

2020 Beneficial Insect Use in the Boston Parks



Crabapples (*Malus* spp.) are hosts to many lepidoptera species and support beneficial insects by providing pollen and nectar.

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Of the 1.5 million known insect species in the world, over 97% are beneficial or harmless.¹ Most of the insects we encounter everyday supply valuable ecological services such as pest control, pollination, decomposition and wildlife nutrition. It is important to recognize their contributions in our landscapes and continue to find ways to support their populations.

"The least creative way to get rid of bad bugs is by using insecticides." - Gilbert Waldbauer Entomologist

Predatory insects perform an integral role in healthy landscapes by keeping pest insects at an acceptable level. However most urban landscapes are out of balance in terms of predators and pests. In these situations, it can be helpful to augment the existing population of beneficial insects with those purchased from insectaries, companies that raise natural enemies intended for release.

This year again, we released green lacewing larva (1000) in the Public Garden, the Boston Common, and Commonwealth Avenue Mall. As generalist predators, the tiny larvae (*Chrysoperla rufilabris*) provide a vital service by eating aphids, small caterpillars, beetles, thrips, mites, whiteflies, mealybugs, and even insect eggs.

Additionally throughout this growing season, as time allowed, I continued to collect and identify the by-catch insects that were found on our elm bark beetle traps. Identifying the non-target insects on the traps is fundamental to knowing more about them, such as their diet or habitat requirements. Getting familiar with them enables us to see their connection to other species which will lead to a greater knowledge of the whole ecosystem in the parks.



Figure 1 Green Lacewing Larva

An important element of this undertaking is discovering the natural predators that are living in the parks and are already feeding on many of the pest species we have. The traps allow the unique opportunity to see arthropods that are very small or difficult to find in nature.



Figure 2 Drumming Katydid ©entomart

For example, this past July, a few Drumming Katydids (*Meconema thalassinum*) were found on three traps. This small katydid lives on deciduous trees or the vegetation beneath them and feeds on aphids, a prolific pest in our parks. The adult Drumming Katydid lays her eggs in bark crevices where they overwinter and hatch the following Spring.

¹ Bulletin #7150, Beneficial Insects and Spiders in Your Maine Backyard

As helpful predators, arachnids are always welcome sights in our parks whether in art or in real life.

Early this Spring, an intact pseudoscorpion turned up on a trap in the Public Garden. Pseudoscorpions are harmless to us but are great natural predators with a preference for mites, thrips, carpet beetle larvae and ants. These tiny arachnids range in size from 2 to 8 millimeters and can live for two or three years as adults.



Figure 4 Pseudoscorpion Photo by Tom Murray



Figure 3 Chalk drawing of spider in the Public Garden

Lastly, in September, an adult praying mantis was spotted balancing on the windshield of a Bartlett Tree Experts truck while they were working on the Mall. (Blurry photograph can be provided upon request) As always, we are encouraged to see that these awesome predators continue making the three parks their home and we hope to release a small army of them again next year.