

TACKLING

European Chafer Beetle

(*Amphimallon majale*)

Invasive species have significant impacts on the environment, human health, infrastructure and the economy in the Metro Vancouver region.

European chafer beetles were first discovered in British Columbia in 2001 in lawns and turfgrass. They have since spread across the Metro Vancouver region. The beetles can spread quickly because they have a short life cycle and can fly. They can also be spread in infested soil, grass and garden plants.

IMPACTS

European chafer beetles damage lawns, sports fields, golf courses and boulevards. The beetle grubs primarily feed on grass roots. Damage is also caused when crows, skunks and racoons dig up lawns to harvest the beetle grubs.

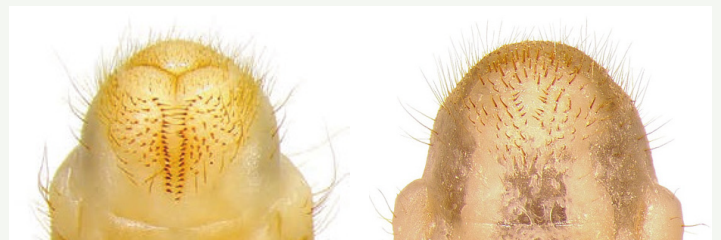
IDENTIFICATION

- **Lifecycle:** European chafer beetles have a one-year life cycle – adult females lay eggs in lawn soil in June, the eggs hatch in July, the grubs feed on the grass roots through the fall/winter and turn into adults the following spring
- **Grubs:** C-shaped, up to 25 millimetres long, white body with brown head; six legs are located near the head; can be distinguished from grubs of other beetles by the pattern of hairs at the end of the tail (called a raster)
- **Adults:** Tan or brown beetles, 12-15 millimetres long; visible flying at dusk from late May until June
- **Visible damage:** Dead or dying patches of lawn or turfgrass; areas where animals are observed feeding in the grass may also indicate beetle presence



Grub

CREDIT: CLEMSON UNIVERSITY USDA COOPERATIVE EXTENSION SLIDE SERIES, BUGWOOD.ORG



Raster patterns of European chafer beetle (left) and Japanese beetle (right) grubs

CREDIT: OHIO STATE UNIVERSITY



European chafer beetle (left) and Japanese beetle (right)

CREDIT: BRUCE WATT, UNIVERSITY OF MAINE, BUGWOOD.ORG

PREVENTION AND CONTROL

To prevent European chafer beetle infestations, it is best to keep your lawn healthy by aerating it twice a year, leaving grass clippings, mulching, overseeding, and mowing it to a minimum of six centimetres tall. Healthy lawns may deter grubs from feeding and laying eggs. Effective invasive species management typically involves a variety of control methods. The following table summarizes the recommended techniques for controlling European chafer beetle on private property or where permission has been granted by the land owner or manager.

CONTROL STRATEGY	TECHNIQUES	NOTES
Biological	Allow birds and animals to feed on the grubs during the spring	<ul style="list-style-type: none"> The animals will reduce the number of grubs
	Every year in July apply parasitic nematodes (microscopic worms that destroy the grubs)	<ul style="list-style-type: none"> Will reduce the beetles but will not get rid of them entirely Available at garden centres (may require special order) Obtain a watering exemption permit from your municipality and water daily for 2-3 weeks
Cultural	Choose alternative lawn designs and plants that grubs do not eat	<ul style="list-style-type: none"> Visit growgreenguide.ca for a full list of alternatives
	Replace an infested lawn with non-invasive plants or other landscape feature	<ul style="list-style-type: none"> Creates a less desirable environment for the beetles
	Cover the infested area with plastic sheeting or landscape fabric in June for 3 weeks	<ul style="list-style-type: none"> Depending on the type of cover material used, it may need to be removed each morning so the grass receives sunlight and water

If lawn restoration is desired, prepare the site the following spring, after most grub damage is done, and before eggs are laid in July. Lightly rake over damaged areas, apply grass seed and add a layer of compost or soil. Lightly rake again and follow lawn watering regulations. Consult your municipality if beetles have infested boulevards.

How Can You Help?

- Do not move soil or plants infested with European chafer beetle.
- To reduce the spread of invasive species, dispose of yard waste and soil appropriately. Visit your municipality's website for more information.
- If you also have invasive plants, check out the factsheets for those species. Visit growgreenguide.ca for non-invasive plant suggestions.
- Download the '[Report Invasives BC](#)' app to identify and report invasive species

For the complete set of best management practices for European chafer beetle, and other key invasive species, visit MetroVancouver.org and search 'Invasive Species'.



Example of chafer beetle and crow damage on a lawn

CREDIT: UBC BOTANICAL GARDEN