

粗纹举腹蚁垄断蜜露对紫胶生产的影响

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Monopolization of honeydew sources by *Crematogaster macaoensis* and its effects on lac production.WANG Si-ming¹, CHEN You-qing¹, LU Zhi-xing², LIU Chun-ju², ZHANG Wei², GUO Zu-xue³

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摘要

为了解粗纹举腹蚁垄断云南紫胶虫分泌的蜜露对紫胶生产的影响, 于2008年10月至2010年5月, 在云南省墨江县雅邑乡调查了粗纹举腹蚁对蜜露的垄断方式, 以及粗纹举腹蚁垄断蜜露对云南紫胶虫的雌雄性比、死亡率、泌胶量和怀卵量的影响. 结果表明: 在云南紫胶虫生活史周期内, 被粗纹举腹蚁垄断的胶被上, 该蚂蚁昼夜不停地取食云南紫胶虫分泌的蜜露, 每10 cm胶被上粗纹举腹蚁的平均数量在(16.8±2.3)~(39.3±10.0)头, 并在胶被

上建立保护膜, 阻止其他动物访问云南紫胶虫. 粗纹举腹蚁的垄断显著降低了云南紫胶虫个体的泌胶量, 但是垄断对云南紫胶虫的群体泌胶量没有显著影响; 粗纹举腹蚁的垄断显著降低了云南紫胶虫的死亡率, 提高了云南紫胶虫的雌虫比例和个体怀卵量. 粗纹举腹蚁垄断紫胶虫分泌的蜜露有利于紫胶生产.

关键词: 蚂蚁 垄断 蜜露 种间关系 紫胶虫 紫胶生产

Abstract:

From October 2008 to May 2010, an investigation was made in a lac plantation in Yayi region of Mojiang County, Yunnan Province, China, aimed to understand the behavior of the monopolization of honeydew sources by ant *Crematogaster macaoensis*, and its effects on the sex ratio, mortality, fecundity, and lac production of Yunnan lac insect *Kerria yunnanensis*. The results showed that *C. macaoensis* fed and monopolized the honeydews around the clock during the whole life cycle of *K. yunnanensis* on the sticklac, and the average number of visiting *C. macaoensis* ranged from 16.8±2.3 to 39.3±10.0 per 10 cm length of the stick-lac. *C. macaoensis* constructed shelters to prevent other animals from visiting the lac insect. *C. macaoensis* monopolization reduced the lac production of individual *K. yunnanensis* significantly, but had no significant effects on the lac production of whole lac insect colony. In addition, *C. macaoensis* monopolization reduced the mortality of *K. yunnanensis* significantly, and increased the percentage of *K. yunnanensis* females and the adult female fecundity. It was concluded that ant monopolization of the lac insect honeydew seemed to be beneficial to the lac production by the Yunnan lac insect.

Key words: ant monopolization honeydew species interaction lac insect lac production

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