

# Researcher finds some bees evolved to shout at competitors

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July 7, 2014

Certain species of stingless bees in Brazil have been found to protect their sources of nectar and pollen from potential predators by emitting signals that are equivalent to a “shout” instead of the normal “whisper” found in other bee species. Dr. Elinor Lichtenberg from Washington State University made this discovery during her doctoral work at the University of California at San Diego. The **study** was reported in the July 7, 2014, edition of the journal *Current Biology*.

Bees and other pollinators protect their source from competitors called “eavesdroppers” by signaling the location of the pollen or nectar source with pheromones. Lichtenberg found that certain members of the genus **Trigona** have developed an alternative to the normal method of hiding a food source from competitors with subtle signals that could be construed as a “whisper”. If larger numbers of *Trigona* visit a food source and deposit pheromones, the site becomes the equivalent of a “shout” that attracts other bees from the same species and keeps competitors away.

More aggressive sting carrying bee species and other competitors are kept away from the food source by the equivalent of a human lie. There are not as many bees present as the odor indicates. This subtle evolutionary change from most bee behavior allows the stingless bees

to compete successfully with more heavily armed opponents.

The study is the first to evaluate the behavior of eavesdropper species in competition as well. Eavesdropping behavior is usually exhibited between species that occupy the same niche in the food chain. Previous studies have demonstrated eavesdropping behavior as a form of attracting a mate or preventing predation but this is the first evidence that the behavior also involves defense against food competitors. The behavior of eavesdropper species and the species that defend against them also alters the plant life that produces the food the two species are competing over.