

研究报告

明亮熊蜂和意大利蜜蜂在温室桃园的访花行为和传粉生态学比较

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摘要 2004—2006年连续3年应用明亮熊蜂和意大利蜜蜂在北京为温室桃园传粉, 对其访花行为和传粉生态学进行研究. 结果表明: 两种蜂都可以替代人工掸花为温室桃园提供有效的传粉服务. 两种蜂的访花行为和传粉效果不同, 明亮熊蜂偏爱于采集花粉, 主要以震动翅膀的方式来使花粉释放和传播, 而意大利蜜蜂偏爱于采集花蜜, 主要以身体接触的方式来粘附和传播花粉; 明亮熊蜂的活动起点温度低、日工作时间长、访花速度快, 在低温条件下比意大利蜜蜂的传粉效果好; 意大利蜜蜂的趋光性强, 飞撞温室塑料薄膜的现象严重, 受温度和光照条件的影响较大, 对温室环境的适应性较差.

关键词 [明亮熊蜂](#) [意大利蜜蜂](#) [访花行为](#) [传粉生态学](#)

分类号

Foraging behavior and pollination ecology of *Bombus lucorum* L. and *Apis mellifera* L. in greenhouse peach garden

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Abstract

From 2004 to 2006, this paper studied the foraging behavior and pollination ecology of two Chinese bee species *Bombus lucorum* L. and *Apis mellifera* L. in greenhouse peach garden in Beijing. The results showed that both of the bee species were able to substitute manual work to provide effective pollination, but their foraging behavior and pollination effect differed significantly in terms of their working timing and visiting frequency, temperature, and the location of flowers on peach tree. *B. lucorum* L. preferred to collect pollen and release it mainly by vibrating their wings, while *A. mellifera* L. gathered and released pollen mainly through body touch on flowers. Moreover, *B. lucorum* L. could work at lower temperature and visit more flowers each day, while the activities of *A. mellifera* L. were easily affected by weather conditions including sunlight and temperature. It was often found that *A. mellifera* L. bumped itself on greenhouse ceiling because of its strong photokinesis.

Key words [Bombus lucorum L.](#) [Apis mellifera L.](#) [foraging behavior](#) [pollination ecology](#)

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