

专论与综述

天敌昆虫利用信息化学物质寻找寄主或猎物的研究进展

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摘要 应用天敌昆虫控制害虫是传统生物防治中的主要内容。信息化学物质是天敌昆虫远距离向寄主或猎物栖息地进行定向, 以及近距离对寄主或猎物进行定位所依赖的重要信号。综述了能够引诱天敌昆虫的信息化学物质的产生、分类、作用、异同及背景, 并介绍了天敌昆虫对信息化学物质的行为反应和特异性。同时, 对这类物质在生物防治中的应用及前景作了介绍与探讨。对不同营养层的种间化学通讯作为研究协同进化时的重要参考也作了简要介绍。

关键词 [信息化学物质](#); [天敌昆虫](#); [虫害诱导挥发物](#); [寄主搜寻](#); [植物防御](#); [三级营养](#)

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Semiochemicals used by natural enemies as host seeking signal

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Abstract Insect natural enemies are important agents for controlling pests in classical biological control programs. Semiochemicals are necessary signals used by natural enemies in long distance location of the host's or prey's habitat and in short range location of hosts or prey in their micro-habitat. This paper presents the origin, classification and function of semiochemicals which can attract insect natural enemies. Similarities and differences in chemical signals and their background volatiles as well as behavioral responses of natural enemies to semiochemicals and specificities of the chemical signals are also introduced. The paper discusses the application of semiochemicals in biological control programs and their future prospect in this field. Furthermore, chemical communication among species at different trophic levels has important implications for future studies on coevolution between different species.

Key words [semiochemicals](#) [natural enemy](#) [herbivore-induced volatile](#) [host seeking plant defenses](#) [tritrophic system](#)

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