



# INLAND BEEEMAIL

Monthly newsletter of the Inland Empire Beekeepers Association

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Presidents  
Corner:

## September Bee Mail

From the President

Hello everyone. What a great summer it has been. It is now September and the young ones are back to school and the summer vacations are over.

Several items that I would like to visit with you at this time.

I received a thank you card from Spokane Valley Adventist Church:

“Jim – Thought you’d like to know that Travis Sammons gave a bee demonstration during our church’s vacation bible school program this past summer. And children really enjoyed it. We appreciate what you guys do! God Bless – Becky”

I know Travis is not the only one doing these presentations. It is nice to know that we, the Association, makes a difference. Thanks Travis and everyone else doing the presentations. It takes time and effort, thanks again.

The picnic was a success.

We had over 40 people show up for the food and visiting with other beekeepers. Thanks to everyone that helped. Last year in talking with Ted he told me that he showed up early to get the pavilion. I showed up at 7:15 AM and there was already someone there. I started laughing and the gentlemen asked what was funny. I told him that I got up and left the house about 6:00 AM trying to be the first one in line for the pavilion then he started laughing also, he was at the pavilion at 6:30 AM. This must have been the husband of the woman Ted told me about. Last year Ted had started to set up in the pavilion when this women showed up and was a little upset that she wasn’t the first for the pavilion. I guess this year she pushed the husband out of bed to make sure that they had the pavilion. Who will get the pavilion next year?

Yellow Jackets

I don’t know about the rest of the world but here at Millers we are having a big problem with the wasps and hornets. During July and August we have put out six traps and baited them. For the first month we used ham slices and for the month of August we have been using honey and wax. Every other day we remove the traps and clean them. The traps produce about six cups of wasps and hornets each time.

Wasps have found their way into the storage area and I used a shop vacuum every night for about a week sucking them up. I found where they were coming into the building and sealed the hole. When I cleaned the vacuum I had over three pounds of wasps. We have lost four weak hives to the wasps. Jenine has been telling me for the last several years that I should put entrance reducers on the hives this time of the year. The wasps were so great around the hives that I felt I had to do something or I would lose all my hives. So, I cut strips of wood 1 ½” shorter than the opening and nailed them in place. Then I watched. The Honey Bees were upset at first with nailing taking place and when the field bees returned they were confused on how to get into the hive. I watched for about ½ hour as the wasps tried to enter the hives, the honey bees were escorting, fighting and killing wasps. When the wasps became outnumbered on the landing strip by honey bees they appeared to move on. My wife, Jenine, was correct, I should use entrance reducers this time of the year.

Honey Month

September is National Honey Month. I have ordered a kit from the National Honey Board. Hopefully I will have the information for the Spokane Fair.

Honey Extraction Sites

The National Honey Board has been working with the USDA on cleanliness of extraction sites. If you would like your site inspected by the USDA contact the National Honey Board at [NHB.org](http://NHB.org) today.

See you at the monthly meeting, Thursday, September 6<sup>th</sup> at the Bee Booth at the Spokane Fair Grounds. The meeting will start at 6:30 PM. The meeting will be short.

Thanks and have a great day.

Jim Miller  
President

# Fair Time!

## Showing Honey at Fairs

Adapted From Beekeeping in the United States By E.C. Martin

Showing farm produce at the county fair or the State fair is a fine American tradition. Fair visitors can be so fascinated by attractive displays of honey and other apiary products, including observation hives, that we should surely make greater use of such opportunities to promote our products. Honey consumption in the United States is only slightly more than 1 pound per person. If no effort is made to promote its use, consumption could drop still further-and there could be a tendency toward lower prices.

About 200,000 people keep bees in the United States. Most States have a fair and there are hundreds of county fairs. Beekeepers in some States do marvelous jobs of organizing displays at the fairs. The initiative for getting beekeepers' displays on the fair prize list and then stimulating good, competitive response from the honey producers must come from State or local beekeepers' associations. Persistent effort by a continuing committee can develop the talent for showmanship present in every community. Expanded use of the fairs could provide the beekeeping industry with an interesting and profitable way to tell many millions of people the good qualities of honey.



### Preparing Honey for Competition

Competition- particularly in white, liquid honey classes- can become quite keen, and some beekeepers become very expert in preparing honey for shows. Where competition is keen, beekeepers sometimes select the most ideal combs of honey, extract them in a hand extractor without the use of a honey pump so as to avoid incorporating air bubbles, strain the honey carefully and allow it to settle, and place it in jars free from crystals, bubbles, or specks of any kind. If show honey contains crystals, the honey may be heated cautiously until the crystals dissolve. Air bubbles may be brought to the surface by gently warming the honey for an hour or more. Moisture is best removed from honey by exposing combs to warm, dry, moving air before extracting.



Smoothly granulated honey is prepared for shows by seeding liquid honey with about 10 percent finely crystallized honey, mixing carefully, bottling, and storing at a temperature as close to 57°F as possible. If stored at the right temperature, the prepared honey will set firmly in about a week.

### Liquid Honey

Appearance, suitability, and uniformity of containers -- 5  
 Uniform and accurate volume of honey -- 5  
 Freedom from crystals -- 10

Freedom from impurities, including froth -- 20  
 Uniform honey in all containers of the entry -- 5  
 Color -- 10  
 Brightness -- 10  
 Flavor and aroma -- 15  
 Density (No additional points below 16 percent water) --20

### Granulated (Creamed) Honey

Appearance, suitability, and uniformity of containers -- 5  
 Uniform and accurate volume of honey -- 5  
 Firmness of set (not runny but spreadable) -- 20  
 Texture of granulation (smooth and fine) -- 20  
 Absence of impurities, including froth -- 15  
 Uniform honey in all containers of the entry -- 10  
 Color -- 10  
 Flavor and aroma (such as natural flavors present and undamaged by heat) -- 15

### Comb Honey in Standard Sections

Suitability, uniformity, and cleanliness of sections (wood) -- 20  
 Completeness, uniformity, and cleanliness of cappings -- 30  
 Uniform and completely filled honey cells -- 30  
 Quantity, quality, and uniformity of honey -- 20

### Cut Comb Honey

Accuracy and neatness of the cut edge of the comb -- 20  
 Uniform depth and filling of the honey cells -- 20  
 Complete, uniform, and clean cappings -- 20  
 Quality, quantity, and uniformity of honey -- 20  
 Freedom from leakage and general appearance of the pack -- 20

### Chunk Honey

Uniformity, cleanliness, and general appearance of the entry -- 30  
 Freedom from impurities and granulation -- 20  
 Quality of the liquid honey -- 25  
 Quality and neatness of the comb honey -- 20  
 Uniform and accurate volume of honey -- 5



### Beeswax

Color between straw and canary yellow (such as undamaged by propolis and iron stain) -- 30  
 Cleanliness (free from surface dirt, honey, and impurities) -- 25  
 Uniform appearance of all wax in the entry -- 15  
 Freedom from cracking, shrinkage, and

marks -- 15  
 Texture and aroma (such as pure wax free from hard water damage) --15

### Bees in an Observation Hive

Correct type and color of bees for the class -- 15  
 Queen: Size, shape, and behavior -- 15  
 Brood pattern -- 15  
 Variety: Presence of queen, workers, drones, brood, honey, pollen, and so forth -- 15  
 Correct number of bees for interest and ease of observation -- 10  
 Cleanliness and suitability of the combs -- 15  
 Appearance, cleanliness, and suitability of the observation hive -- 15

### Display of Apiary Products

Educational value -- 20

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Advertising value (normally for the products in general, not a brand) -- 20

Attractive arrangement (pleasing and eye-catching) -- 20

Originality and variety -- 20

Appearance and quality of products in the display -- 20



## COLONY COLLAPSE DISORDER OVERVIEW AND RELATED INFORMATION

Colony Collapse Disorder, as it has been named, threatens not only pollination and honey production but, much more, this crisis threatens to wipe out production of crops dependent on bees for pollination. Pollination is responsible for \$15 billion in added crop value, particularly for specialty crops such as almonds and other nuts, berries, fruits, and vegetables. In California, the almond crop alone requires 1.3 million colonies of bees, approximately one half of all honey bees in the United States, and this need is projected to grow to 1.5 million colonies by 2010. The bee industry is currently facing difficulty meeting pollination demand in almonds. If research cannot solve CCD, beekeepers will be unable to meet demand for this and other crops.

### CHRONOLOGY OF AN EMERGING CRISIS:

During October-December 2006, beekeepers became alarmed that honey bee colonies were dying suddenly across the continental United States. Beekeepers reported losses of 30-90%. Subsequent investigations suggested that these outbreaks of unexplained colony collapse may have been occurring for 3 or more years. Responding to a report of bee loss in California in late 2005, ARS had sent a team of scientists from Beltsville to take samples of bees there. And, even earlier, in 2002 and 2004, ARS had responded with site visits after claims of bee loss in Alabama and Minnesota, respectively. There was no discernable common cause of bee mortality, and the mortality was isolated, not extensive.

#### 2002-2006: Varroa Mite Crisis;

**Hints of a Problem Beyond Varroa ARS Site Visits to Alabama, California, Florida and Else where**

**National Academy of Science Study on Pollinator Decline (released 2006) Mini-area wide Project for Almonds in California (Summer 2006)**

**Fall 2006-Winter 2007: Crisis Emerges Working Group Formed,**

### CCD Symptoms Determined:

**Rapid loss of bee colony's population with very few bees found near colonies**

**Laying queen present with few remaining attendant bees**

**Honey and pollen present and not consumed by secondary invaders**

**Questionnaires sent to Beekeepers**

**CCD affected colonies sampled across the U.S.**

**Sample analysis initiated**

In late 2006, ARS teamed with university scientists and state departments of agriculture to form a Colony Collapse Disorder Working Group. The first task was to sample affected colonies. Initial sample analysis revealed a large number of disease-causing organisms, with most associated with "stress-related" diseases (*Nosema*, European foul-brood, and others), but no specific cause was determined. The magnitude of detected infectious agents in adult bees suggested some type of bee immunosuppression. Sample analysis is on going.

### FOCUS AREAS AS POSSIBLE CAUSES OF CCD:

Theories about the cause or causes of CCD include infection by bacteria, fungi, viruses, spiroplasmas or new pathogens such as a new *Nosema* (related to the microsporidian giardia), the invasive varroa mite and pesticide poisoning (particularly by neonicotinoids such as imidacloprid). Stresses include poor nutrition (due to apiary overcrowding, pollination of crops with low nutritional value, or pollen or nectar dearth) and migratory stress brought about by the increased need to move bees long distances for pollination. Stress could compromise the immune system of bees making colonies more susceptible to disease. While CCD could be caused by a single factor it is also possible that multiple factors are working together to cause colony loss. Exploring the interactions between causative agents for CCD is not a simple task.

### CURRENT STATUS:

The analysis of samples collected from across the country is ongoing. The ARS Beltsville Bee Laboratory in conjunction with Penn State is exploring the known pathogens and pests and trying to rule them in or out as possible causes of CCD. A series of samples is being analyzed by Penn State and Pennsylvania Department of Agriculture to document the prevalence of unusual fungi and other pathogens in adult bees. In collaboration with Penn State, Columbia University is determining if new pathogens are present by performing high through put sequencing of CCD bees versus healthy bee colonies, using novel methods. To examine affected colonies for exposure to stress, pathogens and pesticides a series of samples is being simultaneously tested using three different diagnostic tools; the Univ. of Illinois is using a whole bee genome array; the Beltsville Bee Lab is

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using a bee health array to screen for exposure to the known bee pathogens; and Penn State will be quantifying new organisms identified by Columbia. All of the aforementioned screenings tools could provide evidence for exposure of CCD colonies to specific classes of pathogens, stress and pesticides (please see <http://maarec.cas.psu.edu/> website for additional information). Pesticide analysis of samples from each colony is being initiated by Penn State, first with analysis of bee bread with analyses of wax and brood to follow. The combination of results from these tests will help to focus future research. Even in the absence of this information studies are underway or in the planning stage to examine migratory stress, nutrition, and various combinations of factors. Future experiments will be refined from the discussions at the workshop and as sample results become available in the spring and summer of 2007.

#### **SAMPLING AND RESULTS TO DATE:**

Sampling of affected hives has been accomplished in beekeeping operations from at least 10 states. Samples include a 300 adult bee sample taken in alcohol from the brood nest area, 100 adult bees frozen on dry ice and held at -80 and sections of comb containing brood, honey and pollen. Sampling of control colonies, in apparent good health, has occurred within the same beekeeping operations or in nearby beekeeping operations.

Three surveys of beekeepers have been undertaken, each with a different focus. One is a detailed questionnaire of a beekeeper's management practices that attempts to explore in detail all aspects of the affected beekeeping operation (Penn Dept. of Ag.). The second has been collected online and with printed questionnaires and explores a wide range of questions with affected beekeepers (Bee Alert Technologies Inc.). The third was recently completed by the Apiary Inspectors of America and results are available from several states across the U. S. Results from all three surveys indicate a higher than expected loss of colonies in the 2006-2007 season. One item of interest is that these surveys attempted to separate the normal "background" noise of winter loss due to parasitic mites and starvation from other losses that the beekeepers themselves felt could not be explained by causes known to them through experience in their respective climates.

#### **PARASITIC MITE, NOSEMA AND PATHOGEN LEVELS:**

The results from dissections of 16 adult bees for tracheal mites revealed that only one of the beekeeping operations had any significant levels of tracheal mites. This same operation from the Pacific Northwest had high tracheal and Nosema levels when sampled in 2004 as well. Tracheal mites were either not detected or at low levels in the remaining beekeeping operations. Nosema levels were very variable with individual colonies having high levels while other colonies in the same operation no Nosema was detected. The variation between colonies was similar for

colonies rated strong or weak. Thirty bees per colony were used as the sample size.

Varroa mite levels are given below in the figure below. Adult bee samples were weighed and number of adult bees per sample estimated for each sample to yield mites per 100 bees. The Varroa levels between the weak and the strong colonies does not differ and only a very few colonies in each group had high Varroa levels. These Varroa levels are well below what is considered an economic injury level. While we have not ruled out Varroa as a contributing factor, the brood patterns did not present characteristic bee parasitic mite syndrome (BPMS) symptoms and coupled with the low mite levels indicate that Varroa was not the leading cause of the loss of colonies for these particular beekeeping operations. As stated before, Varroa mites continue to be a threat and surely some losses this year have been as a result of high mite levels. However, with the samples collected from colonies in CA (see figure) Varroa mites levels do not explain the sudden loss of adult bees in these colonies.

The pathogen levels in adult bees from CCD colonies appear unusual. The table shows infection prevalence in live adult bees taken from multiple colonies from three operations having CCD symptoms and demonstrates a high number of disease organisms found in each bee at high prevalence rate in the operations. In particular, the high prevalence of fungi in adult bees seems indicative of stress or a compromised immune system; these symptoms have never been previously reported.

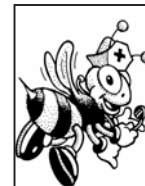
#### **Honey as Medicine?**

Last month, the Food and Drug Administration approved Manuka honey to be used in wound and burn care in the United States. Manuka wound dressings have already been used for several years in Great Britain, Australia, and its native New Zealand. Canada also cleared it for use as an antimicrobial dressing earlier this year.

Honey was a conventional therapy in fighting infection up until the early 20th century, at which time its use slowly vanished with the advent of penicillin.

Compared to other types of honey, Manuka has an extra ingredient with antimicrobial qualities, called the Unique Manuka Factor (UMF). The level of UMF can vary between batches, so each batch is ranked and priced accordingly. The higher the concentration of UMF, the darker, thicker and more expensive it is.

In July 2007, the FDA gave Derma Sciences, a New Jersey-based manufacturer of wound-care products, clearance to sell Manuka wound and burn dressings as medical devices. It's the first honey-based product approved for medical use in the United States.



# Fall Requeening

By Bob Arnold, IEBA Program Chair

Fall is commonly used to describe the month after the main honey flow which occurs in June and July here in the Spokane area. Fall requeening is best **not done in the fall** (September or October) as there is too little time to recover from a mistake. It is best done in **August** as there is sufficient time for the new queen to get laying providing lots of young bees for winter and you can still recover from a unsuccessful queen introduction.

Why is fall requeening desirable? Purchased queens from California in April and May are often poorly mated and supercede during the month they are introduced. However, queens purchased from California in the June, July or August are usually mated well as weather in California readily permits necessary queen mating flights. The queens are also plentiful and often for a smaller price. The most important reason is to replace your queen before it goes through its second winter. Often second winter queens will survive the second winter only to fail in March or April when it is impossible to introduce another queen.

It is important when requeening in the fall that you have some method to keep the old queen laying until you have verified the new queen has been accepted and is laying properly.



This is very important since little time is available if the introduced queen is not accepted and you can risk losing the entire hive if the queen is not accepted. It is best if you want to do requeening this time of year to do it as early in the month of August that you can. You still have time to recover if something goes wrong. Plus you still have some trickle of nectar coming in which is a big help in getting a queen started and the first round of brood laid.

The general technique that I discussed at our July meeting is the method that I prefer. You need to have a queen excluder and a double screen board and the new queen the day you prepare the hive. Remove the honey from the hive, preferably a day before you prepare the

hive to receive the new queen.

Find all of the brood and place half of the brood in each of the two hive bodies. Shake all of the bees down to the lower hive body and place the queen excluder on top of the bottom hive body. Put the top hive body back on top of the queen excluder. After a few hours the bees will have re-populated both boxes with the queen below the excluder. Remove the excluder and replace it with the double screen board. This board will have an entrance for the upper box. I like to face the upper hive body entrance opposite in direction to the lower original entrance of the bottom board.

This manipulation leaves you with two hives on one stand. The top hive is queenless and will start to raise a queen unless you introduce one. This will occur often the same day you perform the manipulation—other hives may take one or two days. In any case the bees in the top box will begin supercedure cells. It is best to introduce your new queen at the same time you put the double screen board on the hive.

For added insurance if you have a frame feeder put on a heavy sugar syrup feed on the top hive (2 parts sugar to 1 part water). This is best done for the period of time the bees are



getting to know the queen until she is out of the cage and laying—a week to 10 days. The queen can be introduced in the cage she was shipped in. You must make sure she stays in the cage for a period of at least 2 days and preferably 3 days.

I prefer putting the queen into my own screen cage which is simply fashioned out of some 1/8" hardware cloth of dimensions 2.75" x 4" and formed on a 3/4" x 3/8" stick. One end of the cage the screen is bent shut and the side soldered. A plug is fashioned out of the forming stick to plug the hole in the other end of the cage. The queen is herded into the cage by placing the mailer cage with the open cork hole up to the entrance to the screen cage. Gently blow on the queen and she will eventually find the new cage entrance and crawl in. Carefully place the plug in the cage. Do this in an enclosed area with a window. If the queen gets loose she will fly to the window and you can pick her up by the wing and place in the cage opening.

Place the mailer/cage in the area of the upper brood chamber where there is brood and a good supply of bees. If you are using the

mailer cage **do not** pull the cork on the candy end. It is best to leave the mailer/cage in the hive for 3 days and then release the queen onto the comb. Before releasing the queen check carefully for any eggs or queen cell starts. If you find eggs you have a queen in the box and you need to start over. Destroy any queen cell starts—look very carefully as sometimes hives will kill an introduced queen if they have queen cells started before you introduce the queen.

You can release the queen from the mailer by **gently** removing the screen off the cage or pulling the plug on the end opposite the candy and letting the queen walk out onto the comb. With the cage just pull out the plug and lay the cage on the comb and wait for the queen to crawl out. Watch the queen carefully, if any bee jumps on her and attempts to sting her grab her by the wing and put her back into the cage. It is normal for the bees to climb on top of the queen. Usually they will be very aggressive with a queen they don't want by jumping her and trying to sting her almost the second she gets free of the cage. They will probably be trying to sting her while she is in the cage so check it first.

Once the queen has crawled around the comb a bit and they do not seem to want to kill her you can place the comb back into the hive and shut it up. It is best to leave the hive alone for at least one week. Check for eggs after a week. If the queen has been accepted then you should wait and see the queen perform properly (no drone brood in worker cells and a good solid laying pattern) before doing anything to the old queen below. After 3 weeks of egg laying if the queen above is good then you can find and kill the old queen and simply pull the double screen from between the two hive bodies. This will work even in a nectar dearth as the two hives seem to be one. If you prefer, however, replace the double screen with newspaper.

**T h i s method takes about 4 to 5 weeks so start early in August.** You still need to get all of your medications on and feed for wintering. This should leave the month of September and a week or two in October to finish. If the introduced queen is not accepted then just combine the two hives or redo the process with a new queen.

The details of all of this eliminate a lot of problems. If you change anything you may discover why I do it this way! Any questions



# Classified Ads

**Tate's Honey Farm** has all of your extracting and packaging needs as well as spring packages and queens. Woodenware for all your winter projects and spring needs. Shop hours are 8:30—2:00 every Saturday at E. 8900 Maringo, Millwood. Contact us at 509-924-6669 or online at [www.tateshoneyfarm.com](http://www.tateshoneyfarm.com)

## BEEBOXES BY LEE

Woodenware, standard or custom orders, IPM bottom boards, Hive top feeders, etc, select lumber. Order now to be ready for spring. Lee Berchtold  
(208) 687-1300

## NUC's - For Sale

Now taking orders for 07 Queens and Nucs 4.9mm and standard cell sizes available. Also 2nd. generation Australian Nuc's available please call for prices. Contact Travis Sammons at 509-928-4326 / 509-991-3758

## Miller's Homestead

**Jim and Jenine Miller**

Cheney, WA 1-509-299-9085  
14606 Stangland Rd., Cheney. Look at our web site for prices on all available items.  
[www.millershomestead.com](http://www.millershomestead.com)

## NUC's For Sale

**RUSSIAN or KONA Queens**

You Get:

### Proven Queen

- ◆ 3 frames brood
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- ◆ 1 frame honey/empty comb
- ◆ 3 lbs. of bees

Chattaroy Hills Honey Farm  
Ted Swenson (509)220-0185

**Available: 21 or 28 April**

Limited #, First Come First Serve



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Otis Orchards, Wash. 99027  
509.928.3616

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[www.inlandbeemail.com](http://www.inlandbeemail.com)

### WSBA Website

[www.wasba.org](http://www.wasba.org)

Hive Care :

## September

Most of us have our supers pulled by now and are thinking about our fall management. Whatever strategy you implement, now is the time to start fall mite treatments.

Be sure to adhere closely to the manufacturers recommendations for all chemical treatments. Remember that many treatments are temperature dependant and successful treatment is easier early in the fall. Improper use increases the chances of mites becoming resistant and also increases the chances of contaminating your comb with pesticides.

Evaluate your hives and their potential for overwintering. Combine those that are weak,. Evaluate food stores and begin a feeding program for light colonies as there is little nectar coming in now. A 2:1 sugar/water solution is recommended for fall feeding.

Robbing and yellow jackets are of particular concern. Reduce your entrances to prevent robbing if possible, trap and destroy yellow jackets and paper wasps that are threatening you bees.

And best of all, enjoy the fruits of your labors as you extract and bottle and share in the county fairs in our region.

# August

Linda Carney, Secretary

Sunday August 12

Meeting Minutes not available at press time. Will be read at the September Meeting - See you at the Fair



## Annual Beekeeping Task Calendar for Small Beekeepers Spokane Area - by Bob Arnold September

Check for AFB. Check mite fall counts. When lots of brood hatches mite fall counts may be high. Check for signs of deformed wing virus—feed heavily if many bees with DWV are present, check mite falls with your medications—it might not be working and you will still have time to try another material. Replace any queens that may be poor with a nuc or mated queen. Introduce with feed on the colony. Feed a pollen substitute if there are no pollen stores. Feed 1:1 syrup if you are trying to build bees and 2:1 if you are trying to feed stores. Mix Fumigillen into your 2:1 feed, feeding about 2 gallons of feed for winter. Get all of the feed on by the end of September. Bees must have a cluster of at least 8" diameter to survive winter and minimum honey stores of 9 frames Russian bees even need less and can have a smaller cluster. Bees that are eager beavers on brood rearing will need an additional 3 full frames of honey.

## Nosema Disease

**Cause:** *Nosema apis*, a protozoan.

**Effect:** Nosema disease is widespread and can cause extensive losses of adult bees. It may also be responsible for some superseding of queens.

**Symptoms:** No symptoms are specifically indicative of Nosema. Inability of bees to fly, excreta on combs or lighting boards, and a pile of dead or dying bees on the ground in front of the hive may be manifestations of Nosema infection, but they may also be caused by other abnormal conditions. The disease may be present without any obvious signs. However, if crawling bees or unusual numbers of dead bees are seen or if a colony fails to build up properly in the spring, Nosema disease should be suspected and your apiary inspector should be contacted for advice and assistance.

**Transmission:** The spores of *Nosema apis* enter the body of the adult bee through the mouth and germinate in the gut. After germination, the active phase of the organism enters the digestive cells that line the midgut where it multiplies rapidly; the contents of these cells are used as its food supply until reproduction ceases and new spores are formed. The cell then ruptures and sheds the new spores into the midgut where they pass down through the small intestine to the rectum. Here they accumulate and are voided in the excreta of the bee. The cycle begins over again when the spores contaminate the food of other bees. Spores will remain viable for many months in dried spots of excreta on brood combs. Near the end of winter, combs are often soiled with excreta from infected workers. Other bees become infected when they pick up the spores in the excreta as they clean the soiled combs during the spring expansion of the brood nest. Thus, the disease within the colony increases rapidly for a time, and a colony may dwindle in the spring because of the premature death of the overwintered bees. Usually, the colony survives and the proportion of infected bees begins to decline rapidly. This decline occurs because the excreta are normally voided away from the hive when regular flights become possible in spring. Since the old bees now die off and are replaced by healthy bees emerging from the brood combs, the disease may not be detectable in the colony by the end of the season. However, enough spores remain on the combs from the previous winter to infect a few bees in the cluster that forms when winter sets in again. These infected bees then form the nucleus for a repetition of the cycle. The disappearance of the infection during the summer seems to indicate that outside agencies such as drinking water, flowers, or vegetation are not important in the spread of the disease. Also, the honey is probably not

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**Next Meeting:  
Thursday September 6th  
6:30 Meeting**

**September Meeting  
THURSDAY 9/6  
IEBA Booth Spokane  
County Fairgrounds**

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Send To:

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contaminated to any significant degree, since excreta are not deposited on the honey combs during the honey flow. The spread of Nosema disease occurs chiefly because of the use of contaminated equipment and the robbing of infected hives, through infected package bees, infected queens, and her attendant workers.

## FAIR TIME!

### North Idaho Fair

The North Idaho Fair Honey Booth was a great success again this year. It, of course, would not have been possible without all of you that came to share your time, knowledge and sparkling personalities with the visitors, and other bee folks alike. Bees hatching out of cells this year was a real special treat for all that saw them. Several folks told me that visiting our booth is the highlight of their Fair visit each year. Thanks a 'Bee'-zillion to each of you that made the booth such a great success.



*Kelly McSheehy*

<b>SEPTEMBER BIRTHDAYS</b>	<b>SEPTEMBER ANNIVERSARIES</b>
<b>Donovan Hunstad - 7th</b>	<b>Nancy and Peter Ice - 3rd</b>
<b>Clara Ross - 11th</b>	<b>Jim and Jenine Miller - 27th</b>
<b>Ed Banton - 21st</b>	
<b>L. Evans - 21st</b>	
<b>Sharon Mumau - 24th</b>	
<b>Heather Spock - 26th</b>	
<b>Bill Spock - 28th</b>	