

Interactions Between Insect Species Feeding on *Rumex obtusifolius* L.: the Effect of *P. spumarius* (L.) Feeding on the Ecology of *G. viridula* (Degeer)

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In order to study the insect-insect interaction of the insect community associated with *R. obtusifolius*, this experiment was designed in such a way that the feeding of one insect could indirectly affect the subsequent insect species through the changes in host plant (**plant mediated insect-insect interaction**). Direct coexistence of the two insect species was avoided in order to restrict the effect of feeding to nutritional changes in food. *P. spumarius* and *G. viridula* were selected for the experiment. On 10 June 1992, six *P. spumarius* nymphs (second instar) were released into each of 8 experimental cages for 2 weeks (**Experimental**). Control cages were not treated with *P. spumarius* nymphal feeding (**Control**). After 2 weeks, they were removed from the plants and 2 gravid *G. viridula* females were then released into each of both control and experimental cages for 3 days. After 3 days, all plants had egg clutches and *G. viridula* females were removed from the plants. The numbers of surviving individuals in each cage and their life stages were recorded. The experiment ended on 7 August, 1992. In order to compare the effect of *P. spumarius* feeding on the ecology of *G. viridula*, first, the index of development (Hodkinson *et al.* 1979) was calculated for each observation date. A statistical analysis was done to see if there is a difference of the development patterns in **Control** and in **Experimental**. There is no significant difference in the development patterns between the two (**Repeated Measures ANOVA**, $F = 0.744$, $p = 0.667$,). Second, the survivorships of *G. viridula* in **Experimental** and in **Control** were compared for any significant difference. The difference in the survivorships between the two was not significant ($F = 0.373$, $p = 0.990$). As the results from this experiment show, there was no effect on the ecology of *G. viridula* due to the previous feeding by *P. spumarius* on *R. obtusifolius* leave