

Santa Monica Daily Press

Why we need to save bees

By Dr. Reese Halter

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A couple of weeks ago I began preparing for my spring classes. At roughly the same time several students approached me and wanted to know more about our incredible honeybees.

After the conversation ended, a few hours later, I thought about jotting down what was said. The following is the abridged version.

The more scientists find out about how life's rich tapestry works — and that each critter has such a crucial role to play — the more we are convinced that all life-forms share a number of similarities. It's truly uncanny.

Take for example humans and honeybees: we are quite similar in a number of ways. We both share addiction and rage management issues. Bees and humans just can't seem to get enough caffeine, nicotine or cocaine; once we start the euphoric "give-me-more" insatiable gene dominates our habits.

It also turns out that both angry humans (mostly males) and worker honeybees (exclusively females) head-butt one another. In the case of the honeybees, when the hive is under attack bees stop their sexy waggle dance for a tenth of a second and vibrate 380 times a second. Vibrations are accompanied by head-butting fellow workers, which we now know conveys that the hive is under siege.

Over the past four years a quarter of a trillion honeybees have died prematurely on our home, planet Earth. Clearly something is terribly wrong here.

In so many different ways the bees are acting as nature's canaries in coal mines. Of the 100 crop species providing 90 percent of the world's food — about 74 percent are pollinated by bees. The bees are the first critters to touch and help make our food; they are getting sick around the globe. As a matter of fact, in March of 2011 the United Nations issued a warning that mass bee deaths signal the writing on the wall for global food security.

The list of bee-caused deaths includes the collision of the following factors: neonicotinoid insecticides, climate change, air pollution, introduced mites, bacteria, fungi, bee husbandry, exposure to high frequency cellular radiation and the latest discovery of parasitic flies.

When any organism's autoimmune system is significantly compromised, not dissimilar to humans afflicted with AIDS, it becomes highly susceptible to a number of potential new ailments including parasites. In the case of our beleaguered honeybees the latter appears to be applicable.

Excellent work from the University of San Francisco recently showed that parasitic flies latch onto honeybees causing them to become disoriented and exhibit "zombie-like" behavior. Bees are social creatures and when they get sick they will not go home. Honeybees carry a selfless gene that sacrifices an individual to safeguard the entire colony.

The Santa Monica City Council is to be congratulated for allowing urban beekeepers the privilege of keeping hives in our city.

There's a tremendous amount each of us can do to help urban bees. This spring I suggest planting native yellow and blue flowers in large patches. Please do not use any herbicides, insecticides, miticides or fungicides in your garden. Also, as the weather gets warmer place a bowl of water in the garden for the bees; they, too, need fresh water. Replenish that water bowl, daily.

Recently an investigative story I wrote was picked up by the Wall Street Journal because it had an important message about honey and our national food security in the U.S.

The Chinese are the biggest honey producers on the globe and they have begun in earnest to micro-filter hundreds of millions of pounds of honey, essentially removing the country of origin or the honey's fingerprint, making it impossible to trace. China continues to use banned carcinogenic poisons on their crops. In 2002, 154,000 pounds of Chinese honey contaminated with chloramphenicol (which causes bone marrow failure) turned up in our grocery stores, unknowingly.

In America, we import at least 150 million pounds of honey and consume over 330 million pounds of honey, annually. It's baked into

everything from breakfast cereals to cookies and mixed into sauces, beverages, processed foods and even cough drops.

Protect your family, support local beekeepers by purchasing their honey. In Santa Monica we have a splendid Farmers' Market — buy your honey locally.

Lastly, I strongly advise you to consider planting both vegetables and fruit-bearing trees this springtime. Our urban bees need healthy sources of nectar and pollen; and we need the bountiful produce that bees miraculously create.

Earth Dr. Reese Halter is an award-winning science communicator: voice for ecology and a distinguished conservation biologist at California Lutheran University. His latest book is "The Incomparable Honeybee"; its been updated and revised. Contact him through www.DrReese.com

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