

Honeybees found to have rightward bias under certain circumstances

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Entomologist Thomas O'Shea-Wheller with Louisiana State University has found that under certain circumstances, honeybees demonstrate a rightward bias. In his paper published in the journal *Biology Letters*, he describes experiments he conducted with honeybees in his lab and what he found.

Prior research has shown that some animals have a directional bias, preferring to turn or stand in certain directions. Even some insects have been known to prefer to turn one way or another under certain circumstances—ants, for example, have been found to prefer turning left when they enter a cavity. In this new effort, O'Shea-Wheller decided to find out if the same might be true for honeybees.

To find out if honeybees prefer to turn one way or the other when entering an open [cavity](#), he set up two boxes in his lab. One box was open inside, the other had a maze of tunnels. Next, he ran trials, giving honeybees the opportunity to explore one or the other box and noting which way they turned when entering.

O'Shea-Wheller reports that out of 180 runs, the honeybees turned right 86 times, went straight ahead 59 times and turned left just 35 times. He noted also that the honeybees that chose to turn right made their decision faster than did the honeybees that chose to go straight ahead or turn left. He suggests this indicates that the honeybees have an automatic-type response that pushes them toward right turns—but only under certain conditions. He found no such [bias](#) in honeybees entering the box that held the maze.

O'Shea-Wheller points out that honeybees are natural explorers—they seek out cavities in rocks and trees while looking for a new place to build a nest. Such new sites are chosen when a certain number of honeybees congregate in the same place. He suggests that having a [natural inclination](#) to turn a certain direction makes the possibility of achieving a quorum more likely than if they simply turned by chance. He adds that having such an inclination might also promote [social cohesion](#) when the honeybees return to the hive with food and water. He notes that it is likely more than coincidence that [honeybees](#) have more odor receptors on their right antennae than on the left, and also better vision in their right eyes.

More information: Thomas A. O'Shea-Wheller. Honeybees show a context-dependent rightward bias, *Biology Letters* (2019). DOI: 10.1098/rsbl.2018.0877

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