

Pome Fruits—Biological Control

Relative Efficacy of Natural Enemies of Pear Psylla

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Field releases of *Anthocoris melanocerus* and *Anthocoris nemoralis* significantly increased *Anthocoris* species above background levels within seven 4-tree randomized blocks. With *Deraeocoris brevis* releases, levels of *D. brevis* were nearly as high in the background as in their release trees. A moderate density of generalist predators (lacewings, lady beetles) also contributed to background levels of predators.

The effects of the three predators on psylla population trends, in this early season (early April to late May) study, are summarized in Figures 1-2. In contrast to a 1991 study, no significant reduction of egg density could be ascribed to released predators. Young psylla nymphs were reduced by 50% ten days after the first release and by 85% after the second release by both species of *Anthocoris* but were not significantly different from controls in *Deraeocoris* release trees. A similar trend was evident for large psylla nymphs and at later dates for adult psylla. The lack of effect of *Deraeocoris* releases probably occurred because this predator occurred in the field independent of our releases and we were able to release at only one-fourth the rate of the *Anthocoris* species. Thus, our releases were inadequate to raise *Deraeocoris* above background levels.

Levels of the parasite *Trechnites insidiosus* were assessed by dissection of nymphs and were similar in all blocks with 40-50% parasitism. This study demonstrates that the effects of individual predators on suppressing pear psylla can be quantified using mass releases into individual trees.

