

Beetlemania

By Susan Camp

While I don't claim to be an expert rose gardener, I know a Japanese beetle when I see one. My father grew roses when I was growing up, and I remember drowning the pests in an old mayonnaise jar half-filled with kerosene, something I wouldn't do now. (Where did my dad dump the used kerosene?)

Jim and I tried growing roses several times over the years, but eventually tired of the effort and gave up. Last year we planted four Old Garden Roses, which have increased in size threefold and are producing lovely, fragrant flowers. We read that Old Garden Roses are resistant to many diseases and insects. Last summer we saw only a few aphids and no Japanese beetles.

Last week the beetles appeared, not in hordes, but enough of them to have us concerned about the well-being of the roses and the gaura, lemon balm, and rudbeckia. It was time to ask my old friend Google for some advice in ridding the garden of these dreaded insects.

Japanese beetles (*Popillia japonica*) are native to Japan, and were first discovered in New Jersey in 1916. Since then, they have migrated throughout most of the United States, into Canada, and even to Europe, causing devastation to many species of flowers, especially roses, as well as grapes, shrubs, and shade and fruit trees.

The attractive insects are about 0.6 inches long with green head and thorax, white tufts on the abdomen, and metallic copper-colored wings. They are clumsy fliers and frequently bump into objects and fall to the ground. Despite their cuteness, Japanese beetles will invade a garden and munch their way through the leaves, skeletonizing them until they appear like antique lace. Flowers, buds, and fruit also are eaten.

Virginia Cooperative Extension (VCE) Publication ENTO-97NP "Japanese Beetle" and Clemson Cooperative Extension HGIC 2107 "Rose Insects and Related Pests" provide information on these unwanted insects and how to protect your plants from them.

After mating in July and August, female beetles lay their eggs just under the soil's surface. Eggs hatch into ugly, C-shaped white grubs with brown heads. The grubs feed on plant roots, burrowing deeper as the weather cools and lie dormant during the winter. In spring, they begin feeding again, pupate in May to early June, and emerge as adult beetles in late June and July.

Numerous options exist for ridding the garden of these voracious pests, from hand-picking and drowning in soapy water, which might work for just a few beetles, to horticultural oils and insecticidal soaps, to natural bacterial predators, to highly toxic chemicals. Clemson Cooperative Extension HGIC 2770 "Less Toxic Insecticides" provides information on alternatives to toxic chemicals that can harm the environment or pose health risks to humans, other animals, birds, and beneficial insects

All products on the market have the potential to do some harm. Read labels carefully to determine whether the product will prevent or kill the appropriate insect. Always follow label

directions, as even mildly toxic products can cause irritation to skin and eyes. The authors do not recommend homemade soap recipes because they can burn plant leaves.

Neem oil extracts from the seeds of the neem tree are used to produce botanical insecticides. Neem oil kills immature insects by suffocation, but also has insecticidal and fungicidal properties.

Milky spore is a microbial insecticide, containing *Bacillus popillae* and *Bacillus lentimorbus*. Milky spore is applied to the soil and watered in to control the Japanese beetle grubs. It can be effective for 15 to 20 years, but other insecticides should not be used in the same area for several years, to prevent killing the milky spore.

Beauveria bassiana is a fungus that kills immature and adult insects, including Japanese beetles. *B. bassiana* takes up to a week to reproduce inside the insects and kill them. Unfortunately, the fungus also kills beneficial insects, like lady beetles.

By the way, traps are ineffective; they just attract your neighbor's beetles. And don't use kerosene.

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