

Polish off your crystal ball. Play HuffPost's Predict the News.



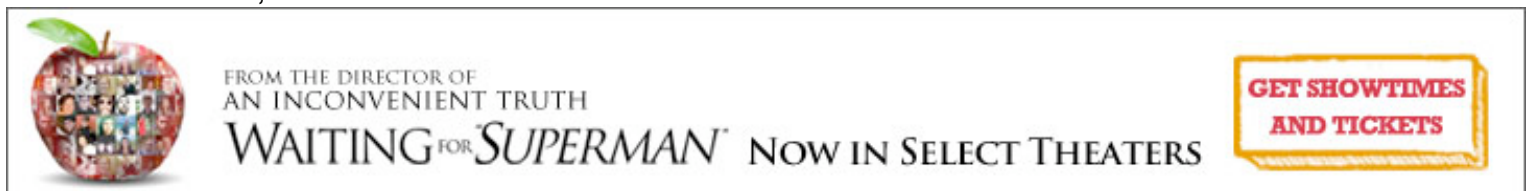
take action **NOW!**
Help America Protect Animals from Domestic Abuse

signatures: 18,443
author: American Humane...

sign petition

care2

November 24, 2010



FROM THE DIRECTOR OF AN INCONVENIENT TRUTH
WAITING FOR SUPERMAN NOW IN SELECT THEATERS

GET SHOWTIMES AND TICKETS

This is the print preview: [Back to normal view »](#)

Dr. Reese Halter

Conservation biologist

Posted: November 24, 2010 11:40 AM

Giving Thanks for Bees

In my opinion, Thanksgiving is the best holiday of the year for a number of important reasons. Irrespective of your faith or political beliefs, or lack thereof, our nation takes a day to breathe, reflect upon the past year and give thanks to our loved ones and the Earth's bounty.

This year, I give thanks in particular for three very special people in my life and 1.8 trillion honeybees that directly account for a quarter of a trillion dollars of commerce, worldwide, annually.

Honeybees are responsible for every third bite on our dinner plate this Thanksgiving and at every meal throughout the year. They pollinate everything from apples to zucchinis, over 100 food crops including half the ingredients in most ice creams. In addition, they are crucial for ensuring alfalfa and clover for the beef and dairy industries around the globe, and annually they help provide 100 million bales of cotton, clothing our species.

But that's not all; globally honeybees produce over 2.65 billion pounds of honey, 44 million pounds of beeswax, potent pain medicines and now they are going to protect us by sniffing out terrorists, drug lords and horrid diseases.

Honey contains over 200 substances. Bees secrete a glucose oxidase enzyme that assists in converting nectar into honey. Along with oxygen the glucose enzyme splits the glucose molecule into water and hydrogen peroxide. Due to its hydrogen peroxide and glucose oxidase content, honey is a powerful antiseptic.

High amounts of malic, citric, tartaric, oxalic and other organic acids combined with the enzymes catalase and peroxidase give honey its renowned antibacterial properties.

With over 80 percent sugar content and its natural acidity honey creates an inhospitable environment for the single-celled microbes that form infections. The low water content of honey keeps bacteria, which thrives in water, from flourishing. The ancient Mayan Shamans realized this and successfully used honey-based medicines to treat cataracts, conjunctivitis, chills, fevers and open wounds. Today, some modern bandage companies line their products with diluted traces of honey.

Honey is loaded with vitamins and minerals. It contains water soluble B1, B2, B6, pantothenic and nicotinic acids, vitamin C -- as well as high amounts of fat soluble vitamins E, K and A. Honey also provides us with essential minerals: calcium, phosphorus, potassium, iron, copper, manganese, magnesium and sulfur.

Some of these minerals in the specific concentrations found in honey mimic the concentrations of blood serum. Therefore honey metabolizes easily and can be an important source of essential nutrients. In addition, the combination of glucose and fructose and some maltose, melezitose and dextrin makes honey an excellent source of caloric energy.

Some researchers suggest that a teaspoon or two of honey before bed ensures a restorative sleep. Floridian tupelo and New Zealand manuka honeys are low on the glycemic index and therefore best for diabetics.

Beeswax is a somewhat silent partner in the daily lives of people around the world. From cosmetics, stick colognes, antiperspirants, candies and dental impressions to the mouth-pieces of didgeridoos, beeswax is often an important component.

Did you know that your pool table has beeswax filling its screw holes and seams between slates? Beeswax thread is still preferred by shoemakers -- and sailors -- because of its durability and resistance to weathering. Furniture and automobile polish, industrial lubricants, paint removers and even the frets on a two-stringed Philippine Kutiyapi boat-lute, they all rely on the wax of the bees.

Did you know that the Roman Catholic Church uses about 3.1 million pounds of beeswax in their candles each year, which are 49 percent beeswax?

Beehives can tell scientists a lot about the health and wellbeing of local environments. In fact, beeswax is a sponge for toxic chemicals. This past springtime researchers examined beehives from 23 states and two Canadian provinces and found 121 different insecticides in 887 samples of bees, wax, pollen and hives.

Of even more concern was that three out of five pollen and wax samples from 23 states had at least one systemic insecticide -- a poison designated to spread throughout all parts of the plant including its pollen and nectar. One group of these chemicals, neonictinoids, are lethal to bees, moths, beneficial soil insects and known to contaminate fresh waterways.

Since 1957, the former USSR has used extracts of bee stings -- bee venom, known as apis -- to treat rheumatoid arthritis, multiple sclerosis and other debilitating autoimmune diseases. The powerful anti-inflammatory effects of melittin and adolapin in bee venom - along with apamin, improve nerve transmission and are being used to effectively treat fibromyalgia and tendonitis. Twelve European countries have officially recognized bee venom solution as a drug.

Bees are man's best friend, provider and protector; they are being trained in 10 minutes to sniff, with a 98 percent accuracy, enriched uranium, methamphetamine and another 60 lethal and illegal substances. In addition, honeybees are already being used as early detectors of lung and skin cancers, diabetes and TB, as well as to monitor fertility cycles and confirm pregnancies.

Remember, you are what you eat. Visit Farmers' Markets and buy local organic foods and support local beekeepers by purchasing their honey.

Last year in California, we used 19 billion plastic single-use bags enough to reach to the moon 15 times. Those bags are suffocating 267 marine species (over a million animals) each year; it's senseless and unacceptable. Wherever you are across our nation or around the globe buy 6 organic cotton shopping bags. Use them instead of supermarket plastic bags. Make it a habit to return those bags to the trunk of your car after unpacking groceries.

This Thanksgiving help our bees by pledging not to use synthetic insecticides, herbicides, fungicides or miticides in your yard.

Dr. Reese Halter is a Science Communicator: Voice for Ecology, conservation biologist at Cal Lutheran University, public speaker and author of "The Incomparable Honeybee," Rocky Mountain Books. He can be reached through DrReese.com

Follow Dr. Reese Halter on Twitter: www.twitter.com/DrReeseHalter