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The status of biological control of leafy spurge in Montana

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The leafy spurge hawk moth, *Hyles euphorbiae*, has become well established on leafy spurge NE of Bozeman, in Gallatin County, Montana. Although the moth has been released in eight other Montana counties in addition to Gallatin over the past 17 years, the Bozeman site represents the only known established population of the moth on leafy spurge in North America. The moth has reportedly become established on cyprus spurge, *Euphorbia cyparissias* in Ontario, Canada (P. Harris pers. comm.) and on cypress spurge infestation in New York.

The most recent release of the moth in Gallatin county was made back in 1974 and hawk moth larvae were first observed by the author during summer in 1982 when approximately 60 larvae were collected. The hawk moth population at Bozeman has since expanded to thousands of individuals and the moth has dispersed and colonized sites a number of miles from the original release site. We are currently conducting research on the moth to determine field population levels, rates of growth and development, fecundity, and intrinsic and extrinsic mortality factors. Approximately 2000 larvae have been collected this summer for additional research and redistribution throughout Montana, surrounding states, and Canada.

The stem and root boring beetle, *Oberea erythrocephala* was released in 1982 in field cages 3 miles NE of Bozeman, Montana by Norman Rees, Research Entomologist with the USDA Rangeland Insect Laboratory, Bozeman, Montana. Initial findings showed that approximately 40% of the leafy spurge roots were attacked and contained viable larvae. After three years the beetles are still in the larval stage, which Mr. Rees attributes to poor adaptation to the type of leafy spurge they were released on. Mr. Rees also released *Oberea* at two sites in Stillwater County, Montana in 1983. The beetle is apparently well adapted to the type of leafy spurge found near Columbus, Montana (Stillwater Co.) as he has recovered adults from the release site that were able to complete their development in one year.