

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 unteraction of the insect community associated with *R. obtusifolius*, this experiment was 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* leaves.