

Do you have Japanese beetles?

Adult beetles are hard to miss. They feed on roses, Virginia creeper and some 300 plants, leaving holes and damaging leaves, flowers and fruit. Young grubs develop underground and typically eat grass roots. A softball-sized patch of brown grass is a sign of hungry grubs.

Know your bug: *Popillia japonica*

Lifespan: 1 year, though adults live about 30 to 45 days

Reproduction: Females lay 40-60 eggs

Threat: Feeds on 300 species of plants, loves watered lawns

July: Adults mate. Females lay eggs in the ground no more than 3-inches deep

August: Eggs hatch after two weeks. Grubs feed on grass roots for 3-4 weeks

Fall-winter: Grubs burrow 8-10 inches or below frost line during winter

April-June: Grubs head back to surface but stay underground to feed on roots and pupate into an adult



Credit: Whitney Cranshaw, Colorado State University

CSU Q&A: bit.ly/CSUJapBeetle

CSU Extension: bit.ly/CSUjb

USDA guide: bit.ly/japbeetle

Treatment Pros & Cons

- Traps attract beetles from 1-2 miles away, not just your yard.
- Milky spore bacteria is spread on lawns and ingested by grubs, which die. But CSU says the treatment inconsistent and impacts a small population.
- Beneficial nematodes are parasitic organisms that feed on insect's larval or pupal stage. Pick nematodes in the genus *Heterorhabditis*. Also need water to survive and are pricey.
- Insecticides can kill adult beetles, but must be sprayed directly. Read labels to see if it hurts beneficial insects.
- Natural predators include birds, racoons and skunks. Also: parasitic wasps (*Tiphia vernalis*, *Tiphia popilliavora*), parasitic flies (*Istocheta aldrichi*), microsporidian disease (*Ovavesicula popilliae*).
- Drying out lawn (Jun-Aug) makes turf inhospitable but grubs in a neighbor's lawn can fly to your garden as adults. Grubs need moisture to survive.

TIPS

- » Hand-picking beetles off plants can be effective for gardeners.
- » Beetles are less active early or late in the day when temperatures cool.
- » Crushing them is okay, dead beetles don't attract live ones.
- » If treating plants or turf, timing is critical. Late summer is more effective than spring.
- » Switch to xeriscaping or choose plants beetles avoid
- » Deep watering lawn once a week keeps grass alive and too dry for grubs

Resistant Plants

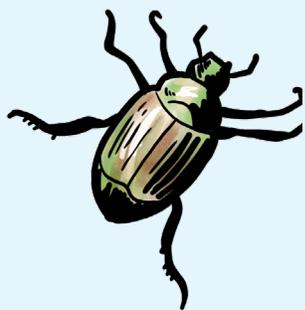
1. Ageratum
2. Columbine
3. Dusty-miller
4. Begonia.
5. Lily-of-the-valley
6. Coreopsis
7. Larkspur
8. Foxglove
9. California poppy
10. Coral-bells

Susceptible Plants

1. Hollyhock
2. Dahlia
3. Hibiscus
4. Common mallow
5. Evening-primrose
6. Soybean
7. Penn. smartweed
8. Rose
9. Grape
10. Sweet corn

How Palisade beat the Japanese beetle

- Discovered infestation early
- Community united over peaches (economic motivation)
- All lawns in public areas plus 712 homes treated or dried out
- Under authority of Colorado's only horticulture pest-control district so property owners could be forced to participate
- **Read the story:** bit.ly/palisadeJB



LARVAL STAGE UNDER GROUND



JUN | JULY | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY

Illustration: Dale Taylor, Special to The Colorado Sun

Credit: [Whitney Cranshaw](http://Whitney.Cranshaw), Colorado State University; Colo. Dept. of Agriculture; USDA



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