



# The Diablo Bee

Newsletter of the Mount Diablo Beekeepers Association

## July 2007

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**Next meeting:**  
**7:30 pm – 07/12/07**  
**Heather Farm Garden**  
**Center**  
**1540 Marchbanks**  
**Walnut Creek**

### HIGHLIGHTS OF THIS ISSUE

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## What's the Buzz?



**THANK YOU!**



Thanks to [Dr. Eric Mussen](#), Extension Apiculturist with the UC Davis Department of Entomology, for his talk on CCD (colony collapse disorder).

### 2007 MDBA Calendar of Events

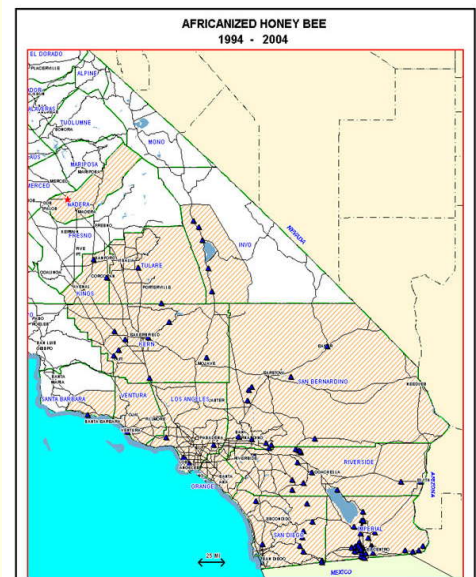
<b>July 12</b>	<b>General Meeting, 7:30, Heather Farm.</b>
<b>August 9</b>	<b>Board Meeting 7:00</b>

## July Meeting

**Important DATE!**

Our next meeting is July 12th at 7:30PM at the Heather Farm Garden Center in Walnut Creek.

David Roe will be talking about Africanized Honey Bees (AHB) in the area, and pesticides that can contaminate your hive equipment for years, along with precautions you can take to prevent this from happening.



## Croatian bees sniff out landmines



By Nicholas Walton BBC News, Zagreb

### A new technique to help find unexploded landmines using honey bees is being developed at Zagreb University in Croatia.

"We started this because our citizens are exposed to serious risks with mines," explains Professor Nikola Kezic, as honey bees buzz around his head.

"Luckily we also have a long tradition of keeping bees and making honey. Our solution makes use of what we have."

Croatia, like Bosnia-Herzegovina and the other countries of the former Yugoslavia, has a big landmine problem, inherited from the wars of the 1990s.

More than 1,000 sq km (380 sq miles) of Croatian countryside are thought to be contaminated by the mines.

About 250,000 mines are still buried, and more than 100 people have been killed by them in Croatia since 1998.

#### Lure of food

Removing mines is slow and very expensive. And even after the de-miners have done their work, some may remain in the soil.

Prof Kezic's idea is to use honey bees to find any explosives that might have been missed by the de-mining teams.



Training the bees to find mines takes place in a large net tent pitched on a lawn at the university's Faculty of Agriculture.

A hive of bees sits at one end, with several feeding points for the bees set up around the tent.

But only a few of the feeding points contain food, and the soil immediately around them has been impregnated with explosive chemicals.

The idea is that the bees' keen sense of smell soon associates the smell of explosives with food. So far this has proved successful.

Prof Kezic says that training the bees takes only three or four days.

The first day or so is spent in the large net tent, getting the bees used to associating the smell of TNT with food.



Prof Kezic says bees can quickly be trained to detect explosives

After that several bees are taken out of the colony and tested to see if they react correctly when presented with extracts of explosives.

"This year our work is to increase the bees' sensitivity to the smell of TNT," says Prof Kezic. He warns that it will take time before they are sure the system is reliable enough to use properly.

#### Painstaking method

Once the technique has been shown to be reliable, the idea is to use the bees on areas that have already been de-mined.

The colony of specially trained bees will be released in the de-mined area, and followed with a special heat-sensitive camera.



The bees will be expected to settle on areas of ground that smell of explosives. If they land on an area where no landmine was discovered earlier, the de-mining team will investigate to make sure they have not missed one.

If the technique proves a success it might provide a cheap and easily available resource for de-mining teams all over the Balkans.

Other animals have been used before to detect explosives.

Gambian giant pouched rats are used in several African countries, including Mozambique, to find mines. Like the bees in Croatia, they are trained to associate the smell of TNT with food.

Dogs are also used to find landmines and to sniff out hidden explosives, for instance in airports. But unlike rats and bees, the weight of sniffer dogs means that they can be at risk of setting off the mines they are trying to detect.

Dogs have also been used for offensive operations in wartime. In World War II the Soviet Red Army trained dogs to run underneath enemy tanks. The dogs had petrol bombs strapped to their backs which ignited when they knocked against the enemy vehicles.

In the Croatian countryside bee-keeping has been popular for centuries. Delicious pots of honey and other produce can be bought directly from the bee-keepers at roadside stalls all over the region.

Despite many years of working with bees, Prof Kezic has not lost his enthusiasm for them. His office, full of charts, diagrams and models of bees, is testament to his interest in these social insects.

And in his fridge there is further evidence of what makes bees so special: pots of honey and some delicious honey-flavoured raki, the local strong alcohol.

Story from BBC NEWS:

<http://news.bbc.co.uk/go/pr/fr/-/hi/europe/6701517.stm>

## Ulcers and Honey



FROM SCIENCEBLOG.COM:

The sore on Catrina Hurlburt's leg simply wouldn't heal.

Complications from a 2002 car accident left Hurlburt, a borderline diabetic, with recurring cellulitis and staph infections. One of those infections developed into a troublesome open sore that, despite the use of oral antibiotics, continued to fester for nearly eight months.

Then Hurlburt's physician, Jennifer Eddy of UW Health's Eau Claire Family Medicine Clinic, suggested she try using topical honey.

Within a matter of months, the sore had healed completely.

"I remember thinking, holy mackerel-what a difference," says Hurlburt, who can't use topical antibiotics because of allergies. "It's a lot better than having to put oral antibiotics into your system."

With funding provided by the Wisconsin Partnership Fund for Health and the American Academy of Family Physicians Foundation, Eddy is currently conducting the first randomized, double-blind controlled trial of honey for diabetic ulcers. Eddy first successfully used honey therapy a few years ago with a patient who was facing amputation after all medical options had been exhausted.

Experts believe that treating wounds with honey has tremendous potential for the approximately 200 million people in the world with diabetes, 15 percent of whom will develop an ulcer, usually because of impaired sensation in their feet.

Currently, every 30 seconds someone somewhere in the world undergoes amputation for a diabetic foot ulcer. In 2001, treating diabetic ulcers and amputations in U.S. patients cost \$10.9 billion.

"Patients like Catrina Hurlburt are a great example of the potential health care savings," explains Eddy, who is also assistant professor of family medicine at University of Wisconsin School of Medicine and Public Health. "Unsuccessful conventional care for ulcers can cost thousands of dollars. Therapy with honey may only cost a few hundred."

Diabetics typically have poor circulation and decreased ability to fight infection. Diabetic ulcers treated with long courses of systemic antibiotics can become colonized with drug-resistant organisms--so-called "superbugs" such as Methicillin-resistant

*Staphylococcus aureus* (MRSA). Since honey fights bacteria in numerous ways, it is essentially immune to resistance. Honey's acidic pH, low water content (which effectively dehydrates bacteria), and the hydrogen peroxide secreted by its naturally-occurring enzymes make it ideal for combating organisms that have developed resistance to standard antibiotics.

"This is a tremendously important issue for public health," explains Eddy, adding that the Centers for Disease Control and the World Health Organization have identified bacterial resistance as one of the most important medical problems of our day.

Patients in the clinical trial will receive ulcer care and treatment by an expert podiatrist. Half will be randomly assigned to receive honey, while the other half will receive a wound-care gel that has been compounded with inert components to give it the flavor and color of honey. The ulcers will be measured to see how quickly they heal, to evaluate whether honey or the standard wound gel is better for healing.

If honey proves the more effective method, Eddy cautions patients against using it at home without a physician's involvement. "Unfortunately, diabetic ulcers are very complicated, and honey would only be part of the solution," she says. Successful care also requires off-loading-avoiding walking and putting weight on the sore-and the sterile removal of dead skin and bacteria from the wound.

"If we can prove that honey promotes healing in diabetic ulcers, we can offer new hope for many patients," says Eddy. "Not to mention the cost benefit, and the issue of bacterial resistance. The possibilities are tremendous."

[University of Wisconsin-Madison](#)

## Newbie Nuggets.....

### 9 Reasons Honey is Truly a Miracle Food

by **Wade Meredith** on May 17th, 2007

Honey has been consumed by humans for 2,500 years and it's still got the right stuff. Check it out:

1. Honey is mostly known as a sweetener. It contains about 69% glucose and fructose.
2. Honey is a universal source of energy that provides 64 calories per tablespoon. (One tablespoon of sugar will give you about 50 calories.) The sugars in honey are easily converted into glucose by even the most sensitive stomachs.
3. Honey contains a variety of vitamins and minerals. The vitamin and mineral content of honey depends on the type of flowers pollen was gathered from during the making process.
4. Good for your skin: milk and honey are often served together. Both of these [help smooth and sooth skin](#).
5. Honey has anti-bacterial and anti-fungal properties. It has traditionally been used as a natural treatment for wounds, burns and ulcers. In recent years there has been [renewed interest in the medicinal properties of honey for wound care](#).
6. Honey is an excellent [ergogenic](#) aid and can boost the performance of athletes. Honey helps maintain blood sugar levels, muscle recuperation and glycogen restoration after a workout. During the ancient Olympics, athletes ate honey and dried figs, to enhance their performance.
7. Antioxidants: Honey contains nutraceuticals, which are effective in removing free radicals from our body. As a result, our body immunity is improved.
8. Honey can help control cholesterol levels and type II diabetes. In a series of experiments involving healthy subjects and those with either high cholesterol or type 2 diabetes, honey has proved itself the healthiest sweetener.
9. Phytonutrients found both in honey and propolis (or 'bee glue', which is found in raw honey) have been shown to possess cancer-preventing and anti-tumor properties. These substances include caffeic acid methyl caffeate, phenylethyl caffeate, and phenylethyl dimethylcaffeate. Researcher has shown these substances to prevent colon cancer in animals by shutting down activity of the enzymes, phosphatidylinositol-specific phospholipase C and lipoxigenase.

## Quick Guide to Other Pollen Bees

### Blueberry Bee - *Osmia ribifloris*

Native to the coastal mountains of southern California, this solitary bee normally gathers pollen from manzanita, but will pollinate blueberries.

### Bumblebee - *Bombus* spp.

Many native species across the country. Form small colonies, usually underground. Begins working around 7 in the morning.

### Carpenter Bee - *Xylocopa* spp.

Create so much sonic energy with their buzzing that pollen shoots out of tomato flowers' hollow anthers in a cloud. These native solitary bees nest in bamboo and wood.

### Hornfaced Bee - *Osmia cornifrons*

Used commercially for several decades in Japan to pollinate apples, it's now in the U.S. A single hornfaced bee can visit 15 flowers in a minute. This solitary bee nests in reeds, tubes and holes in wood.

### Oxaeid Bee - *Ptiloglossa arizonensis*

Prefer to pollinate between 5 and 6 in the morning. This solitary bee nests underground.

### Polyester Bee - *Colletes* spp.

Native solitary bees, they build plastic-lined cells in underground nests.

### Shaggy Fuzzyfoot Bee - *Anthophora pilipes villosula*

Fat, shaggy, and fast-flying; it can pollinate in rainy, cool weather. This Japanese solitary bee nests in dry adobe. It was imported to the U.S. in the 1990's.

### Sweat Bee - family Halictidae

Nesting underground, some kinds form social units with queens and workers.

## 6 Tips for Attracting Native Pollen Bees

1. Select eight to 10 species native to your area (see the plant sidebar on page 30 and find additional resources at [www.audubonmagazine.org](http://www.audubonmagazine.org) to help you create a native bee habitat of your own). Exotic plants attract exotic bees, pushing out native species.
2. Don't plant "pollen-less" or double-flowered horticultural varieties.
3. Pick plants that will flower at different times through the season.
4. Integrate patches of bee-friendly plants throughout your garden, especially in your vegetable patch, where they attract pollinators and increase yields.
5. Provide nest habitat in the form of "bee blocks," as well as dead branches for boring bees and bare ground for ground-nesting species. (See the [Xerces Society website](#) for details.)
6. Avoid or eliminate pesticides.

## Recipe of the Month

### Helen's Honey Barbeque Sauce

- ½ Cup honey
- ¼ Cup Dijon-style mustard
- 2 Teaspoons fresh thyme, or ½ teaspoon dried
- 1 Teaspoon curry paste (or to taste)
- ½ Teaspoon coarse salt
- ¼ Cup water
- ¼ Cup vegetable oil

Whisk the honey, mustard, thyme, curry paste, salt, and water together in a small saucepan. Bring to a low simmer over medium heat and drizzle the oil in slowly, whisking to incorporate. Pour into a clean jar, allow to cool thoroughly, cover and refrigerate. This will keep several weeks in the refrigerator; stir or shake well before using.

Yield: 1-1/2 Cups

Adapted from Hay Day Country Market Cookbook by Kim Rizk

# Announcements

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☞ Please send in your favorite honey recipes or bee articles via email to [ersten3@yahoo.com](mailto:ersten3@yahoo.com) or [Kieran@usmones.com](mailto:Kieran@usmones.com)

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☞ Kelly Knapp and Debbe Holeman are interested in giving homes to bumble bees and any other native bees. Also, they want to learn about restoring native bee habitat. Please call 925 634-4584 or 240-1930 or email [kellysmiles75@yahoo.com](mailto:kellysmiles75@yahoo.com)

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☞ *Major Branzel has bees for sale. Nucs, packages, hives. Please call (707) 643-9433 for pricing.*

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☞ **Swarm Wanted**  
Please Contact Ersten Imaoka @ 925-687-7350 or [ersten3@yahoo.com](mailto:ersten3@yahoo.com). Will donate \$20 to Club.

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## ☞ Membership Dues

Dues should be sent to:  
Jeff Peacock, Treasurer  
Mount Diablo Beekeepers Association  
3341 Walnut Lane  
Lafayette, CA 94549

The Diablo Bee  
21 Newell Ct  
Walnut Creek, CA 94595

