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## Debbie's Insects Blog

By [Debbie Hadley](#), About.com Guide to Insects

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## Threatened Honey Bees Tell Others to "Stop Dancing!"

Monday February 15, 2010

Foraging [honey bees](#) that encounter danger make a bee line back to the hive to warn others, frequently by head butting them. James Nieh, a biologist at UC San Diego, discovered that honey bees use a special signal to keep fellow hive mates out of harm's way.

Honey bees [waggle dance](#) to inform others about the quality and location of food sources. Bees that experience a threat while feeding, either from competitors or predators, use a 'stop' signal to reduce waggle dancing back in the hive.

The signal is a vibration that lasts about a tenth of a second, with the bee vibrating at about 380 times per second. "It is frequently delivered by a sender butting her head into a recipient, although the sender may also climb on top of the receiver," Nieh said. The more dangerous the perceived threat, the more stop signals the bees delivered to the waggle dancers.

Nieh notes that his discovery is a rare example of negative feedback being used by a superorganism. "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," he said.



The waggle dancer (with yellow and pink paint marks) is frozen when receiving a stop signal from a bee marked "S" to her left.  
Photo: James Nieh

Nieh's discovery is detailed in a paper published in the February 23rd issue of the journal *Current Biology*.

Source: [Biologist Discovers 'Stop' Signal in Honey Bee Communication](#), Kim McDonald, UCSD, Feb. 9, 2010

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February 15, 2010 at 3:13 pm

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