The Praying Mantis

The author is R. L. Doutt, Professor of Entomology, Emeritus, Division of Biological Control, Parlier.

The praying mantis, because of its appearance and attitudes, is a fascinating insect and a worthwhile subject for nature study. Furthermore, its habit of feeding on other insects tends to clothe it with a certain degree of respectability. Writers of articles in newspapers, Sunday supplements, and national magazines have seen the posture of prayer in the mantis' folded forelegs. When this is coupled with the alleged good deeds of the predaceous insect, it is easy to capture the public fancy and to attribute some rather sensational accomplishments to the praying mantis.

In recent years, mantis egg packets have been offered for sale by enterprising collectors, and these are worthwhile if purchased merely for the purpose of observing the life history of an interesting insect species. However, people have occasionally purchased these packets with the misapprehension that the mantises, hatching from these eggs would control insect pests. There are no general data to support such a belief. In addition, the fact that the mantis is a general feeder and has only one full generation each year would further tend to minimize the effectiveness of the praying mantis as a biological control agent.

Biological control of pests has been well demonstrated in California on many occasions and its tremendous value to agriculture is obvious. However, in each case of biological control, the agent used has been one closely associated with the pest—not a general, indiscriminate feeder. The biological control agents that are effective are those that respond quickly to changes in the numbers of a pest insect, exerting their greatest effect whenever the pest population starts to increase. The praying mantis is not this type of insect and, accordingly, is considered to be of negligible value in biological control.
In the interest of setting the record straight, it may be worthwhile to examine some facts about praying mantises.

The praying mantis derives its name from the form of its peculiar front legs, which are adapted for seizing and holding prey. One segment of the leg, the femur, has a groove that is armed on both sides by a row of spines. The next segment of the leg, the tibia, snaps into this groove like the blade of a pocketknife. The mantis sits motionless with these powerful, raptorial forelegs raised together in front of its body. This curious attitude suggests one of supplication and, as a consequence, these insects have been given appropriately descriptive names. In England, they are called praying insects, and one European species is named religiosa. The Moslems maintain that the mantis prays with its face toward Mecca. In Andalusia, the mantis is called "Santa Teresa"; in Germany, praying mantises are called "Fangheuschrecken" (praying crickets) or "Gottensanbeterinnen" (worshippers of God). They have also been called the Hottentot's God, nuns, saints, mendicants, and preachers.

The habit of the insect belies its name, however. It is a veritable tiger, is strictly carnivorous, and feeds on almost any insect of a size it can overcome. Since mantises often tend to wait for their prey at flowers, the pollen and nectar feeders are frequently their victims. In fact, adult honey bees are recorded as the favorite food of one species. The mantis is markedly cannibalistic and will feed readily on any insect that is alive and moving. After mating, the male mantis is frequently devoured by the female.