Spined Soldier Bug

Scientific name: *Podisus maculiventris* (Say) (*Insecta: Hemiptera: Pentatomidae*)

**Introduction**

The spined soldier bug *Podisus maculiventris* (Say) is a beneficial insect. This stink bug is a predator of many arthropod species including garden, crop and forest pests. Adults are pale brown in color and get their name from the spines on their shoulders (Figures 1 and 5).

**Distribution**

This is a common stink bug throughout the United States with distribution ranging from Mexico to Canada. Spined soldier bugs can be located in a variety of habitats including woodlands, near streams and agricultural systems (De Clerq, 2008).

**Life cycle**

**Egg:** Eggs are 1 mm or 0.04 inches in diameter with long, characteristic projections around the operculum (egg cover). Spined soldier bug eggs vary from a light cream to black color (Figure 2) and often remain in this stage for five to eight days.

**Nymph:** There are five nymphal instars in this species. Nymphs, through all instars, are oval shaped, lacking the characteristic shield and shoulder spines possessed by adults. Spined soldier bug nymphs are black in the 1st instar but subsequent instars have red, orange, or cream markings (Figures 3 and 4). Nymphs can range from 1.3 to 9 mm or 0.05 to 0.35 inches depending on the instar (De Clerq, 2008). Nymphs do not have fully developed wings, and therefore do not have high dispersal capabilities.

**Adult:** *Podisus maculiventris* (Say) takes four to five weeks to go from egg to adult. Adults are pale brown and 10-14 mm long or 0.4 to 0.55 inches (De Clerq, 2008). The shoulders have an outward projecting spined tip and a dark spot on the membranous tip of the wing. In the northern and central United States, there are two to three generations per year; however, the warmer Louisiana climate allows for the possibility of additional generations. Adults can live up to four months (De Clercq, 2008).

**Target Pests**

Nymphs of the spined soldier bug are gregarious feeders. Spined soldier bug prey on a wide variety of prey including 90 insect species across eight orders and possess the capability of controlling more than 75 of these species in different agroecosystems (De Clerg, 2008 and Baek, 2013). These insects primarily feed on soft bodied larvae of Coleoptera.

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### Use in Biological Control

Spined soldier bugs are available for purchase as biological control agents. Multiple companies sell egg masses which can be released into gardens or greenhouses. In the absence of prey, they may feed on plant fluids but this is often not damaging to the plant. It is important to practice integrated pest management (IPM) which highlights the use of selective insecticides in agriculture systems, and to only utilize them if necessary. Use of the most selective insecticide should allow the continued presence of this beneficial insect (Boyd, 1998).

### Selected References


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