



RESPONSE OF THE SPIDER MITE *Tetranychus evansi* TO PREDATOR CUES RESPOSTA DO ÁCARO *Tetranychus evansi* À PISTAS DE PREDADOR

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Prey use cues of all sensorial modalities to detect and avoid predation. This avoidance plays an essential role in survival and reproduction, but it comes with costs. In order to reduce those costs, prey are known to discriminate between cues from dangerous and harmless predators. Here, we investigated the escape behaviour of *Tetranychus evansi* in the presence of cues from two predatory mites. *Phytoseiulus longipes* is considered as a good candidate for biological control of *T. evansi* and has high development rate and predation rate on this prey. We therefore considered it as a dangerous predator for *T. evansi*. Although *P. macropilis* has been found associated with *T. evansi* in the field, it has a low predation rate and cannot complete its life cycle on this prey. Thus, we considered it a much less dangerous predator. We investigated whether *T. evansi* recognized cues of these two predators and changed its behaviour to avoid predation. To evaluate escapes of *T. evansi* from areas with predator cues, we released *T. evansi* on a tomato leaf disc with predator cues, connected with a bridge to a disc without predator cues. The spider mites escaped more often from discs with cues of *P. longipes* than from discs without such cues. In contrast, *T. evansi* did not escape more from discs with cues of *P. macropilis* than from discs without such cues. We conclude that *T. evansi* can detect cues of the dangerous predator *P. longipes*, resulting in escapes. However, it did not show such a change in behaviour when experiencing cues of *P. macropilis*, perhaps because it does not recognize these cues, or because the predator poses no serious threat.

Keywords: behaviour, cost, escape

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