project was not going to be the success that was hoped for because this was too big a change without much up-front planning.

The last presentation was from Lilia DeGuzman and it was titled "Genotype in Varroa - Some not too bad, others awful." If the information presented the day before on the Russian queen stock wasn't exciting information enough, Lilia describe a project she is working on using DNA testing to determine different Varroa races. Her work has shown that there are five different races of Varroa. The two most significant to us are what she called the Russian-type and the Japanese-type. The Russian-type Varroa are very hard on honey bees and are the predominate type here in the U.S. The Japanese-type and cross of the Russian-type and Japanese-type are much less damaging to honey bees and hives can tolerate this race of mite. She proposed further study, but feels that we might be able to "flood" the U.S. with Japanese-type genetics and "breed-down" Varroa mites to a point where our bees can tolerate them.

Pastrami

by Ron Bennett

One of the basic necessities of life (my life anyway), is once in a while, a real pastrami sandwich. One thing missing in rural Northwest life is a real Jewish deli with real brisket of beef, real corned beef, and real pastrami (let alone a good knish). I've ordered a pastrami sandwich only to find it's made from some chemically altered turkey loaf or from some small hard super-lean (dry) clod of beef with a texture like chipboard. So, searched out and found some corning and pastrami recopies and started to work.

A true pastrami is nothing more than a corned beef that has been smoked. Traditionally, each deli has its own secret recipe for the corning and for the smoking. You may already have your own corning (salt/sugar/spice) curing and can use that as a basis and then play with different smokes to get the right flavor for you. I don't recommend using the already corned beef briskets that are sold in the markets, but if they are to your liking - go for it.

3-4	lbs.	beef brisket
¾	cup	Morton's Tender Quick
½	cup	Honey
¼	cup	black peppercorns, crushed
2	Tlbs.	corriander seed, crushed
1	tsp.	whole cloves
4	cloves	garlic, diced small
1		1-gallon zip-lock bag
2	cups	wood chips (hickory, alder, cherry to suit your taste

Mix coarsely crushed black peppercorns, coarsely crushed corriander seeds, Tender Quick, honey, garlic and clove. Rub mixture over both sides of the beef and put it all into a 1 gallon zip-lock bag and refrigerate for seven days, turing the bag once a day to even curing. After seven days, hang the brisket in a cool dry place for 24 hours. Then following the directions for your smoker, smoke for 1 hour per side.

To serve, slice accross the grain and steam to heat.

GEORGE CARLINISMS

Is this how Plato got his start? Maybe that's why the word profundity has the word fun in it! Or not...

Does killing time damage eternity?

Why doesn't Tarzan have a beard?

Why is it called lipstick if you can still move your lips?

Why is it that night falls but day breaks?

Are part-time bandleaders semi-conductors?

Can you buy an entire chess set in a pawn shop?

Daylight savings time - why are they saving it and where do they keep it?

Did Noah keep his bees in archives?

Do jellyfish get gas from eating jellybeans?

Do pilots take crash-courses?

Do stars clean themselves with meteor showers?

Do you think that when they asked George Washington for ID that he just whipped out a quarter?

Have you ever imagined a world with no hypothetical situations?

Have you ever seen a toad on a toadstool?

How can there be self-help "groups"?

How do you get off a non-stop flight?

How do you write zero in Roman numerals?

How many weeks are there in a light year?

If athletes get athlete's foot, do astronauts get mistletoe?

If Barbie's so popular, why do you have to buy all her friends?

If blind people wear dark glasses, why don't deaf people wear earmuffs?

If cats and dogs didn't have fur would we still pet them?

If peanut butter cookies are made from peanut butter, then what are Girl Scout cookies made out of?

If space is a vacuum, who changes the bags?

If swimming is good for your shape, then why do the whales look the way they do?

If tin whistles are made out of tin, what do they make fog horns out of?

If white wine goes with fish, do white grapes go with sushi?

If you can't drink and drive, why do bars have parking lots?

If you jog backwards, will you gain weight?

Why do the signs that say "Slow Children" have a picture of a running child?

Why do they call it "chili" if it's hot?

Why is the time of day with the slowest traffic called rush hour?

WAS Goes "North, to Alaska!"

The WAS invites you to join us in Alaska in July of 2000. The annual meeting and Conference will be held in Anchorage - the "hotbed" of Northern beekeeping. A full program of local, national and international speakers is planned. This will be combined with beekeeping (and fishing) tours. The Conference will be July 13, 14 & 15 at the Westcoast International Inn.

Efforts to reduce costs are being actively pursued and include the probability of a chartered air carrier and possibly a return trip via a cruise ship exploring the great Inland Passage!

In order to maximize the benefits for this meeting, an early pre-paid deposit will be required (like we did for our Hawaii meeting is 1996). A $200 non-refundable deposit must be made before Feburaryr 1 of 2000. We encourage you to join us in Alaska and so that we may be sure to provide you an unforgettable beekeeping adventure, please send your $200 per person deposit to:

Western Apicultural Society
George Steffensen, Treasurer
P.O. Box
Grants Pass, OR 97527

"North, to Alaska!"

YES!!!! I do plan on attending !!!! And YES, I have enclosed my pre-registration deposit.

Name(s): _____

Street Address: _____

City: _____ State: _____ Postal Code: _____ Country: _____

Deposit: $200 X Persons = _____ (amount enclosed)

Make check payable to WAS and mail to:

Western Apicultural Society
George Steffensen, Treasurer
P.O. Box 956
Grants Pass, OR 97528-0956

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

George Steffensen, Treasurer
P.O. Box 956
Grants Pass, OR 97528-0956