2018 Beneficial Insect Use in the Boston Parks

Praying Mantis

Christine Helie
The Growing Tree
Thegrowingtree.christine@gmail.com
774-633-0193

“Imagine a soldier the size of an insect.” ~ Darren Cross *Ant-Man 2015*

Insects that prey upon other insects are considered beneficial and play an important role in maintaining the health of our landscapes. Supporting populations of beneficial insects or using them to suppress harmful insects is a necessary strategy in any integrated pest management program (IPM).

Since praying mantises are generalist predators, feeding on a variety of insects, we can use them to assist in our natural pest control. When praying mantises are very young they eat small pests such as aphids, leafhoppers, mites, and even small caterpillars that damage leaves and plants. As they grow, praying mantises move on to larger prey such as beetles, wasps, true bugs, or flies.

This year, in an effort to manage several different pest insects, Normand and I released 240 Chinese praying mantises (*Tenodera sinensis*) on trees throughout the Public Garden, the Boston Common, and on the Commonwealth Avenue Mall.

In January of 2018, I collected several Chinese praying mantis egg cases from a nearby field. Since our goal for the approaching spring and summer was to reduce the populations of smaller pests attacking the trees in the parks, I decided to manipulate the hatching dates of some of these praying mantises and extended their cold period by placing a few egg cases into a refrigerator in mid spring. Delaying their time of emergence enabled us to have tiny mantises, which are best suited for consuming aphids or spider mites, available when we needed them most. This artificial overwintering allowed me to stagger their development and continually release small praying mantises over several weeks.

The addition of praying mantises in the parks has been well received over the past two years. However timing their emergence and growth to coincide with the pest insects we want to control has been challenging. While we appreciate the importance of these beloved predators, there are other beneficial insects that merit our attention. Two natural predators that we should consider releasing in the future are the green lacewings and the brown lacewings. The larvae of each of these insects are predacious. The adult stage of all brown lacewings and green lacewing adults in the genus *Chrysopa* will also eat insects. Both of these predators are commercially available in species that are already represented in our parks. Most important is that both green lacewings and brown lacewings are little and will pursue the pests we need to control. We are excited about their potential assistance in the ongoing health care of the trees in the three parks.

Areas or Trees in Which Praying Mantises Were Released

June 13, 2018
Boston Common
B Panel trees
Public Garden
Beacon Street Edge

August 8, 2018
Boston Common
English Elm En07

August 10, 2018
Boston Common (near Ballfield)
Linden GB

August 13, 2018
Public Garden
Shadblow 3H2
White Pine 3F30
Swiss Stone Pine 3E72
Beech 3C1
Weeping Beech 2J1
Commonwealth Avenue Mall
Red maple DE6

August 14, 2018
Boston Common
Linden Jh16
Linden Jh06
Ash Jh02
Slippery elm Jg07
Linden Hb02
Cherry Fa05
Cherry Cf08
Commonwealth Avenue Mall
American elm CD22m

August 23, 2018
Public Garden
Weeping Beech 1H6