

# Bees Equiped With Microchips Help Explain Hive Declines

by Stephen Messenger, Porto Alegre, Brazil on January 11, 2010

## SCIENCE & TECHNOLOGY



*Photos: Philippe Psaila /*

[DoubleVue.fr](http://DoubleVue.fr)

In hopes of better understanding why bee populations are in decline, scientists are attaching microchips to bees to monitor their movements. The tiny device is glued to the back of the bees works with equipment installed at the entrance of their hives to record different data. Researchers say that the insight provided by this unprecedented observational technique will help them better understand the behavior of the insects throughout their entire lifecycles--and may shed light onto the reasons why bee populations have been steadily declining over the last 20 years.

### **Bee Populations are in Decline**

Just in the last few years, the scientific community has grown increasingly concerned over a [drop in the number of beehives worldwide](#) and the troubling implications it could have on an agriculture industry that relies on them for the pollination of crops. According the [USDA](#), the current number of hives, 2.4 million, is 25 percent lower than in the 1980s. Throughout the world, declines in bee populations are estimated to be anywhere between 20 to 30 percent. Since bees are responsible for pollinating 75 percent of plants for human consumption, the new research to monitor bee behavior transcends mere entomological curiosity.



### **Pesticides to Blame for Hive Collapse?**

The research is being conducted by the Minutes-Association for Technical Coordination Fund in Lyon, France. In the past, there have been a number of theories about what might be causing the phenomenon known as colony collapse disorder--from parasitic mites to a decline in the number of flower-blossoms. The French scientists, now capable of monitoring the behavior of individual bees, **are suspecting a pesticide common throughout the world, Fipronil, may be to blame.**



### **Microchips Shedding Light on the Problem**

According a report from GloboRural, even in non-lethal doses, the chemical causes the bees to become disoriented, which results in a significant impairment to their ability to collect nectar. The microchips have helped scientists observe bees with a reduced "sense of

**direction and, by extension, ability to find their way back to the hive." The microchip weighs only 3mg--not enough to impede the movement of the insects in the hive or in flight.**

The methods being employed to study bee behavior may help scientists discover other factors that may be impacting the lives of these pollinators, so important to global agriculture.

### **More on Bees in Decline**

[Will Engineering a "Flexi-bee" Save Colonies from Collapse?](#)

[The Cooperative Launches Plan Bee to Help Save UK's Honeybee](#)

[Can Native Black Honeybee Save UK Bee Industry?](#)