

Pest Alert

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Florida Department of Agriculture and Consumer Services, Division of Plant Industry

Charles H. Bronson, Commissioner of Agriculture

***Nipaecoccus viridis* (Newstead), a New Exotic Mealybug in South Florida (Coccoidea: Pseudococcidae)**

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INTRODUCTION: Cooperative Agricultural Pest Survey (CAPS) Pest Survey Specialists Andrew Dierksen and Karolynne Griffiths collected this New Western Hemisphere Record on 13 November 2009 in the Rosemary Scrub Natural Area, Boynton Beach, Palm Beach County. The host plant was dodder (*Cuscuta exaltata* Engelm) (Fig. 1), a parasitic plant. Native to Asia, this mealybug has been previously intercepted at several ports-of-entry on plants from several plant families.

DESCRIPTION: Approximately 4 mm long by 3mm wide with body color being black, purple to blue green with thick white, or pale yellow wax. Females produce an ovisac (Fig. 2) with a wax that is sticky when touched. In high densities (Fig. 3), waxy secretions, may appear as a continuous layer of wax which will obscure individual mealybugs. Wax may turn yellow in older infestations. Specimens do turn black in 70% alcohol. Species identification or confirmation will require slide mounting.

BIOLOGY: There is extensive published information on the development and bionomics of this species in Asian countries. In laboratory settings, it was shown that high humidity and high temperatures (>30°C; 86°F) adversely affect development and survival.

HOSTS: CAPS Pest Survey Specialists noted that the original population of mealybugs was restricted to dodder. There are several co-occurring species of *Cuscuta* in South Florida, so it is possible that species other than *C. exaltata* could serve as hosts. A subsequent collection on 9 December 2009 recovered the mealybug from *Ximenia americana* (tallow wood) (Olacaceae). Published collection records state that suitable plant hosts are found in 35 plant families, including Euphorbiaceae, Fabaceae, Myrtaceae and Solanaceae. It has been intercepted at US ports on *Punica* sp. (Lythraceae), *Nephelium* sp. (Sapindaceae), *Eugenia* sp. (Myrtaceae) and *Citrus* sp. (Rutaceae). In Okinawa, it is a significant pest of mango, and is a serious pest of citrus in South Africa.

ECONOMIC IMPORTANCE: This is an agricultural pest in Asia that attacks food, forage, ornamental crops and fiber crops, such as cotton. It is also a pest of stored potatoes. *Nipaecoccus viridis* is widespread throughout the tropic and subtropics, attacking numerous plant species and often causing considerable damage (Clausen 1978; Sharaf and Meyerdirk 1987). The potential for invasiveness appears high.

NATURAL ENEMIES: The literature reports that there are several natural enemies of the Lebbeck mealybug including the mealybug destroyer, *Cryptolaemus montrouzieri*, which is present in Florida. The parasitic wasp *Anagyrus indicus* (Encyrtidae) was an effective control for an infestation in Jordan, but this species does not occur in the United States.



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner

DISTRIBUTION: Found in several countries in the **Afrotropical**, **Australasian** (including Hawaii islands), **Oriental and Palearctic regions**. **Florida distribution:** Palm Beach County.

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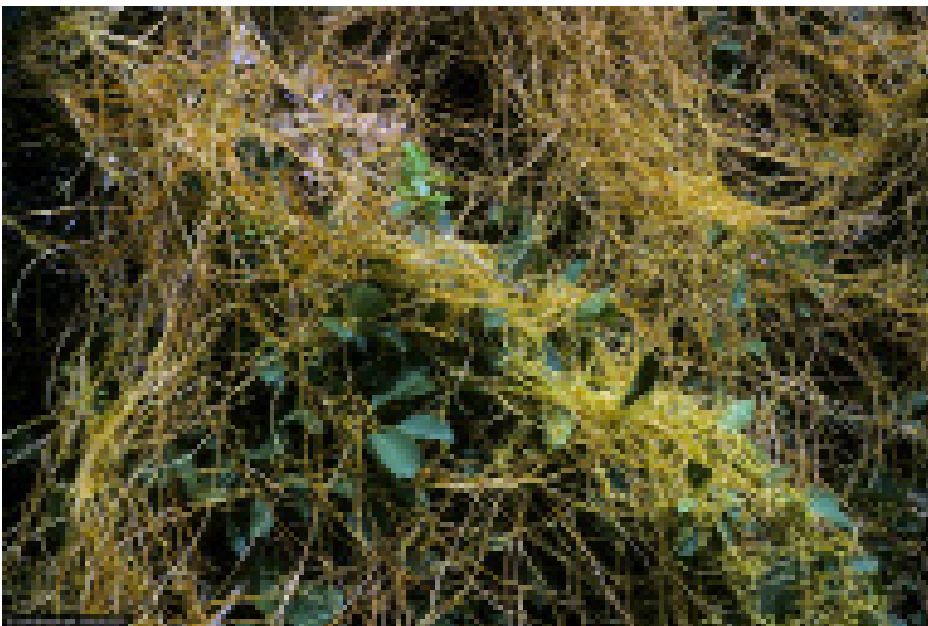


Figure 1. Dodder covering unknown plant.

Photography credit: Richard A. Howard Image Collection, courtesy of Smithsonian Institution

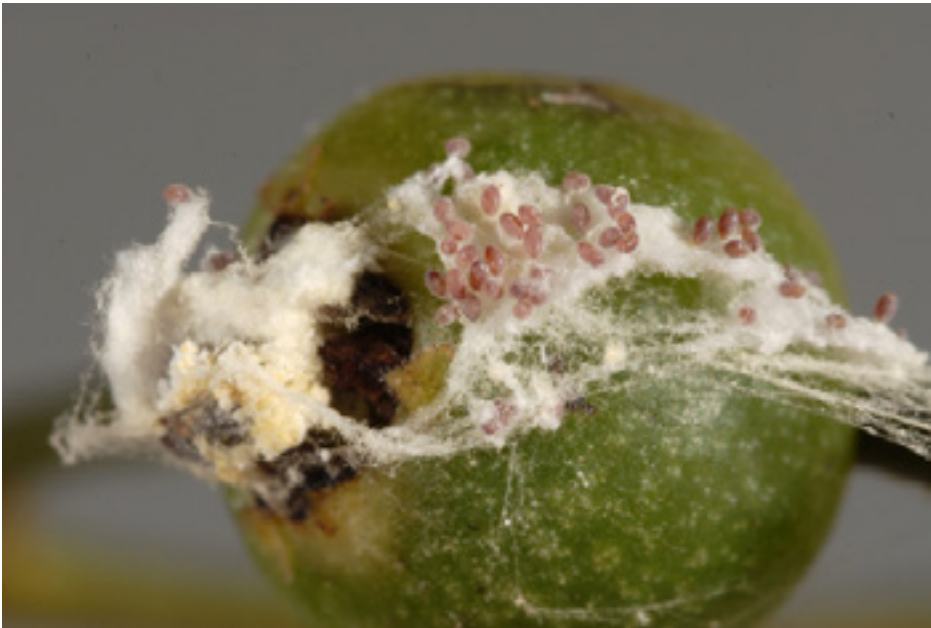


Figure 2. Ovisac of female mealybug, *Nipaecoccus viridis*, opened revealing pink eggs.
Photography credit: Lyle Buss, University of Florida 2009



Figure 3. Female mealybugs, *Nipaecoccus viridis*, on stem and fruits of dodder.
Photography credit: Lyle Buss, University of Florida 2009