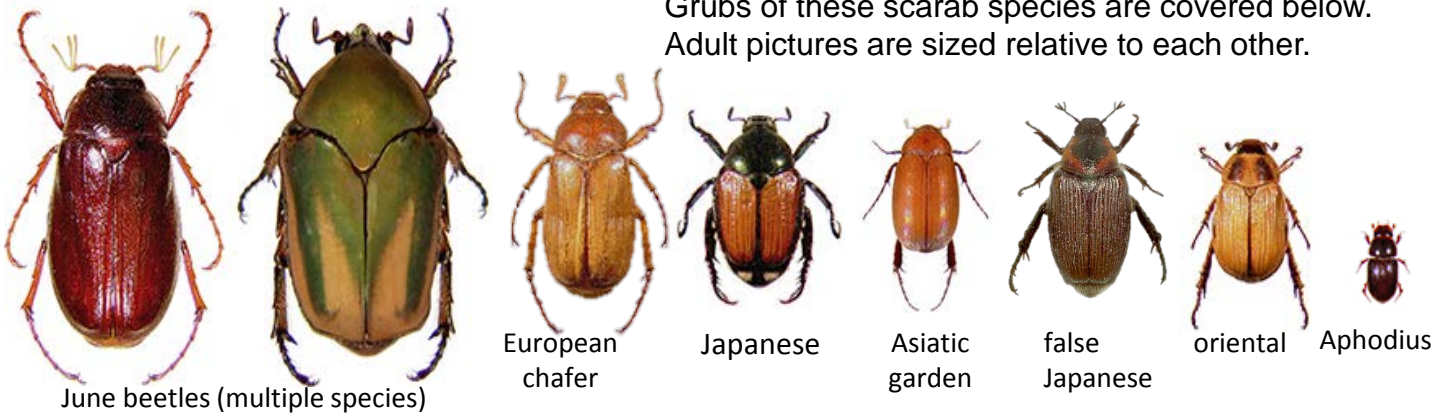


Field ID sheet for grubs

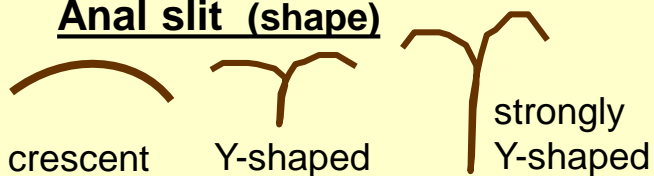
Chris DiFonzo, Michigan State University

Grubs of these scarab species are covered below. Adult pictures are sized relative to each other.

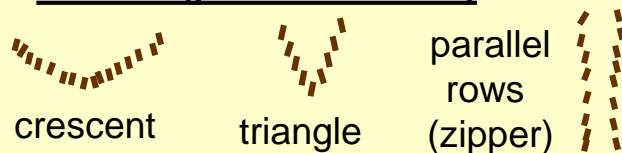


All species are annual (i.e. a single generation per year), except for June beetle which has a three-year lifecycle. Grubs are identified by the shape of the anal slit and hairs on the butt-end. Grubs in spring vary vastly in size by species

Anal slit (shape)



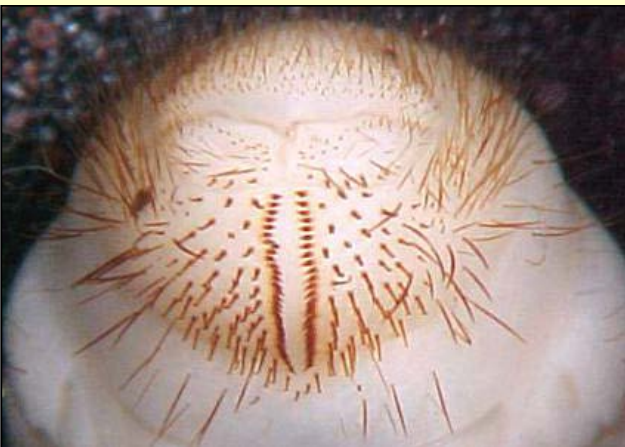
Raster (pattern of hairs)



June beetle (“true white grub”)

- 3-year lifecycle; common in Michigan
- anal slit: Y-shaped
- raster: strong parallel rows (= closed zipper)
- damage to corn, soy, sugarbeet. Typically present in no-till fields or after fallow period.

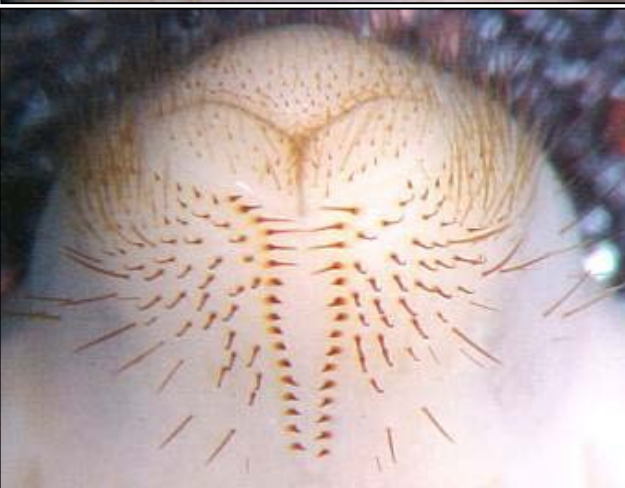
Adults can have mass emergence in late May-June, but do not feed. There are multiple species – most large & brown in color, some green.



European chafer

- annual lifecycle
- anal slit: Y-shaped
- raster: diverging rows (= opening zipper)
- damage to winter wheat in fall & spring

Adults resemble small June beetles and do not feed.





Japanese beetle

- annual lifecycle; common across MI
- anal slit: crescent-shaped
- raster: short triangle
- damage to corn, soybean

Adults are metallic green/ purple with tufts of white hairs along abdomen. Adults feed on many plants and may defoliate crops and silk-clip corn.



Asiatic garden beetle

- annual lifecycle
- anal slit: strongly Y-shaped
- raster: crescent-shaped row of spines
- other: distinctive white bulb on face, & an aggressive 'bitey' behavior
- damage to corn, alfalfa, potato in counties in Southern Michigan

Adults are chestnut brown & barrel-shaped. They come to at lights at night and feed on many plant species, but hide during the day.



*White bulb on face of AGB grubs;
No other species has this feature*

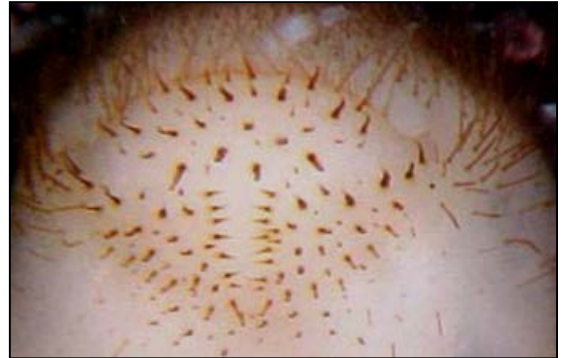
Aphodius grubs & adults are very tiny; associated with manured fields



Aphodius (manure grubs)

- annual lifecycle;
- anal slit: difficult to see; anal pads
- raster: small triangle
- damage to corn & soy

I have never seen field of row crops in Michigan attacked by these two species.



Oriental beetle Annual lifecycle

- anal slit: crescent-shaped
- raster: 2 rows of spines, one small & one large
- adults have multiple color forms

False Japanese beetle annual lifecycle

- anal slit: crescent-shaped
- raster: short row of diverging spines
- adult lack white tufts of Japanese beetle