

## Bees in further danger?

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Well, harrumph.

Poor bees. Just when we thought we were making headway on the bee thing, we find another threat. Raptors? The Rapture? Nope. This time it's the very thing that helps to sustain them: the flower.

According to researchers in the Department of Entomology at the University of California, Riverside (UC-R), and the University of Sussex in the United Kingdom, flowers can threaten the health of bees by exposing them to parasites.

"Flowers are hotspots for parasite spread between and within pollinator populations," said Peter Graystock, a postdoctoral researcher at UC-Riverside and first author of the team's report. "Both the flower and bee species play a role in how likely parasite dispersal will occur."

The report was published in the "Proceedings of the Royal Society B," and it's said to be the first to show that, just as bees may disperse parasites, the flowers they visit can become platforms for pollinator parasites that then are transferred to other visiting bees.

In a UC-R press release, Graystock explains: "By showing that visits from parasite-carrying bees can turn flowers into parasite platforms, we can say that it is likely that heavily visited flowers may become more 'dirty' with bee parasites. Planting more flowers would provide bees with more options, and parasite spread may thus be reduced."

The four common honeybee and bumblebee parasites that were discovered to be dispersed by flowers include *Nosema apis*,

*Nosema ceranae*, *Crithidia bombi* and *Apicystis bombi*. In bees that have become heavily infected, the parasites can cause queen death and colony collapse; other maladies include lethargy and dysentery.

The study determined that bumblebees and honey bees can transport parasites once thought to be species-specific, meaning that current, host-specific quarantine and parasite screening protocols should be expanded in order to protect pollinator diversity.

“With some 20,000 bee species, it is a surprise that only recently has research in pollinator health considered the interactions between bee species,” Graystock said. “Our finding may also affect the national and international trade of flowers unless sterilization of parasites on these flowers can be guaranteed. Otherwise flower movements may also be moving pollinator parasites to new territories.”

He explained that commercially imported bumblebees have been found to contain a cocktail of parasites that are harmful to both bumblebees and honeybees.

“We know these commercially imported bumblebees, when given the opportunity, will forage on the same flowers as wild bees and honeybees,” he said.

For more information, visit Graystock’s blog at: [http://bit.ly/graystock\\_bees-FTDS](http://bit.ly/graystock_bees-FTDS)<sup>[2]</sup>.

*Cover Photo: iStock | Cimmerian*

1. <http://www.amerinursery.com/wp-content/uploads/2015/08/bees-further-danger.jpg>
2. [http://bit.ly/graystock\\_bees-FTDS](http://bit.ly/graystock_bees-FTDS)