

# HUFF POST GREEN

## Seven Billion People Need Bees

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by Dr Reese Halter

Conservation biologist, Broadcaster

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This first week of November (2011) our population surpassed seven billion humans. And in the last week of October (2011) scientists from the [University of California at Berkeley](#) irrefutably proved that over one billion temperature sensors registered warming between 1-2 degrees Celsius, in some cases more than three times greater than the IPCCs average of 0.64 degrees Celsius. Humans are forcing the climate by burning carbon-based fuels releasing over 82 million metric tons of greenhouse gases, daily, on our planet.

All life forms are in jeopardy. Our food chain is perilously close to collapsing; yet the lawmakers in Washington regularly ignore this message. My biology and environmental students at California Lutheran University in Thousand Oaks and I are miffed at why this issue is not front and center in DC.

Prices at the grocery store have been rising dramatically since February 2011 and will continue to do so with no foreseeable end in sight. The climate has changed that much -- it's [disrupting](#) our way of life and costing governments around the world billions of dollars in infrastructure damage.

In May of 2009, Don Gorman, the publisher of Rocky Mountain Books, called and asked me to write [The Incomparable Honeybee](#). A couple months later, the first edition was in print and selling like hotcakes. Last week a revised and updated edition was released; we all need to be aware of the health and well being of the bees. Because without healthy honey, bumble, stingless and solitary bees there's no chance that more than seven billion people can thrive especially since the oceans are [fished-out](#) and currently feeding, unsustainably, at least a couple billion people, daily -- in addition to acidifying (from absorbing rising atmospheric CO2) faster than any time in the last 60 million years.

One of the thrills of studying nature is discovering the magnificent interrelationships amongst critters, plants, insects and ecosystems. My students are constantly amazed at my enthusiasm and passion when I connect the dots in class.

For instance, the brutal drought that is enveloping Texas and much of the southern half of America has adversely impacted the Mexican free-tailed bats that migrate from northern Mexico in the springtime to central Texas. One hundred million bats -- the largest bat colony on the globe -- feast on an astounding 1,000 tons of insects and pests nightly during the summertime -- nature's exquisite insectivores. Those bats save Texas cotton farmers millions of dollars that would otherwise be spent on purchasing man-made, synthetic insecticides that kill honey, bumble and solitary bees.

The current drought, however, has significantly lambasted the Mexican free-tailed bat population (they can't find water) and Texas farmers were forced to spend millions of dollars applying carcinogenic, synthetic insecticides to grow their bee-pollinated cotton crops. This will most certainly have a deleterious affect on all bee species.

Surprisingly, bees and humans share a number of similarities. For example, we both require restful and rejuvenating sleep. Sleep deprived bees, just like humans, experience communication problems like finding food and performing an accurate waggle dance to reveal locations of nectar, pollen, water and tree resin. Stressed bees like humans become anxious, depressed and pessimistic; they display emotion-like qualities. Moreover, bees that exhibit a high defensive behavior or optimism are likely to survive a winter rather than perish.

Did you know that humans have been keeping bees in cities for over three thousand years? Bees were kept in the "land of milk and honey" in the Iron Age city of Tel Rehov in the Jordan Valley -- the oldest known commercial beekeeping facility in the world. It should then come as no surprise that city councils around the world have recently allowed urban beekeepers to keep hives in Santa Monica, New York, Chicago, London, Melbourne, Tokyo and many other places. In fact, urban beekeepers along with the tremendous support of city dwellers are planting more bee-friendly trees and flowers helping to sustain urban bee populations.

And make no mistake, bees around the globe are dying by the billions from insecticides like neonicotinoids, climate-driven mismatches, introduced parasites and diseases, air pollution and habitat loss. In the

last four years alone over a quarter trillion honeybees have died prematurely. Of the 100 crop species providing 90 percent of the world's food -- over 74 percent are pollinated by bees.

The amount of electromagnetic radiation emitted from your cellular phone is enough for you to strongly consider using the "hands-free" mode to obviate harmful brain radiation. [Researchers](#) from Switzerland discovered that the amount of radiation given off by just one mobile phone has a noticeably negative effect on bee behavior, causing them to immediately become anxious. People would be wise to take note at what the bees are showing us about cellular phone radiation levels.

At the end of each day I take a tablespoon of local beekeepers' honey and marvel that it took 12 bees laboring their entire foraging lives of three weeks, combined flying time of about 6,000 miles, to produce 21 grams or a tablespoon of delicious and nutritious honey.

Help save urban bees -- please, do not use herbicides, insecticides, miticides or fungicides in your garden.

*Earth Dr Reese Halter is an award-winning science communicator: voice for ecology and distinguished conservation biologist at California Lutheran University. His latest books are [The Incomparable Honeybee](#) and [The Insatiable Bark Beetle](#). Contact [Earth Dr Reese Halter](#)*