



Springfield Plateau

Springfield Plateau Chapter of the Missouri Master Naturalist™ is a community based natural resource education and volunteer program. Its purpose is to develop a corps of well-informed volunteers to provide education, outreach and service dedicated to the beneficial management of natural resources and natural areas within their communities for the State of Missouri.

Thursday, March 4, 2010

Butting Bees say "Stop"

You may be aware of the dance that honey bees do in the hive to tell their friends about a new food source. What if there is bad news, such as a predator hanging around? How about a good head butt! The bee's distinctive waggle dance transmits information about food resources to hive mates. It was previously observed that a peculiar "stop" signal would end the dance for recruitment of food. New research shows the sign is a vibrating signal of a tenth of a second, delivered by the sender by butting her head against another bee or sometimes mounting it.

James Nieh of the University of California at San Diego found that found that the signal could be triggered by an attack from competitors or simulated predators. The greater the danger, the more stop signals the bee would transmit. Indeed, when researchers pinched the bees legs, the bee stop signals increased 88 fold over a simple threat of competition.

Honey bee colonies are referred to as "Superorganisms", as defined in [Wikipedia](#).

A **superorganism** is an **organism** consisting of many organisms. This is usually meant to be a **social unit** of **eusocial** animals, where **division of labour** is highly specialised and where individuals are not able to survive by themselves for extended periods of time.

Ants are the best-known example of such a superorganism

Nieh says, "This is only the second example of a negative feedback signal ever found in a superorganism and is perhaps the most sophisticated example known to date". The research is published in the journal **Current Biology**, and the story with pictures is available at this

[National Geographic link](#).

Posted by Schoolcraft at 12:58 PM

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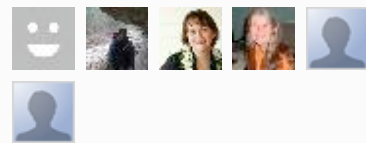
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