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THE PLANT BUG PESTS OF BIRDSFOOT TREFOIL FOR SEED PRODUCTION IN NORTHERN WISCONSIN

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There are three plant bug (Family: Miridae) species that are pests of trefoil seed production in northern Wisconsin. Plant bugs are sucking insects that feed on various plant parts, including the flower buds, flowers, and developing seeds causing bud and flower drop and seed shrivelling. These insects lay their eggs in the stems of plants. The immatures (nymphs) can be distinguished from the adults by the smaller size and the lack of wings. There are five nymphal stages (instars). Plant bug nymphs are often confused with aphids, but the plant bugs are much faster moving.

Adelphocoris lineolatus (Alfalfa Plant Bug):

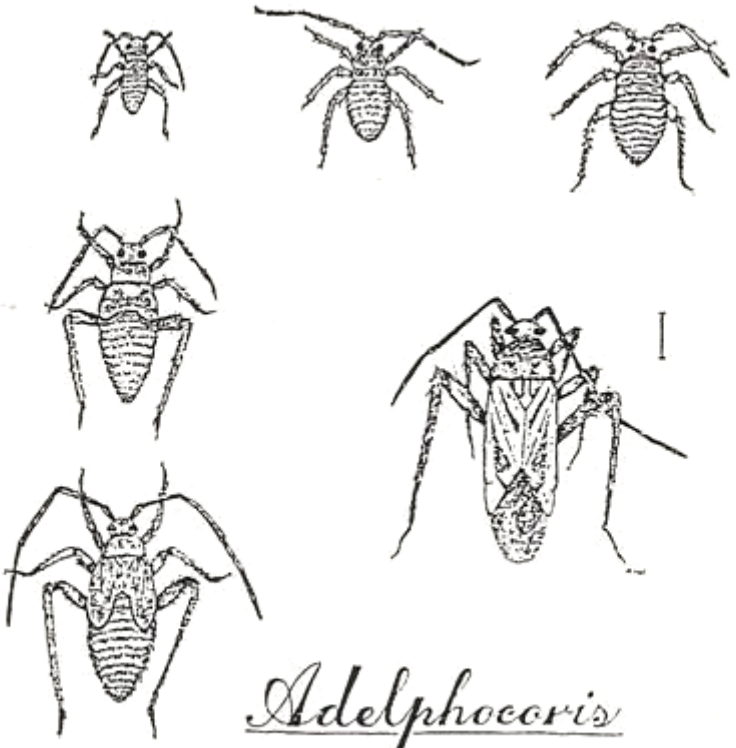
Adults are 3/8 inch long, green to greenish-yellow with brown tinge and have relatively long antennae. Nymphs have a light green body often tinted with red on the abdomen. Antennae become wider at the end and are reddish-brown at the tip. This species passes the winter in the egg stage in trefoil and other plant stems. There are usually two generations per year. Nymphs first appear on trefoil around mid-May, and adults are common by early July. The second generation nymphs appear in mid-July, and these develop into adults by August and lay eggs through September. These insects can be numerous throughout the summer, especially in June and July.

Lygus lineolaris (Tarnished Plant Bug):

Adults are 1/4 inch long, brown to yellowish-brown, often with a V-shaped marking in the middle of the back. Nymphs are often green to brownish-red, and in the older instars there are five conspicuous spots on the back. This species passes the winter as an adult in and around trefoil fields. There are usually two generations per year. Adults become active by early May, nymphs first appear in June and develop into adults by July. These adults give rise to a second generation of nymphs which become adults in the late summer and fall.

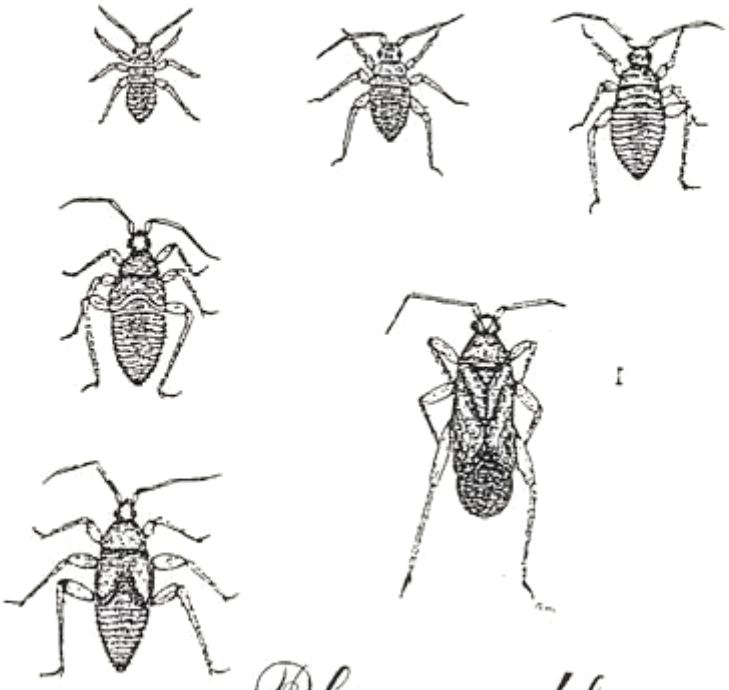
Plagiognathus chrysanthemi (No common name):

Adults are 1/8 inch long, similar in color to the alfalfa plant bug. Nymphs are pale green and very small. This species passes the winter in the egg stage in trefoil and other plant stems. There is only one generation each year. Nymphs first appear around mid-May and develop into adults by July. Adults have laid their eggs and are mostly gone by early August. These insects are very abundant early in the growing season especially in June and early July.

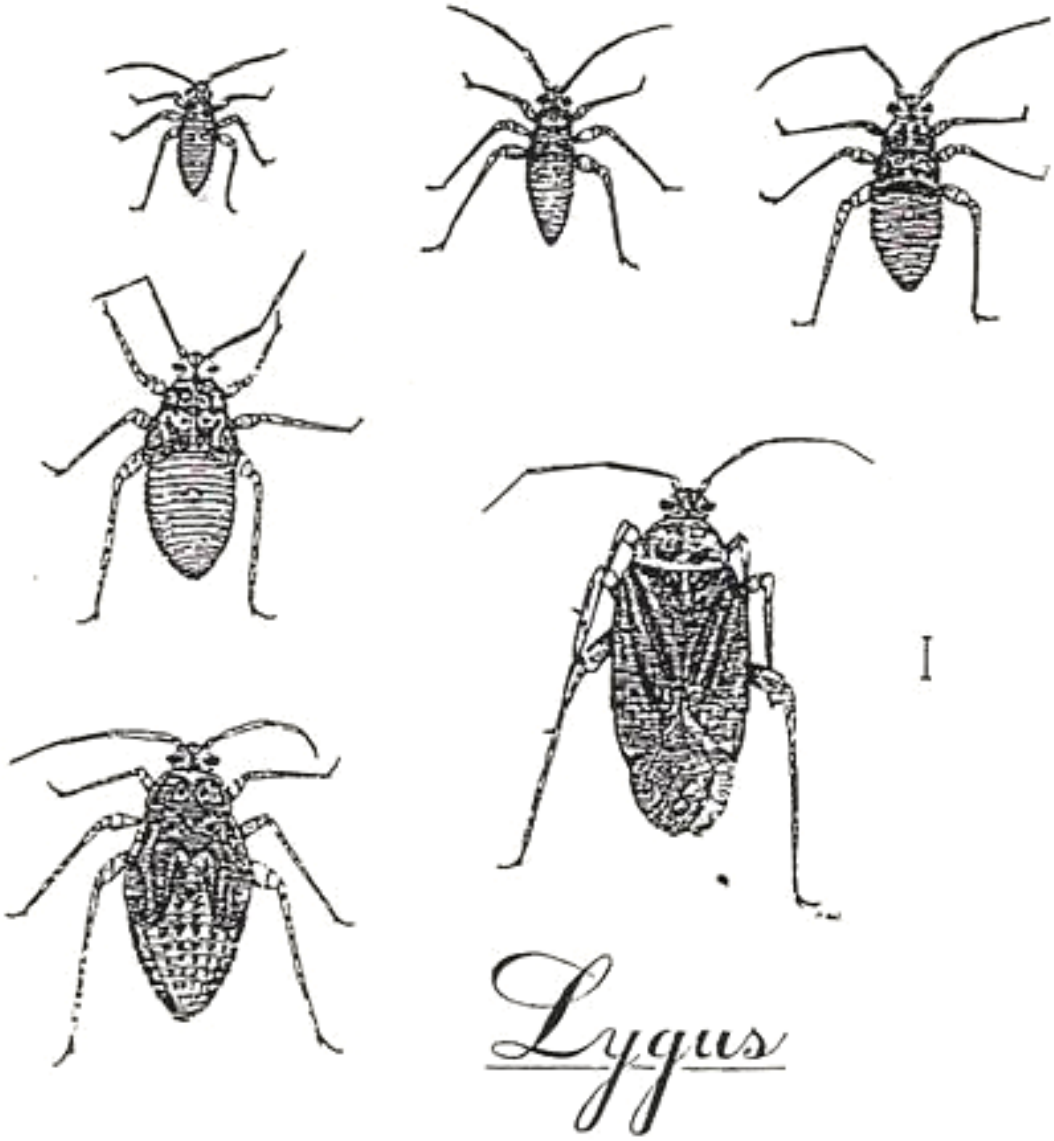


Adelphocoris

Alfalfa Plant Bug



Plagiognathus


Lygus
Tarnished Plant Bug

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Last year Dr. Nancy Ehlke joined the University of Minnesota as an assistant professor in the Department of Agronomy and Plant Genetics. Dr. Ehlke's training has been in quantitative genetics and breeding of forages and conducts research on *L. corniculatus* as part of her responsibilities. Dr. Ehlke's current efforts are evaluation of seed production, cultivar development, and selection for physiologic traits. Titles of some of her recent publications follow.

Casler, M.D., H. Talbert, A.K. Forney, N.J. Ehlke, and J.M. Reich. 1987. Genetic variation for rate of cell wall digestion and related traits in first cut smooth bromegrass forage. Crop Sci. 27:935-939.

Ehlke, N.J., M.D. Casler, P.N. Drolsom, and J.S. Shenk. 1986. Divergent selection for in vitro dry matter digestibility in smooth bromegrass. Crop Sci. 26:1123-1126.

Casler, M.D. and N.J. Ehlke. 1986. Forage yield and yield component response to divergent selection for in vitro dry matter digestibility in smooth bromegrass. Crop Sci. 26:478-481.

Casler, M.D. and N.J. Ehlke. 1985. Sample size and experimental design for detecting differential anatomical composition of smooth bromegrass stems and leaves. Crop Sci. 25:542-547.

Ehlke, N.J. and M.D. Casler. 1985. Anatomical characteristics of smooth bromegrass clones selected for in vitro digestibility. Crop Sci. 25:513-517.