

Bee mystery spells trouble



Patrick Durkin column: July 19, 2007

Until a friend's phone chirped and chimed last September in our elk camp at 11,000 feet in the Colorado wilderness, I never thought it necessary to ask people to turn off their (expletive deleted) cell phones while hunting or fishing.

For that reason and others, it's disappointing to hear science has absolved cellular telephones of guilt for causing honeybees to vanish from commercial hives in Europe and the United States. Since February, I clung hopefully to erroneous reports that cell-phone transmissions disorient honeybees so thoroughly they can't navigate home to their hives.

If those reports had proven true, we would have had just cause to ban cell phones from the planet. Most of us, however, suspected these electronic irritants weren't the problem. It's not as if honeybees monitor calls between sparring humans, thus boring themselves so senseless that entire colonies crash into trees or mountainsides.

No, this is another natural mystery that probably involves disease, habitat changes, poor nutrition, chemical poisoning or a combination of factors we never quite grasp.

This whodunit began when beekeepers in Southern states opened their hives last fall and discovered only the queen bee and young bees. The colonies' older bees were gone without a trace. No bodies, no drag marks and no suicide notes. Even scientists were puzzled.

And alarmed.

Although honeybees aren't solely responsible for the nation's pollination chores, they provide most of the help, because we can grow, hold and truck them where they're needed. Without them, honey production suffers and crops that require them for pollination aren't as productive.

By itself, pollination — which enables fruit to grow — adds \$15 billion to crop values nationwide, especially for nuts, berries, fruits and vegetables. Therefore, a panel of national experts convened, studied the matter and released a report in June.

The panel said this mystery — which will be called "Colony Collapse Disorder" until scientists can label the cause more specifically — is causing "significant" losses to the nation's 2.4 million honey-bee colonies. In fact, CCD could affect bees in more than 22 states, and some estimate CCD losses at 25 percent nationwide.

Wisconsin's 64,000 honeybee colonies have suffered some losses, but nothing severe. Good thing, because we're No. 8 in honey production nationwide, generating annual averages of 5 million pounds worth \$6 million.

In addition, many Wisconsin crops need pollination to maintain their commercial markets. A 2005 estimate put those market values at \$125 million for cranberries, \$19 million for apples, \$5.5 million for strawberries and \$2.5 million for cherries.

Nationwide, honeybee colonies suffering the worst losses usually are commercial operations, not mom-and-pop hobbyists who raise honeybees for fun and small profits. More than a few beekeepers say large-scale operators might share responsibility for collapses.

How so? Overworked bees. For instance, pollinating California's almond crop alone requires 1.3 million of the nation's 2.4 million honeybee hives. This means half of the nation's commercial beehives ride 18-wheelers westward each year to perform the task.

They also truck cross-country to pollinate apples, watermelons, blueberries and any other crops requiring service. In addition, large beekeepers truck their hives to Florida, Texas, Oklahoma and California each winter to produce more stock. Some suggest this constant travel and production compounds common honeybee health problems caused by mites, pesticides and poor nutrition.

Let's also note honeybees are not native to North America. They arrived with Europe's pioneers and entrepreneurs, and were dubbed "white man's flies" by Native Americans. But instead of threatening them

for being an exotic species or illegal immigrant, we value them so much that famous politicians like Sen. Hillary Clinton, D-N.Y., and Sen. Barbara Boxer, D-Calif., announced initiatives recently to transfer millions in research money to study their disappearance.

And make no mistake: To learn why honeybees vanish, Americans will pay any price and bear any burden, just so long as we aren't asked to choose between fruits, honey and iPhones.

Asian Parasite Killing Western Bees - Scientist



Story by Julia Hayley
SPAIN: July 19, 2007

MADRID - A parasite common in Asian bees has spread to Europe and the Americas and is behind the mass disappearance of honeybees in many countries, says a Spanish scientist who has been studying the phenomenon for years.

The culprit is a microscopic parasite called nosema ceranae said Mariano Higes, who leads a team of researchers at a government-funded apiculture centre in Guadalajara, the province east of Madrid that is the heartland of Spain's honey industry.

He and his colleagues have analysed thousands of samples from stricken hives in many countries.

"We started in 2000 with the hypothesis that it was pesticides, but soon ruled it out," he told Reuters in an interview on Wednesday.

Pesticide traces were present only in a tiny proportion of samples and bee colonies were also dying in areas many miles from cultivated land, he said.

They then ruled out the varroa mite, which is easy to see and which was not present in most of the affected hives.

For a long time Higes and his colleagues thought a parasite called nosema apis, common in wet weather, was killing the bees. "We saw the spores, but the symptoms were very different and it was happening in dry weather too."

Then he decided to sequence the parasite's DNA and discovered it was an Asian variant, nosema ceranae. Asian honeybees are less vulnerable to it, but it can kill European bees in a matter of days in laboratory conditions.

"Nosema ceranae is far more dangerous and lives in heat and cold. A hive can become infected in two months and the whole colony can collapse in six to 18 months," said Higes, whose team has published a number of papers on the subject.

"We've no doubt at all it's nosema ceranae and we think 50 percent of Spanish hives are infected," he said.

Spain, with 2.3 million hives, is home to a quarter of the European Union's bees.

His team have also identified this parasite in bees from Austria, Slovenia and other parts of Eastern Europe and assume it has invaded from Asia over a number of years.

Now it seems to have crossed the Atlantic and is present in Canada and Argentina, he said. The Spanish researchers have not tested samples from the United States, where bees have also gone missing.

Treatment for nosema ceranae is effective and cheap - 1 euro (US\$1.4) a hive twice a year -- but beekeepers first have to be convinced the parasite is the problem.

Another theory points a finger at mobile phone aerials, but Higes notes bees use the angle of the sun to navigate and not electromagnetic frequencies.

Other elements, such as drought or misapplied treatments, may play a part in lowering bees' resistance, but Higes is convinced the Asian parasite is the chief assassin.

By any name, roses lure bees



Contra Costa Times Jun 2, 2007
CAROLYN PARKER, *Roses A to Z*

TWO BEE INSPIRED subjects I'd like to cover today. It was early morning and Frau Dagmar Hartopp, a luscious Rugosa single (five-petal rose), had just opened, and her pale yellow stamens were fresh and picture-perfect. I had my camera's close-up lens poised on two blooms, ready to click the shutter.

Suddenly, there was a honeybee scrambling in the stamens on one bloom, and a busy bumblebee was raiding the other. I clicked and clicked -- oh, the joys of a digital camera. The bees wouldn't quit; they wanted all the precious, powdery pollen they could get.

Since my garden has always been well-endowed with single roses, a favorite early morning ritual is to walk the garden, with coffee in hand, and watch the bees. Some are completely still -- no, they're drunk -- asleep in yesterday's blooms. All are entertaining.

I've read that there's a shortage of pollinating bees -- but not on our property. It's a good feeling to see so many busy bees, and now I'm trying to identify native species. Some look like miniature honeybees.

Gardeners are asked to plant bee-friendly plants to encourage their presence. California natives, cosmos, sunflowers, poppies, salvia and penstemon are plants often suggested. What about roses? Don't experts know how attractive roses are to bees, especially singles?

Many people say they prefer hybrid teas, and that singles don't look like roses. Actually, some singles are hybrid teas, and once people start noticing and become more familiar with singles, they almost always fall for them.

Bees are attracted to the many-petaled hybrid teas only if the stamens are revealed. With singles, there are often numerous blooms, and every morning during a bloom flush, there's a fresh feast.

For those of you who like collecting rose names for your wish list, here are some of the great singles growing in my garden: Cocktail, Redcoat, Flutterbye, Irish Elegance, Lilac Charm, Mrs. Oakley Fisher, Rosa rugosa, News, Playgirl, Altissimo, Golden Wings, Happenstance, Yellow Butterfly, Rosa californica and, my most recent addition, Carefree Delight.

Carefree Delight is an always-in-bloom, pink blend landscape rose. Which reminds me, have you noticed the spectacular displays of landscape roses on our nearby freeways and roadside meridians? Do you remember observing, about five years ago, how vast expanses were newly planted with masses of small, floriferous rosebushes? Those roses have all matured into glorious, sizable mounds of gorgeous color. Zooming down the road these days, drivers enjoy awesome rose exhibits. And think of the bees. Many landscape roses are rich with stamens.

Landscape roses require very little upkeep and are usually shiny-leafed and disease-resistant. Prune them like an ordinary shrub if you need to contain growth. Here's a sampling of nice landscape roses: Seafoam, Flower Carpet White, Knockout, Sevilliana, Pink Meidiland, Apple Blossom, Baby Blanket.

In my rose garden I've done a first pruning and spent-bloom removal, and now the roses are waiting for a good feeding. This time I'll follow directions on bags of 16-16-16 fertilizer. Next month, they might get an organic fertilizer. Both work if the rose is well-mulched and the soil is rich in compost.

If you're going on vacation soon, prune back perennials that have given their all with your roses. Fleabane, catmint, nemesia, diascia, columbine, foxglove, geum, dianthus and many of the hardy geraniums would all like a bloom cut. New growth will be evident by the time you return.

Carolyn Parker tends her 300 roses in Lafayette. She is the author and photographer of "R is for Rose: Reflections from a Passionate Rose Lover." Visit her Web site at <http://www.rosesfromatoz.com>.

Recipe of the Month

Apricot Honey Bread

- Makes 12 servings -

Ingredients

3 cups whole wheat flour
 3 teaspoons baking powder
 1 teaspoon ground cinnamon
 1/2 teaspoon salt
 1/4 teaspoon ground nutmeg

1-1/4 cups 2% low-fat milk
 1 cup honey
 1 egg, slightly beaten
 2 Tablespoons vegetable oil
 1 cup chopped dried apricots
 1/2 cup sunflower seeds, chopped walnuts or
 chopped almonds
 1/2 cup raisins

Directions

Combine dry ingredients in large bowl. Combine milk, honey, egg and oil in separate large bowl. Pour milk mixture over dry ingredients and stir until just moistened. Gently fold in apricots, sunflower seeds and raisins. Pour into greased 9 x 5 x 13-inch loaf pan. Bake at 350°F for 55 to 60 minutes or until wooden pick inserted near center comes out clean.

Nutritional Information per Serving

Calories: 302 (15% from Fat). Carbohydrates: 61 g.
 Cholesterol: 20 mg.
 Dietary Fiber: 5 g. Fat Total: 6 g. Protein: 7 g.
 Sodium: 154 mg.

Newbee Nuggets.....

HONEY BEE FACTS

While collecting their food, honey bees unintentionally pollinate more than 90 cultivated crops with a combined annual value of \$20 billion. Honey bee pollination affects about every third bite of food consumed. These foods include apples, almonds, blueberries, cranberries, cantaloupes, other melons and cucumbers. Many plants pollinated by honey bees contribute indirectly to human diets because they are important food sources for livestock and wildlife. These plants include alfalfa, clover, wild fruits, and berries. Also honey bees are important in pollinating plants needed for dune and marsh stabilization.

Many insects besides honey bees can pollinate plants, but no other insect is more easily managed or relocated for specific pollination, nor does any other insect pollinate such a wide range of plants.

Announcements

☞ Please send in your favorite honey recipes or bee articles via email to ersten3@yahoo.com or Kieran@usmones.com

☞ 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

☞ I am a parent at Duck's Nest Preschool in Berkeley and we are very interested in starting a bee colony at our community garden. I know very little about this and a friend suggested I contact your club. Do you have volunteers that would be interested in setting up an observational bee hive and doing a little education for our staff?

Thank you,
 Maren Van Duyn
maren.vanduynd@sbcbglobal.net

☞ I have 20 acres rolling hills ranch in native grasses and Oak trees on 8393 Pleasants Valley Road, Winters, CA with lots of water from next door Putah creek and wanted to offer it to Beekeepers to store hives or place hives to collect honey. No spraying has been done. We are a mosquito free area, thanks to winds and lack of surface ponds, so Solano County does not spray here at all. They have traps set out but never catch anything.
 Jim Milner
jimilner@hotmail.com

☞ I live on an acre of land and do only organic gardening. Would it be possible to have a bee box

put on our property? Could you recommend someone to contact?
Thank you in advance for your assistance.

Best Regards,
Sylvia Barnes
University of California, Berkeley
2195 Hearst, F130; MC 1103
Tel: (510) 642-8147 Fax: (510) 643-8997
sbarnes@berkeley.edu

 **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**

