

Can We Bring Back Lightning Bugs?

By Susan Camp

Last weekend was an exciting one in many regions of the United States and other countries. Millions of people were fortunate enough to observe and record on their cameras and cell phones the intense color and ephemeral beauty of a highly unusual aurora borealis display. I wasn't one of them, but I have enjoyed hundreds of photos from all over Virginia, including the Middle Peninsula.

What I hope to enjoy on summer nights is a light display of much smaller magnitude, but one of great ecological significance: the nightly lightning bug show, which will begin in just a few weeks.

Do you remember staying outside until dark on summer evenings and catching lightning bugs in an empty mayonnaise jar with holes punched in the lid? Did you take the jar inside and put it by your bed to watch the dainty lights flicker until you fell asleep? By morning, the lightning bugs likely were dead, but, no matter; there were always more to catch the next evening.

Not any more. In recent years, lightning bug populations have been dwindling in many states. Environmental scientists suggest numerous reasons, some proven, some only surmised, but all relate to modern methods of gardening, landscaping, land development, and light pollution. The waning of the lightning bug population may prove to be a warning signal for us to make changes in certain ways we interact with the environment.

Called lightning bugs in the south and east and fireflies in the western states, these insects are neither bugs nor flies. They are nocturnal winged beetles, members of the Lampyridae family of over 2400 species found across the globe. Many species produce winking lights at dusk, possibly to attract mates or prey or to defend their territory. In North America, most species of lightning bugs are found east of the Rocky Mountains.

Lightning bugs generate what scientists call "cold light" because it occurs without heat production. The green, yellow, or red light, depending on the species, develops from a chemical reaction in the firefly's lower abdomen.

Several days after mating, female lightning bugs lay their eggs on the ground. The eggs hatch within several weeks and the voracious larvae begin feeding on slugs, snails, grubs, and worms. The larvae overwinter in underground burrows or beneath tree bark. They feed for several weeks after emerging in the spring and pupate for one to two weeks before the adults emerge and fly up into the evening sky to mate, lay eggs, and die.

Lightning bugs live a short time and provide only beauty and pleasure to humankind. Lightning bugs don't bite or sting; their larvae eat slugs and snails that damage our flowers and vegetables. Some adult species may sip on nectar and pollen and act as pollinators. These amazing critters even have their own website, <https://www.firefly.org>.

What can we, as gardeners and property owners, do to keep lightning bugs flying high to light up the summer night? Research indicates that some firefly populations may be victims of light pollution. A simple way to attract lightning bugs is to dim or eliminate the lights around your home. City, street, and car lights also may interfere with their ability to signal each for mating and avoidance of predators.

Leave some litter on the ground under your trees; you should, of course, remove and dispose of any diseased debris that could infect your plants. Plant native trees, especially pines, and native grasses. Provide a running water source, such as a fountain or small pond. Avoid containers of standing water that could attract mosquitoes. Don't mow your lawn too often, and set your mower blade higher.

Another effective method to protect these harmless insects is to cut back or avoid altogether the use of pesticides, herbicides, and chemical fertilizers. Instead, use natural fertilizers like manure and compost that you create from kitchen and lawn scraps

See [firefly.org](https://www.firefly.org) for interesting facts, suggestions, and resources concerning lightning bugs.