

SCIENTIFIC NOTE

First report of *Nezara viridula* f. *aurantiaca* (Hemiptera: Pentatomidae) in HawaiiMary Golden¹ and Peter A. Follett²

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The southern green stink bug, *Nezara viridula* (Hemiptera: Pentatomidae) has body color polymorphisms. Nine different color morphs are known which are derived from four basic types varying in the pattern of orange coloring (Kiritani and Yukawa 1963, Yukawa and Kiritani 1965, Kiritani 1970, Hokkanen 1986). While the color polymorphisms are manifest in both the larval and adult stages, previous studies have focused only on the more obvious adult traits. One of the body color polymorphisms, *N. viridula* f. *aurantiaca*, is uniformly orange or yellow but is occasionally pink. The common green form is *N. viridula* f. *smaragdula*.

The mix of *N. viridula* color polymorphisms varies with region. Japan shows the greatest diversity of color polymorphisms while *N. viridula* populations in many parts of the world (Australia, Pacific Islands, USA, Central America, and the West Indies) appear to be only or primarily green (Yukawa and Kiritani 1965). Yukawa and Kiritani (1965) stated that the f. *aurantiaca* morph is very rare in Japan, occurring in about 1 in 5000 individuals. In Brazil, the frequency of f. *aurantiaca* is higher at 0.7% (Vivan and Panizzi 2002). Only f. *smaragdula* is thought to occur in the Americas, but one f. *aurantiaca* was collected with 203 f. *smaragdula* in Florida and golden morphs occasionally appear in laboratory cultures of f. *smaragdula* there (McLain 1985, Hokkanen 1986). The f. *aurantiaca* morph was previously not reported in Hawaii (Yukawa and Kiritani 1965).

In June 2004 we collected two adult *N. viridula* f. *aurantiaca* in a patch of glycine (*Neonotonia wightii*) and castor bean (*Ricinus communis*) next to a macadamia orchard in Pahala on the island of Hawaii. During the next few months we collected another 12 f. *aurantiaca* from the same site and brought them into the laboratory for rearing. This was the first discovery of this color morph in Hawaii since *N. viridula* was accidentally introduced in 1961 (Davis 1964). Thirteen of the 14 field-collected f. *aurantiaca* were males suggesting this color polymorphism might be sex-linked. *N. viridula* f. *aurantiaca* collected in Brazil (n = 80) were 87.5% male (Panizzi personal communication). Genetic studies were conducted with the orange and green color morphs to examine inheritance of the orange body color trait, sperm precedence, and assortative mating (Follett et al., in press).

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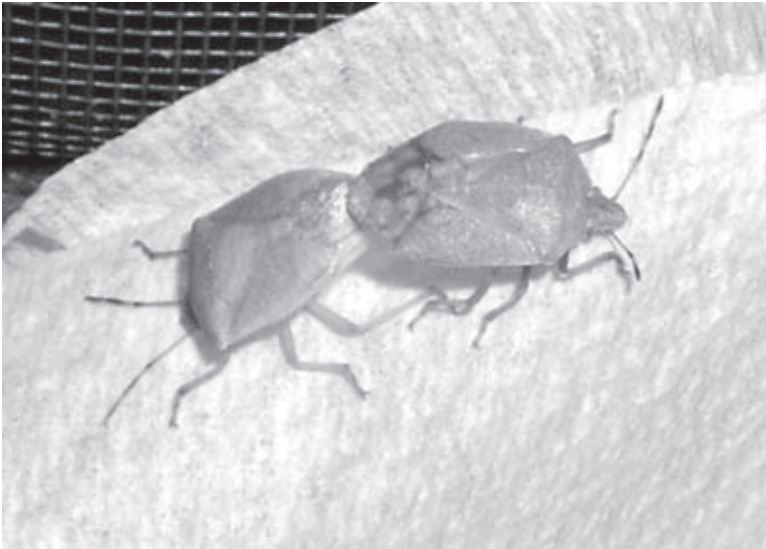


Figure 1. *Nezara viridula* f. *aurantiaca* male (left) copulating with a sibling female.