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Full Length Research Paper

Bioecology of broad bean bruchid *Bruchus rufimanus* Boh. (Coleoptera : Bruchidae) in a region of Kabylia in Algeria

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Abstract

In this study, the conditions of colonisation of the broad bean *Vicia faba* L. by the adults of the Coleoptera Bruchidae *Bruchus rufimanus* Boh. were analysed in the region of Kabylia in Algeria. *B. rufimanus* adults began to colonise the *V. faba* cultures in February after termination of a larval and a reproductive diapause. Males appeared in February and had terminated their reproductive diapause. Females began to colonise the broad bean culture in March; they terminated their reproductive diapause after consumption of nectar and pollen of the host-plant flowers. The adult density depended on the abundance of the trophic resources at the beginning of adult colonisation phase. The females oviposited on the green pods as soon as they appeared on the plants and laid on these pods as long as they did not become mature. The first and the secondary larval instars developed in maturing seeds in the green pods. The last larval instars and the pupae developed in dry seeds after harvesting and storage in granaries. A high inter-individual variability in the duration of the post-embryonic development was observed in this study. The adaptive significance of this developmental heterogeneity was analysed in this study.

Key words: *Vicia faba*, *Bruchus rufimanus*, host plant colonisation, life cycle, larval and reproductive diapause, post-embryonic development.

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