

Praying Mantis or Preying Mantis?

By Susan Camp

At first glance, the photo next to this column looks like the same clump of black-eyed Susan that was published a few weeks ago, but right in the center of the picture you will spot a large, green praying mantis, lying in wait for a tasty morsel to appear.

Last Wednesday I showed the picture to two fellow Master Gardeners, Nancy Choquette and Carolyn Evans. Nancy said, “Did you know that praying mantises will eat hummingbirds’ heads?” I was stunned. I like praying mantises, with their alien appearance and voracious appetite for unwanted, pesky insects. I didn’t want to believe Nancy, but she is very knowledgeable about nature, so I figured it must be true.

When I got home, I told my husband about hummingbirds as a food source for praying mantises. He agreed with Nancy, and said he had watched a YouTube video of a mantis decapitating a hummingbird. I decided to research this unusual insect.

The praying mantis or mantid (*Stagmomantus* sp.) is a predator that feeds on flies, beetles, crickets, mosquitos, moths and other insects, including those considered beneficial by gardeners. It is called an “ambush predator” for its technique of lying in wait for a meal, then making a lightning-fast attack, grabbing the prey with its strong forelegs, and consuming it while it is still alive. Both immature nymphs and adult mantises are predators.

Although there are approximately 2300 species of praying mantises, only three are commonly found in our region: Carolina, European, and Chinese mantises. The three species are similar, varying in size and coloration, which helps camouflage them from prey. The small Carolina praying mantis adult is about 2 to 2 ½ inches long and green or mottled gray/brown. The male Carolina can fly, but the female is flightless. The European praying mantis is about 3 inches long and green, with a black and white “bull’s-eye” spot on the inner side of each foreleg. The Chinese mantis is the largest, from 2 to 5 inches long, with an elongated thorax, strong forelegs and large eyes. It is green or brown, with a yellow or light green wing stripe. The Chinese mantis is the species commonly used commercially to eat insect pests. Both male and female Carolina and Chinese mantises can fly.

Female mantises lay their 300 or so eggs in a foamy secretion that hardens into a rectangular egg case attached to leaves or stems. The eggs overwinter in the case and hatch in the spring into nymphs that look like miniature adults.

The nymphs begin to feed immediately, and grow into ruthless, almost-perfect killing machines with triangular heads, two sets of compound eyes, and three single eyes. They can rotate their heads almost 360 degrees. Their powerful, serrated forelegs with sharp, hooked ends fold back on themselves into a praying position. Their strong mouthparts devour live prey. Praying mantises will cannibalize each other and females decapitate the males and eat their heads during mating.

Praying mantises hunt for moths at night and will catch and eat small vertebrates, including frogs, lizards, and snakes. And yes, hummingbirds and other small birds. The photos are not pretty. I won't watch the video.

To reassure my birder friends, I found no research indicating that large numbers of hummingbirds are at risk for predation by praying mantises. The positive results of having mantises in the garden appears to outweigh the damage to the hummingbird population. Several articles recommend leaving praying mantises in place. If you have regular hummingbird visitors, as we do, you would not want to add extra mantises to your garden by importing them.

The University of Maryland Extension Home and Garden Information Center article "Predators: Praying Mantid (Mantis)" and Galveston County Master Gardeners article "Praying Mantis" offer information on the insect's characteristics and life cycle. Virginia Cooperative Extension Publication 426-366 "Minimum-Chemical Gardening" and "Vegetable Crop Handbook for Southeastern United States-2013" discuss the use of beneficial insects for home gardening.

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