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Biloxi-Gulfport and South Mississippi

## ENVIRONMENT:

### Save the bees, please

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By REESE HALTER

Over the past three years more than 50 billion honeybees have died. Scientists understand the causes and now we need everyone to lend a helping hand.

The humble honeybee has been inextricably linked to humankind since prehistoric times. At first we were drawn to this remarkable creature because of its honey.

Honey is to a bee what electricity is for humans — energy. One tablespoon of honey weighing 21 grams contains 16 grams of sugar or 60 calories, and it took 12 bees their entire foraging lives, combined flying time of about 6,000 miles, to produce 21 grams of honey.

To understand the importance of honeybees, consider:

- 1) Every third bite on your plate is a result of their primary role on the

planet as pollinators.

2) Honeybees contribute at least \$44 billion a year to the U.S. economy. In Mississippi agriculture accounts for almost \$6 billion and bees pollinate apples, blueberries, broccoli, cantaloupe, cucumbers, pumpkins, squash, tomatoes and watermelons (to name a few); alfalfa and clover for beef and dairy industries; cotton for our clothes; honey, candles and medicines.

3) Bees have a memory; they vote; they are being trained to count; and they are helping people as an early detector of disease by sniffing skin and lung cancers, diabetes and tuberculosis.

4) Many blue-chip corporations depend on honeybees for their products, including General Mills' Haagen Dazs ice cream, Starbucks coffee and Burt's Bees.

A combination of factors has collided to create the perfect storm responsible for honeybees' memory loss, appetite loss and autoimmune system collapse, resulting in the rapid decline in honeybee populations worldwide.

Each year 5 billion pounds of pesticides are applied globally. Many farmers stack their chemicals, reducing application costs, but

increasing toxicity levels, in some cases 1,000-fold. In 2008, researchers from Penn State found 43 different pesticides in a Pennsylvania apple orchard.

European research showed that bees exposed to electromagnetic radiation from cellular towers made 21 percent less honeycomb, and that 36 percent, taken a half mile from the hive, were unable to navigate home.

Bees evolved to feed on a wide assortment of pollens, but today we use them in monoculture fields. Pollens provide their only source of protein. Proteins grow eggs, larvae, brains and autoimmune systems.

The abnormally high temperatures of 2006 were likely the tipping point for bees in North America. The searing springtime temperatures during the onset of flowering are believed to have caused sterile pollen in many plants. Sterile pollen produces little if any protein.

Clearly agriculture must reduce the toxicity levels from pesticides, herbicides and miticides, globally. There is hope, as organics is the fastest growing agriculture sector in the U.S. at \$24 billion a year.

Each of us can help by purchasing organic foods and cottons, and by supporting local beekeepers by buying honey. Do not use herbicides

or pesticides in your yard. Plant a wide variety of native yellow and blue flowers and participate by helping scientists in the U.S. National Phenology Network ([www.usanpn.org](http://www.usanpn.org)).

Without the bees we cannot survive.

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