

Deciduous tree and shrub disorder: Skeletonizing by rose chafer

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Skeletonizing of the leaves of roses, raspberries, grapes, fruit trees, and many other cultivated trees and shrubs may be caused by the adult rose chafer, *Macrodactylus subspinosus* (Fabricius). Adult beetles are attracted to flower blossoms, particularly roses and peonies. Damage occurs in June and tends to be most severe in areas of light sandy soil, which is preferred by the larvae. Heavy or clay soils hamper rose chafer growth and development. For this reason the insects have been a greater problem in the central and east-central parts of the state.

Birds and small mammals can die from eating adult rose beetles. Where farm animals are allowed to roam, note that rose chafers are toxic to chickens.

Symptoms and life cycle

The insects overwinter in the larval, or grub, stage just below the frost line. In the spring, the larvae transform into the non-feeding pupal stage, which then emerge as adults in late June or early July. The adult beetles are tan with a reddish brown head and slender, spiny, orange or dark brown legs. They are $\frac{1}{8}$ to $\frac{1}{2}$ inch long and live only about 3 to 4 weeks. However, during this time their damage can be severe. The beetles skeletonize leaves, often leaving only the larger veins intact. They also feed on the fruits or blossoms of some plants and can damage raspberries.

During this period of heavy feeding, the adults mate and the

females lay their eggs in grass, alfalfa, or clover sod in sandy well-drained areas. The eggs are deposited just below the soil surface and hatch 2 to 3 weeks later.

The grubs feed on the roots of grasses and other plants but do not cause serious plant injury. Full grown in the autumn, the grubs are about 1 inch long with a pale brown head and dingy white body.

Controls

Cultural

It does not take many chafers to do noticeable damage. Therefore, in a small garden it is sometimes practical to remove the beetles from the plant by hand. These should be crushed or otherwise destroyed. The beetles are strong fliers and can reinvade the garden from surrounding areas. Regular inspection and removal may be necessary. Placing cheesecloth around the plants will also effectively keep the chafers out.

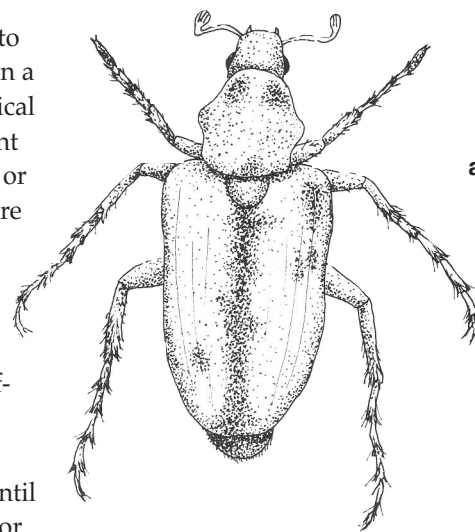
Chemical

Damage is often not noticed until after the beetles have already left for the season. If damage is observed but no rose chafers are present, spraying will be of no benefit. However, continue to inspect the damaged plants for several days to be certain that no additional beetles fly in.

If the insect is present, acephate, bifenthrin, carbaryl, cyfluthrin, deltamethrin, imidacloprid, lambda-cyhalothrin, and permethrin are effective chemical controls. For large populations, or to protect valuable



Rose leaf skeletonized by adult chafers.



Adult rose chafer beetle.

plants, two or three applications may be necessary. Remember, reinfestation readily occurs during heavy flights and repeated insecticide applications may not completely protect the plants. Be certain to read and carefully follow all precautions and instructions on the pesticide label before use.



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