

# Pest ... or snack? June bugs are the 'croutons of the sky'

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Credit: AI-generated image ([disclaimer](#))

Many people grit their teeth in anticipation of the arrival of June bugs. You might already have had your first run-in with one. Perhaps you heard one clumsily bounce off your window? Maybe you saw one loop around the porch light? Possibly, you felt one tangle its six sticky legs into your hair?

June bugs, also known as May bugs or June beetles, are a group of scarab beetles that are distributed across North America. For a brief period each summer, the adults are common and abundant across many parts of their range.

June bugs are attracted to light, which means we often encounter them at windows and streetlamps in early summer. Due to their large size and distinctive appearance, they are rather conspicuous among the millions of other [insect species](#) we share our world with.

Whether you consider them friend, foe or a neutral party, here are some insights into these misunderstood creatures to celebrate the advent of June bug season.

## **Hundreds of different species of June bugs**

June bugs are found within the genus *Phyllophaga*, derived from the Greek *phyllon* (leaf) and *phaga* (eat). This name is a literal description of the adult's habit of feeding on plant leaves.

There are more than 800 species of June bugs [known to science](#) and [more are discovered every year](#). Adult beetles are usually blackish or reddish brown in color, and tend to be very hairy on their fronts. While June bug species have many external similarities, their genitalia are very distinctive—with the male organs resembling a scoop, a claw or a fork. Taxonomists often confirm the identity of the species, or describe new species, by carefully examining the genitalia.



A June bug (*Phyllophaga* sp) resting on a paved surface in Guelph, Ont. Credit: Ryan\_Hodnett/Wikimedia Commons

### **June bug grubs live below ground for years**

When you encounter a June bug flying or crawling about, you are looking at a full-grown adult. Just like butterflies and moths, June bugs grow through a process known as "holometabolous development." They pass through several stages: egg, larva, pupa and adult. Just as with butterflies, adult June bugs look and behave completely different from the larvae.

Each June bug starts as a pearl-like egg laid in the soil. Each egg hatches into a c-shaped larva known commonly as a white grub. White grubs feed on the roots of plants, disrupting the uptake and transport of water and nutrients.

In high densities, June bugs can be serious pests of ornamental and agricultural plants, lawns and golf courses. Larvae spend at least a year in the soil, and in some cases take as much as [four to five years to reach maturity](#).

In late spring, the larva metamorphoses into a pupa, and then into the adult beetle. Armed with wings and developed gonads for mating, the June bugs will emerge from the soil and take to the night sky with the goal of feeding, finding a mate and reproducing, thus beginning the cycle anew.



*Phyllophaga hirticula*  
(Knoch, 1801)

*Phyllophaga delata*  
(Horn, 1887)

*Phyllophaga subtonsa*  
(LeConte, 1856)

*Phyllophaga ilicis*  
(Knoch, 1801)

Four species of Polyphaga showing the similar external morphology and distinctive male genitalia. Credit: University of Nebraska State Museum, entomology division

## June bugs are food for many wild animals

Although many people find June bugs unsettling, they play an important role in helping nutrients cycle through ecosystems. By chowing down on grass roots, June bugs concentrate nutrients into juicy (larva) and crunchy (adult) calorie-rich packages that are consumed by a variety of other organisms.

June bugs are a rich source [of protein \(40 to 50 percent\) and fat \(seven to 18 percent\)](#). Many [wild animals](#) such as skunks, raccoon and several bird species consume June bugs across all stages of their life cycle. In the process of foraging for June bug larvae, animals often dig up soil, damaging crops, gardens, lawns and [golf greens](#) in the process.

Aside from vertebrate predators, June bugs are an important food source for many other insects. A study based in southern Québec found that 29 species of insect used the June bug (*Phyllophaga anxia*) [as a source of food](#).

One of the remarkable species that feeds on June bugs is *Pelecinus polyturator*. It is a large wasp (about seven centimeters long) that primarily reproduces asexually, and is found from northern Argentina to southern Canada. *Pelecinus polyturator* uses its long ovipositor to lay its eggs into white grubs, which eat and kill their host after hatching.

## Some people eat June bugs too

Much of the discussion around entomophagy (eating insects) in North America is centered on industrially reared insects like crickets and mealworms. Wild-foraging insects can also play an important role in supplying insects for human consumption, as is the case with June bugs.

Historically, the Bear River people in northwestern California [ate fire-](#)

[roasted](#) June bugs. Today, many people collect adult June bugs from lights or dig larvae from the soil for recipes. They crush them and bake them [into biscuits](#), sprinkle them onto salads as "[croutons of the sky](#)," a term coined by Jonathan Bobryk of Nova Scotia, or even fill cooked larvae with cheese [and wrap them in bacon](#)

If you come across an adult June bug this spring, maybe give it a closer look. This chunky insect could very well be older than any of the babies and toddlers in your life.

If you squish it under your foot, you might be saving your lawn from the wrath of hungry white grubs, but you also might be robbing a [barred owl](#), a peleciniid wasp, or your neighbor of a protein-rich morsel.

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