

Consumption of Tobacco Budworm (Lepidoptera: Noctuidae) by Hooded Beetle (Coleoptera: Anthicidae) and Bigeyed Bug (Hemiptera: Lygaeidae)¹

G. S. McCutcheon

Department of Entomology, Coastal Research and Education Center, 2865 Savannah Highway, Charleston, South Carolina 29414-5332

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ABSTRACT The tobacco budworm, *Heliothis virescens* (F.), is a primary pest that destroys the fruiting structures of several major agronomic and horticultural crops in South Carolina. Consumption rate of tobacco budworm eggs and first instar larvae by hooded beetle, *Notoxus monodon* (F.), was compared for three consecutive 24-h periods in two sizes of laboratory cages. During the first 24-h period, significantly more budworm eggs (76.5%) than larvae (32.5%) were consumed in 1,200-ml plastic cages (12 × 14 cm) as well as in 30-ml plastic cages in which mean consumption rate was 61.3% of eggs and 22.5% of larvae. After 48 and 72 h, there was also greater consumption of eggs than larvae in the larger cages; however, no differences in rate of consumption were detected in the 30-ml cages. The hooded beetle and the bigeyed bug, *Geocoris punctipes* (Say), were tested separately in laboratory cages to compare consumption rate of tobacco budworm eggs. Consumption rate was recorded for each predator at four egg densities (5, 10, 15, and 20 eggs per 30-ml plastic cage) for three consecutive 24-h periods. Mean cumulative consumption rate was 54.3 and 77% after 24 h, 73.3 and 94.3% after 48 h, and 88.5 and 97.8% after 72 h by hooded beetles and bigeyed bugs, respectively, over all densities. The bigeyed bug consumed eggs at a higher rate than the hooded beetle during each time interval at all densities except 5 and 20 eggs per cage during the first 24-h period. Both the hooded beetle and the bigeyed bug should be considered in pest management decisions at the onset of oviposition by moths of tobacco budworms.

KEY WORDS *Notoxus monodon*, Anthicidae, Coleoptera, *Geocoris punctipes*, Lygaeidae, Heteroptera, *Heliothis virescens*, Lepidoptera, Noctuidae, cotton

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