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### Oriental Beetle

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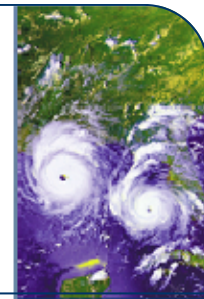
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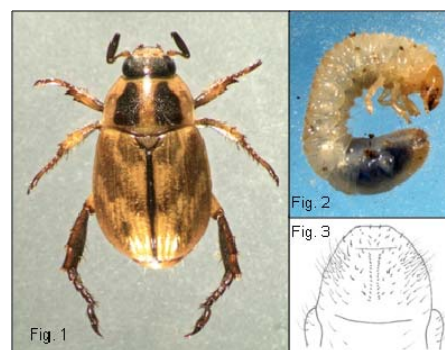
## Oriental Beetle

Nadeer Youssef and Jason Oliver

The Oriental beetle, a native of Asia, was first detected in the United States in Connecticut in 1920. It currently occurs throughout the Northeast, mid-Atlantic and mid-West states. The larval stage (grub) causes the most damage by feeding on developing roots of turf and ornamentals. The Oriental beetle does not occur in the nursery-growing areas of Tennessee based on a trapping survey of 16 nursery and sod farm sites during the summer of 2014. There should be great concern about preventing the establishment of this beetle in Tennessee because larvae are serious pests in container nursery production.

### Identifying Oriental Beetle

- Adult beetles vary in color but usually have mottled, metallic brown and black wings, head and thorax (Figure 1). Adults are 0.3-0.4 inches (0.7-1.3 mm) long and have a 1 or 2 year life cycle. Adult beetles are active primarily in the evenings from mid to late summer. Egg laying can take place throughout the adult flight period.
- Grubs are C-shaped and 1-1 1/4 inches long in their final larval instar (Figure 2). Grubs can be recognized by a parallel pattern of dark hairs (setae) on the underside of the last abdominal segment (rastor) (Figure 3). However, be aware that other related grubs may have similar rastor patterns.
- A possible indicator of Oriental beetle could be a sudden decline in containerized plant health due to root-feeding grubs in the potting substrate. Plants should be lifted from the pot and examined for signs of grubs and feeding damage. We recommend you bring grubs to your local county extension office for closer microscopic examination and possible rearing to the adult stage to confirm identity.
- In container plant substrates or turf soil, Oriental beetle grubs are usually found 1 to 6 inches deep.



Photos by Mike Reding, line drawing by Nadeer Youssef

### Managing the Oriental Beetle On Your Property

- Be watchful for large numbers of grubs in the substrate of container plants.
- Adult male beetles can be lured to traps with a commercially available sex pheromone bait.
- In turf, the economic threshold for larvae is 10 grubs/ft<sup>2</sup>. However, the significant issue for the Tennessee nursery industry is likely to be the severe larval damage to tree roots in container plants, since adult beetles like to lay eggs in container substrates.
- For larval control, granular imidacloprid should be applied in late summer/early fall to kill newly hatched larvae.
- Contact your county [extension agent](#) for additional information.

*\*Always follow pesticide label instructions.\**



## Contact

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for further information about pest issues with nursery crops.

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