

TACKLING

Japanese Beetle

(Popillia japonica)



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

Japanese beetle was first detected in BC in 2017 in the False Creek area of Vancouver. Given the potential widespread impact of this pest, many agencies and individuals are involved in a collaborative effort to prevent Japanese beetle from becoming widespread in the Metro Vancouver region.

IMPACTS

In North America, Japanese beetle is a destructive insect, causing extensive damage by feeding on a wide variety of plants, including turf grass, trees, garden plants, and fruits and vegetables. If this pest spreads, it could seriously harm BC's agricultural and horticultural sectors, by reducing crop yield and quality, destroying turf grass, and increasing ongoing management costs.

IDENTIFICATION

- **Lifecycle:** Japanese beetle has four life stages: egg, larva (grub), pupa, and adult, producing one generation per year; eggs are laid in the soil and grubs feed on grass roots during the winter; adults emerge from the soil in June-July, then mate and feed on plant leaves, fruits, and flowers.
- **Grubs:** C-shaped, up to 25 millimetres long, white body with brown head; six legs are located near the head; can be distinguished from other grubs (including European chafer beetle grubs) by the pattern of hairs at the end of the tail (called a raster), but a microscope is required.



Japanese beetle life stages: egg, 3 different sizes of grubs, pupa, adult
CREDIT: D. SHETLAR



European chafer beetle (left) and Japanese beetle (right)
CREDIT: B. WATT, UNIVERSITY OF MAINE, BUGWOOD.ORG



Garden plant leaf with feeding damage caused by Japanese beetle
CREDIT: D. HOLDEN, CFIA

- **Adults:** Metallic green head, metallic copper-brown body with six distinct tufts of white hair around each side and back of the abdomen; 10 millimetres long and 6 millimetres wide; may be visible flying or feeding on plants from June 15 to October 15.
- **Visible damage:** Plant leaves appear skeletonized (lacy and webbed with much of the tissues between leaf veins eaten), indicating the presence of Japanese adults.

PREVENTION AND CONTROL

Effective invasive species management typically involves a variety of methods. In the Metro Vancouver region, Japanese beetle numbers are currently small and significant populations have not yet established, so local efforts have been focused on eliminating this pest. The following table summarizes the strategies in place.

STRATEGY	DESCRIPTION	NOTES
Surveillance	The Canadian Food Inspection Agency (CFIA) places thousands of traps throughout the Metro Vancouver region to detect adult beetles.	<ul style="list-style-type: none"> Traps are set out annually from June 15 to October 15 and checked regularly by professionals. Traps may be attached to poles, fences, trees, or other structures and pose no risk to humans, pets, birds, or other insects.
Reporting	The CFIA accepts public reports of beetles and feeding damage by phone or email (see contact information below).	Please report all: <ul style="list-style-type: none"> Japanese beetle observed outside of a surveillance trap. Feeding damage that may have been caused by the Japanese beetle.
Movement Restrictions	To prevent further spread, the federal government has established regulated areas based on where the beetle is present. There are also requirements in place related to the movement of regulated articles (items).	<ul style="list-style-type: none"> Do not move 'plants with soil attached' outside of a Japanese beetle regulated area (check the CFIA website for current boundaries). When working or gardening within a regulated area, thoroughly clean all equipment after use and before leaving the area.
Treatment	The federal government may issue a Treatment Order for public or private land near Japanese beetle detection sites.	<ul style="list-style-type: none"> Ground treatments are applied once a year by professionals and in accordance with applicable regulations and requirements. Landowners within treatment zones are eligible for free treatments and will be contacted.

How Can You Help?

- Report suspect Japanese beetles or plant damage to 604-292-5742 or BCPF.Japanese.beetle@inspection.gc.ca (with insect photos when possible).
- Do not touch or move Japanese beetle surveillance traps; report misplaced or damaged traps.
- 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 factsheets for those species. Visit growgreenguide.ca for non-invasive plant suggestions.
- Download the '[Report Invasives BC](#)' app to identify and report other invasive species.

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



Japanese beetle surveillance trap

CREDIT: D. HOLDEN