D–48: Behavioural studies of Mirid bug *Lygus rugulipennis*

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Mirid plant bugs are serious pests on the family *Brassicae*. Olfactory reception of chemical substances likely to be the sex pheromone and behavioural studies for specificity for host plant odours by male and female Mirid bugs, *Lygus rugulipennis* (Heteroptera : Miridae) were investigated using olfactometers. On treatment with E-2 hexenyl butyrate which is produced by plant bugs, there was a significant response from males. Although butyrate attracted conspecific males, it did not appear to attract conspecific females. It could be an important constituent of the sex pheromone of the female bug. Females however showed greater attraction towards conspecific females suggesting that an aggregation pheromone is involved. Although female bugs showed significant attraction towards female scents, similar attraction of male bugs towards another male bug was not commonly seen. When laboratory bioassays were carried out with three host plants, myrid bugs showed greater affinity to some clover species than to others of the same family (Leguminosae : Papilionoidae). *L. rugulipennis* totally rejected red clover *Trifolium pratense*. The clover, *Medicago falcato* was found to be attractive only to females ($p<8,9E-05$), not males. *Medicago sativa* was preferred by both male and female bugs showing that males can distinguish the two *Medicago* species used in the bioassays. The number of males found in sweep netting experiments in different areas of three clover growing regions

confirmed this preference shown by the above olfactometer data. The bugs showed positive response towards light when locating the plants and the responses of male bugs towards female bugs were enhanced in the absence of light.

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