

11-1945

## EC1516 Revised 1945 Blister Beetles

O. S. Bare

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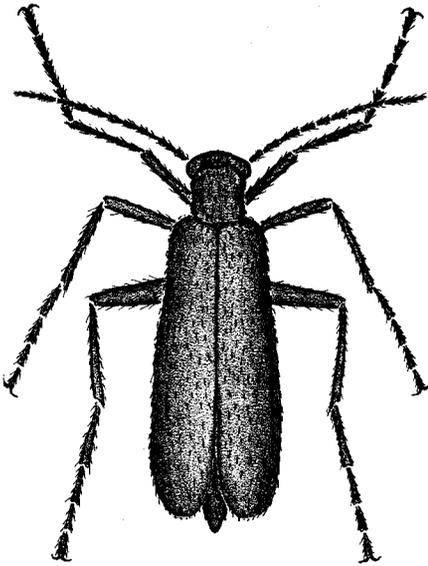
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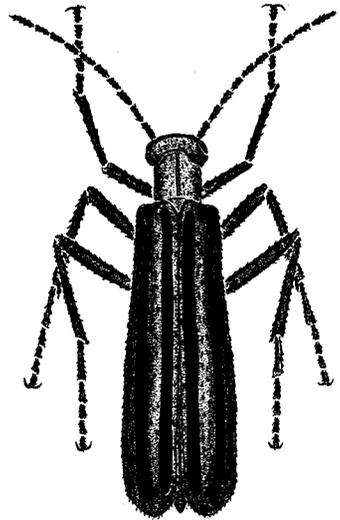
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# Blister Beetles



**COMMON GRAY  
BLISTER BEETLE**



**STRIPED  
BLISTER BEETLE**

Cooperative Extension Work in Agriculture and Home Economics  
University of Nebraska College of Agriculture, and the United States  
Department of Agriculture cooperating, W. H. Brokaw, Director, Lincoln.

## Blister Beetles

By O. S. Bare  
Extension Entomologist

Description: Blister beetles commonly vary from a half inch to an inch in length. Their bodies are long, slender, and cylindrical in form. The head is considerably wider than the prothorax, which resembles a rather long and slender neck. Different species of blister beetles vary greatly in color. Of the more common ones, two are gray, two are solid black, one is striped with orange or tan on black, one is brown, and one is gray with very fine black spots. Other less common species have a wide range of colors and markings.

Host plants: Blister beetles attack a wide variety of field, garden and orchard crops. Those most likely to be damaged include potatoes, tomatoes, beans, sugar beets and alfalfa, but even good sized trees and shrubbery may sometimes be seriously injured by them. These pests are good fliers and may fly from planting to planting, but commonly travel on foot and often in droves.

Type of injury: Blister beetles are chewing insects that actually devour the foliage and even the finer and more succulent stems of the host plants. Trees, shrubbery and coarse stemmed plants are defoliated, and finer stemmed and tender plants vegetables and fruits may be wholly consumed.

Life history: The life history of blister beetles varies according to species. In general, the winter is passed in an advanced larval stage in the soil. Larval growth is completed in the spring and is followed by an inactive pupal stage lasting from two to four weeks. Adult beetles then emerge; usually in June or July. Egg laying by the adult females begins in a few weeks. The elongate, cylindrical, yellow eggs are laid in clusters in the soil, and hatch in from 10 days to 3 weeks. The resulting larvae feed largely on grasshopper eggs and are rated as beneficial. However, they probably cannot nearly offset the damage done by the adults. These larvae go through several unusual, complicated transformations before reaching the advanced larval or prepupal stage in which they winter.

Control measures: Sodium fluosilicate, dusted on hardy crops such as potatoes, at the rate of 15 pounds per acre, gives good control. Dust only where beetles are located as it must actually get on the insects to be effective. Plants should be dry when the dust is applied or foliage may be damaged. For tender crops such as tomatoes and beans the sodium fluosilicate should be diluted with an equal amount of flour or talc. About 48 hours are required for the kill but beetles cease feeding soon after the dust is applied. They may travel considerable distances and hide under clods and trash before death occurs. A dust of one part barium fluosilicate to three parts of flour also is effective.

Paris green dusts and sprays give fair control on hardy crops such as potatoes, but should not be used on more tender crops. One part of Paris green to nine parts of hydrated lime by weight makes an effective dust. For a spray, use 4 pounds of the poison and 8 pounds of hydrated lime to 50 gallons of water; or an ounce of Paris green and 2 ounces of hydrated lime to a gallon of water.

A zinc arsenite-lime sulfur spray is reported by potato growers as giving good control of blister beetles, as well as potato psyllids and Colorado potato beetles. The formula is 1 gallon of commercial lime sulfur, 2 pounds of zinc arsenite, and 40 gallons of water.

DDT apparently is quite effective as a blister beetle poison. Recent tests indicate that a dust containing 10 or 15 per cent of DDT gives good control but because of its poisonous nature its use is not recommended on crops to be used as food for human beings or livestock.

Bordeaux mixture plus calcium arsenate is repellent to blister beetles and may kill some of them. In using it, spray the plants with a standard strength Bordeaux mixture with an ounce of calcium arsenate added to each gallon.