

BEES

FROM PAGE 1

the Dakotas, with plentiful moisture and expanses of sweet clover, remained too cold for bees to venture from the hive. Across the country pollinators have been stressed by adverse climate conditions.

A seed of doubt arises as we find a cluster of bees the size of a baseball. This one, and others like it, too small to generate needed warmth, will surely perish early in the winter. We will combine the clusters and wish them the best of luck. Why are these recently populous colonies failing? The queens are young, supplemental feed has been provided, recommended medications have been administered, yet the colony has virtually disappeared. The specter of Colony Collapse Disorder evokes a sense of foreboding.

After two punishing years, with 50-100% of hives lost in some commercial and sideline beekeeping operations, 2009 saw a decrease in cases of Colony Collapse Disorder or CCD. While new research grants have funded numerous studies, the best explanation for this phenomenon of missing bees continues to be, according to Dr. Eric Mussen of U.C Davis, that numerous factors create a cumulative effect which the colony cannot endure. Many theories have been disproved, but others remain strong candidates. Globally, bee health has declined due to parasites such as the varroa mite, tracheal mite, and *Nosema cerana*, a recently identified fungus which invades the bee's gut. Viruses introduced to bees by these parasites spread between hive mates causing deformity, brood death, and bee paralysis. Pesticides, applied both by the beekeeper within the hive and by the farmer to crops, accumulate in the wax comb; producing a toxic environment for developing larvae. Fungicides, introduced in pollen, prevent its fermentation to nutritious "bee bread" by naturally occurring yeasts. Climate change may bring unpredictable precipitation for floral nectar sources. Increased atmospheric carbon dioxide may result in reduced protein content of pollen sources. As these factors weaken the bees, yet another more insidious threat looms.

The most damaging effect of bee losses is reduced genetic diversity. Genetic diversity is the hive's most powerful resource for continued survival. This gene loss is further compounded by commercial queen breeders who collectively select only 500 queen mothers to produce a million queens per year. These mass-produced queens provide the inherited characteristics of their new colony. As dead hives are repopulated with colonies lacking genetic diversity, inbreeding of the 2.3 million managed hives in America occurs. The end result, per Dr. Steve Sheppard of WSU, is the documented loss of 25% of honeybee alleles, or gene variants,

over the past decade in North America. Alleles determine specific traits which related bees share. New alleles, possibly introduced by Africanized and Australian bees, have recently been found in the bee's genetic code. These new traits partly offset this loss of genetic material, but they may have questionable benefit.

Our bees, managed for honey production and pollination, lead a pampered existence when compared to feral honeybee colonies and local native bee pollinators. These untended bees will not be fed sugar or pollen supplement in a drought year. Viruses and parasites infect their colonies, often crossing host species from managed bees. New high potency pesticides and fungicides contaminate food supplies. Floral nectar sources disappear as we seed pastures for grass hay (a virtual desert to pollinators) and apply herbicides to roadside vegetation. Diminishing numbers of various bumblebees, leafcutter bees, and other solitary bees are reported.

We need both managed bees for monoculture crop production and feral and native bees for our gardens and wild flora. Fortunately, competition for nectar sources is somewhat limited between bee species due to differing floral preferences. To assist our pollinators, we must view our world from their perspective. When possible, monoculture farmlands requiring bees should be interspersed with a variety of floral nectar and pollen sources. Roadside ditches and pastures should likewise be cultivated to provide bloom throughout the summer, especially during July through September as bees prepare for winter.

Our last five pallets bring hope as we open hive after hive packed with healthy and heavy winter bees. The question arises "what makes these bees different?" Hive records indicate these colonies spent late summer adjacent to an alfalfa field which the farmer generously let bloom to 75% before the last cutting. During this time, these bees could copiously nourish their larval winter sisters. Interestingly, at the time, I had noticed an abundance of bumblebees and other native bees also collecting from the fronds of deep blue flowers. Bee colonies from this area will likely emerge from winter with strength to begin the next year. We must act now to prevent poisoning our insect pollinators, to plant for managed and native bees, and to educate others so that we may insure the survival of our pollinators and, thus, ourselves.

Coming next: Planting for pollinators.

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Applegate Food Pantry



Applegaters!

We greatly appreciate all of your donations to the Applegate Food Pantry and remind you that nonperishable foods (as well as winter clothes) can be left at the Ruch Library. Checks should be made to "Applegate Access."

The address for donations is:

Applegate Access

P.O. Box 1692, Jacksonville, OR 97530

Thank you and Happy New Year!

Arlene and Claude Aron

and all of the wonderful volunteers.

Claude and Arlene Aron • 541-846-0380

Annual celebration, auction and awards ceremony for Jackson Soil and Water Conservation District

The annual celebration, auction and awards ceremony for Jackson Soil and Water Conservation District will be held in Eagle Point, Friday, January 15, 2010. The catered dinner will feature local products in keeping with the theme of "From Farm to School." Helena Darling will prepare local pumpkin and red pepper roast chicken with spinach pesto, Oregon blue cheese roast potatoes with rosemary and lemon, green salad with fresh pear vinaigrette, served with fresh bread and butter. Darling operates her business out of Ashland.

Speakers for the evening will include Marc Marelich of Bon Apétit food service and Barbara Boyer of Yamhill Soil and Water Conservation District. Marelich serves local and sustainable products at several outlets at Willamette University in Salem. Boyer will discuss Yamhill's experience in developing a farm-to-school program and the role districts can play in developing a local foods program. Both promise to be interesting speakers who promote "direct to the table" sustainable agriculture.

Several awards in recognition for outstanding achievement will be awarded to the "volunteer of the year," the poster contest, watershed steward award and the conservation of the year award. The event will feature a year-in-review and recognition for outstanding contributions conserving our soils and water.

Jackson County commissioner C. W. Smith will act as auctioneer for the Fred Straube memorial scholarship fund and scholarship winners honored. Mel Morris will provide technical assistance during the auction. Friends having items to donate for the auction need to have those to the District Office no later than January 8.

Please contact the JSWCD office at 541-776-4270 (ext 3), to RSVP by January 5, to have a count for the caterer.

Please note the change in phone numbers for the District. Cost for the dinner is just \$10. Doors open at the Eagle Point High School at 5:30 pm and the event begins at 6 pm.

Ralph McKechnie
541-776-4270 (ext. 3)

Voices of the Applegate will keep on singing

The Voices of the Applegate community choir will begin their new year of song starting on January 6 for the 12-week winter session. Tami Marston, our new director for this session, will direct our choir for Wednesday evening rehearsals from January 6 through March 17, with a concert to be held on March 21. Rehearsals will begin promptly at 7:00 pm at the Applegate Library and will last for about an hour and a half. All are invited to participate in the choir, and no auditions are required.

The spring session (April 7- June 20) will be directed by Cyrise Beatty and the fall session (September 8-November 21) will be directed by Blake Weller.

The Voices of the Applegate are looking forward to a new year of song and joy. Come join us and be sure to mark your calendars for the free concert at 3:00 pm on March 21 at The Applegate River Ranch House.

Joan Peterson
541-846-6988

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