

# IMPACT

integrated management of forest  
pests addressing climate trends

## Pest profile – Garden Chafer

**Scientific name:** *Phyllopertha horticola* (Linnaeus, 1758)

**Taxonomic position:** *Insecta; Coleoptera; Scarabaeidae*

**Common name:** Garden chafer; The Bracken or Garden foliage beetle  
and June bug.



**Host Habitats:** Gardens; Parks; Hedgerows and woodland edges.

**Threats:** The Garden chafer is the most important chafer pest of lawns and sports turf, occurring in large numbers and causing considerable damage due to the grubs feeding on the grass roots. The adult beetles eat the foliage of various plants and deciduous trees and have also been known to cause damage to apples in orchards.

**Distribution and spread:** Found throughout the UK. Is more abundant in the warmer and wetter the region, i.e. *the west; south and the south-west*. It flourishes best in permanent pasture on light soil in hilly country, and occurs from sea-level to an altitude of at least 1,160 ft.

**Climate change:** During wetter summers the wet condition encourages the larvae to easily explore the grass roots of lawns. If the temperature increases in spring, the white grubs pupate in April and from May they reappear as adult garden chafers.

**Control:** Only the newly hatched grubs are susceptible to nematodes, there is only one opportunity a year to kill them using Terranem (*Heterorhabditis bacteriophora Poinar, 1976*) a nematode biological control from mid July to the end of September, when the grubs are in the upper soil layer and soil temperatures are above 12°C.

**Monitoring:** The Sherriff Amenity integrated pest management system utilises both the Garden Chafer Trap and - an insect-parasitic nematode, offering a unique way to identify a potential future grub infestation and provides an environmentally safe biological control.

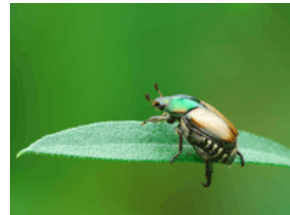


The Garden chafer has one generation per year. The adults emerge at the end of May. On leaving their pupae it takes several days before they are fully coloured and hardened. They come to the surface of the soil and flight activity starts.

The adults fly between 10.00 and 12.00 a.m. usually only in sunny weather. The flight period is from the end of May until the second or third week of June. The males are most noticeable, circling the lawns for females, after mating the females dig in to the turf to lay eggs.

The Garden chafer, *Phyllopertha horticola* (L.), has three larval instars, the third ending in overwintering, which gives way to a prepupal stage. The lifecycle occupies 12 months and only one generation is present in the soil at any time.

At the earliest, oviposition starts in the latter half of May. The first instar occupies individually about three weeks on the average; the second instar about four weeks; and the third instar, up to the beginning of hibernation, eight to ten weeks.



On average, first-instar larvae begin to appear in a population about the first week of July, second instars about the fourth week of July, third instars about the fourth week of August, and the earliest hibernators about the third week of October. Except for a few stragglers occasionally in early December, the entire population is generally overwintering by the end of November.

The **IMPACT** project, with partners Forest Research in Wales, Swansea University and the National University of Ireland, Maynooth is looking at improved pest control measures. Top of the agenda for the *Integrated Management of forest Pests Addressing Climate Trends (IMPACT)* team is assessing how changing climate will influence the damage caused by pests and pathogens. The project is part funded by the European Regional Development Fund through the Ireland – Wales Programme (INTERREG IVA) and Natural Resources Wales. For more information log on to:

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