



Root Feeders

Black Vine Weevil Damage



Adult Black Vine Weevil



Legless weevil larva



European Chafer and Asiatic Garden Beetle

Who cares?

- Earlier in the year, harder to control
- EC damages turf

What to look for?

- Evaluate stunted plants for grub injury, especially in containers
- Learn to identify grubs
- Become familiar with behavioral attributes of injury

European Chafer —

Adult



European chafer adults swarming to tree at dusk for mating

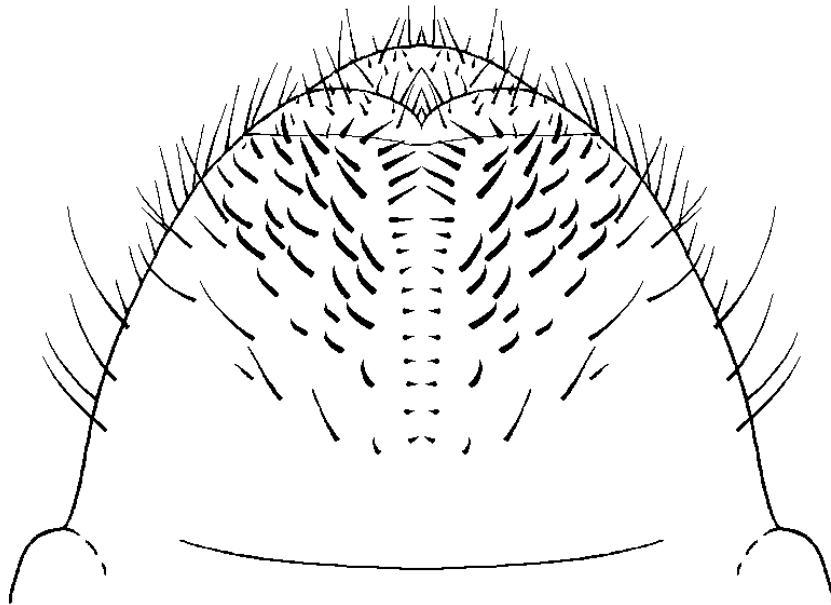
Adults do not feed

European Chafer Pest Threat Container Nursery and Turf

- Are high in soil profile, can feed through October and even under snow
- Low densities can damage nursery stock
- Damage un-irrigated lawns w/no history grub previous grub injury (JB prefers well maintained turf)

Identifying Grub Species

**European chafers have Y-shaped anus
& two rows of bristles that diverge at anus
Earlier and larger**



Y-shaped anus with two rows of bristles.

European Chafer



European Chafer (2000) ■
Projected Distribution (2006) ■

Oriental Beetle & Asiatic Garden Beetle –



Three common color forms of Oriental beetle



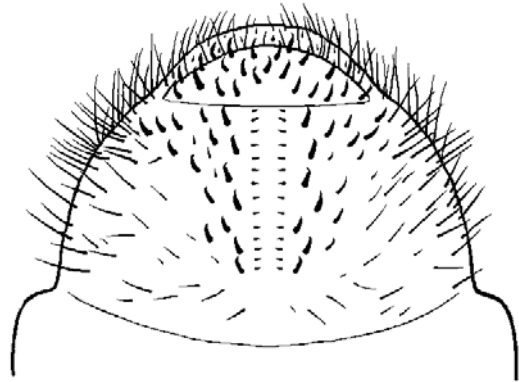
Asiatic garden beetles feeding & mating
Adults shred leaves

Asiatic Garden Beetle Pest Threat:

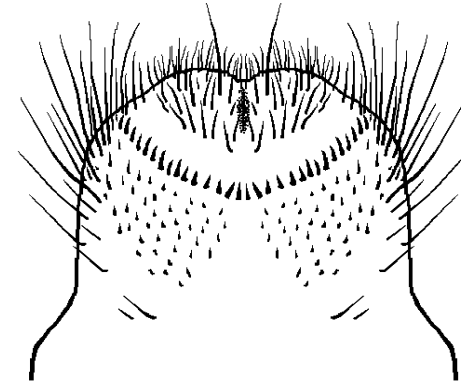
Perennials, flowers

- Adult feeding
 - Flowers (aster, dahlia, mum, roses)
 - Foliage, trees and vegetable crops
 - Shred leaves, like a caterpillar
- Larval feeding
 - Roots of perennial plants, flowers and vegetable crops
 - Turf a secondary problem

Oriental beetle



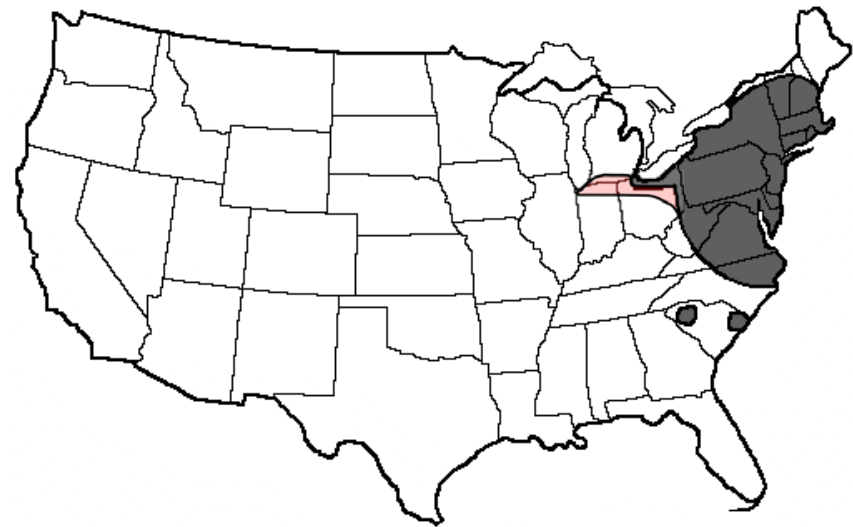
Asiatic garden beetle



Oriental Beetle & Asiatic Garden Beetle



Oriental Beetle (2000)



Asiatic Garden Beetle (2000) 
Projected Distribution (2006) 

White Grub Adults



Annual Grubs

GJB, EC, SMC, NMC, JB, OB, AGB

Multi-year Grubs, **M/JB**

Multi-gen/yr Grub, **BTA**

White Grub Third Instars



Annual Grubs

GJB, **EC,** **MC,** **JB,** **OB,** **AGB**

Multi-year Grubs, **M/JB**

Multi-gen/yr Grub, **BTA**