

Falling Leaves and Fireflies

If you have been reading this column for a while, you probably know that those falling leaves collecting on your lawn and garden areas can provide an important layer of leaf litter upon which many beneficial and interesting insects depend – including Connecticut's own fireflies.

And who cannot be charmed by those magical creatures who delight us with unexpected but short-lived bursts of light on a warm summer evening? Now you see it, now you don't. And just where the next one may be spotted is quite unpredictable. Nature at its whimsical best!

If you haven't seen fireflies in your yard recently there could be a number of reasons, one being that your yard may have been "sanitized" with too much fall clean up. Leaving the leaves in gardens and wild areas will go a long way to creating likely spots for overwintering fireflies as well as for bumble bee queens, butterfly caterpillars, and other beneficial insects.

Firefly life-cycle

Fireflies are actually not flies at all, but beetles, having similar life cycles to butterflies: eggs, larvae, pupae and flying adult. And like butterflies, we tend to think of them primarily in the summer during their visible adult stage. But at any time of the year there may be eggs, larvae, or pupae present in your leaf litter, eggs having been laid in mid- to late-summer. And because we don't see them, one might forget that introducing pesticides near these areas can be damaging to firefly populations. Also, leaf blowers should not be used near these areas for their own devastating effects.

When adults do emerge, they will be looking for a mate, which is what all that twinkling and sparkling is all about. A male firefly will have a distinct lighting pattern to attract females of the species to be answered, if he is lucky, by an interested female.

Firefly communication happens through a process called bioluminescence, made possible by the chemical luciferin which when combined with oxygen releases energy in the form of light.

What's in a name?

Depending on what part of the country you live in, fireflies may be called lightning bugs. They are one and the same. However, the term glow worm (made famous by the song) refers to a species of fireflies whose females do not have wings but do give off luminescence.

When can we expect to see fireflies in Connecticut?

In Connecticut, fireflies typically emerge and are visible from late May through July, with their peak season often occurring from mid-June to mid-July. However, the exact timing can vary from year to year based on weather conditions like warm, humid springs which can lead to an earlier appearance.

Are firefly populations declining in Connecticut?

There are reports citing declines of fireflies, both in certain locations and overall. Gale Ridge, ecologist and entomologist of the Connecticut Agricultural Experiment Station, reports that "fireflies are disappearing in areas of high urbanization because city lighting interferes with their ability to communicate."

Additionally, the Xerces Society reports “Anecdotal reports of firefly declines have been on the rise in recent decades.” Xerces also states that “14 percent of the 171 species of fireflies in North America are threatened with extinction.”

What can we do?

If we want to support healthy firefly populations in Connecticut, we can:

- Avoid chemical fertilizers and pesticides which harm fireflies and their food sources.
- Do not use leaf blowers at or near areas of leaf litter.
- Minimize outdoor lighting as it can disrupt mating rituals.
- Allow leaf litter to accumulate in the fall, providing crucial habitat.

Again, your autumn yard clean-up rituals will have a direct impact on species that need safe overwintering sites. Think of leaves as habitat and you may be rewarded with a private light show next summer!