

## Beneficial Species Profile



**Photo credit:** (Left) Russ Ottens, University of Georgia, Bugwood.org; (Right) Whitney Cranshaw, Colorado State University, Bugwood.org

**Common Name:** Spined Assassin Bug

**Scientific Name:** *Sinea diadema*

**Order and Family:** Hemiptera, Reduviidae

**Size and Appearance:**

	Length (mm)	Appearance
<b>Egg</b>	1.64 mm	The outer surface of the egg has irregular hexagonal reticulations (net pattern). At the anterior area of the egg is an egg cap (operculum). The border of the operculum has small uniform holes along the circumference of the egg. The operculum overall is rounded and flat, and the outer rim with minute irregular reticulations. The central area of the operculum has a projecting cone, with the cone being comprised of several scales that do not meet at the tip.
<b>Nymph</b>	1.8-10.4 mm	The body of the nymph is elongate-oval. The overall color of the head and hardened areas of the thorax are brown to dark brown. Antennae are generally yellow to yellowish-brown and darkest at the base; they are four segmented, and threadlike. The legs are brownish at the base and generally yellowish at the end, with the first pair of legs darker and full of spines. The head is long and narrows at each end. The beak is three segmented and dark brown, with the tip fitting into a striated groove. The total length of the beak is 1.13 times the head. The nymph goes through five different instars or stages between successive molts with the first instar occurring between hatching and the first molt. As the nymphs go through the instars, the overall color goes from a brown or dark brown to a yellow or yellowish-brown in color. As the nymph continues to develop, spines develop on the side of the head, thorax and abdomen. Wing pads are present and develop from first to fifth instar. The eyes are a reddish brown.

<b>Adult</b>	10-15 mm	Adults are a dark brown or dull red in color with reddish-brown eyes. The femur of the first pair of legs is swollen and covered with spines. The top of the head and thorax are covered with spines. The beak is three segmented. The antennae are four segmented and threadlike. The abdominal segment of the body is expanded and flat and has a pale spot on the rear edge of each segment. Due to the abdomen being so wide, the wings of the adult do not cover the entire body. The forewings of the adult are thickened at the base and thin at the outer portions.
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**Type of feeder (Chewing, sucking, etc.):** Nymphs and adults have piercing sucking mouthparts.

**Host/s:** Both the nymphs and adults are generalist predators. They feed on aphids, tarnished plant bugs, caterpillar eggs, leafhoppers, lady bugs, bees, flies, and asparagus beetle eggs and larvae. They have also been found to prey on small caterpillars, including cotton worm and other injurious species.

**Description of Benefits (Predators):** The nymphs and adults use their sharp beak to pierce through the outer covering of their prey and suck out the inner body fluids. The spined assassin bug feeds on a variety of horticulture and agriculture pests, including the European corn borer, Mexican bean beetle, and tarnished plant bug. Unfortunately, they also do feed on pollinators like bees.

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