

Spiders avoid areas where fire ants have been

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A team of researchers at Canada's Simon Fraser University has found that several species of spiders avoid areas where fire ants have recently congregated. In their paper published in the journal *Royal Society Open Science*, the group describes experiments they conducted with spiders and ants.

Most people are afraid of spiders and prefer to not have them in their homes. Unfortunately, studies have not yet produced an effective deterrent. In this new effort, the researchers suggest they may have found something that spiders tend to avoid: chemicals left behind by [fire ants](#).

After learning that some of their colleagues in an unrelated study had discovered that spiders seemed to be less prevalent in areas where they were studying ants, the researchers set up experiments to find out if the spiders were actively avoiding the ants. Their experiments consisted of placing several specimens of a single species of ant in an enclosure for a period of time and then replacing them with a single female spider. The enclosure had separate compartments, some of which had been blocked when the ants were inside. The spider, on the other hand, was free to go wherever it wished, possibly as part of an assessment of sites for a new nest. Filter [paper](#) laid on the floor of the enclosure was replaced between test runs.

In studying their results, the researchers found that the majority of black widow spiders, hobo spiders and false black widow spiders avoided the parts of the enclosure that had been trampled by European fire ants. The spiders did not react the same way to other species of ants, such as black garden ants or western carpenter ants. They note that European fire ants are particularly aggressive and are known to swarm and kill spiders—they suggest that it is possible that spiders have learned over time to avoid them.

The researchers were not able to trace the residue left behind by the [fire ants](#) that the spiders could sense, but suggest further study in isolating such chemicals could possibly lead to the development of an effective [spider](#) repellent.

More information: Andreas Fischer et al, Know your foe:

synanthropic spiders are deterred by semiochemicals of European fire ants, *Royal Society Open Science* (2021). [DOI: 10.1098/rsos.210279](https://doi.org/10.1098/rsos.210279)

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