

Guam New Invasive Species Alert No. 2013-01

Eggplant Mealybug

(Hemiptera: Pseudococcidae)

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During a visit to a farm near Swamp Road in Dededo on December 4, 2013, University of Guam Extension Agent Jesse Bamba discovered a large mealybug with ovisacs infesting the lower surfaces of eggplant leaves. Samples of infested leaves were preserved in ethanol for subsequent identification by Dr. Gillian Watson at California Department of Food and Agriculture Diagnostic Center in Sacramento, California. Dr. Watson identified the mealybug as *Coccidohystrix insolita* (Green 1908) on December 13, 2013. Diagnoses was based on microscopic examination of slide mounts.

Description

This is a relatively large mealybug which feeds on the lower surfaces of leafs and on stems (Fig. 1). Adult females have a short ovisac (Fig. 2). Nymphs are largely devoid of wax, unlike most species of mealybugs. A distinctive character of the nymphs is transverse lines of dark pigmentation on the dorsal surface of their abdomens (Fig. 3).

Host Plants

C. insolita is polyphagous and is recorded from the following host plants (Veilleux et al. [2001]):

ACANTHACEAE: *Adhatoda vasica*, *Anisotes trisolcus*, *Barleria cristata*, *Barleria cristata*, *Eri-anthemum*, *Justicia adhatoda*; AMARANTHACEAE: *Achyranthes*, *Achyranthes aspera*, *Alternanthera eriandra*, *Gomphrena celosioides*, *Gomphrena globosa*; APOCYNACEAE: *Tabernaemontana*; ARACEAE: *Schismatoglottis*; ARECACEAE: *Cocos nucifera*; ARISTOLOCHIACEAE: *Aristolochia indica*; ASTERACEAE: *Mikania*, *Psiadia*, *Psiadia altissima*; CHENOPODIACEAE: *Chenopodium album*; CUCURBITACEAE: *Momordica dioica*; EUPHORBIACEAE: *Acalypha*, *Croton sparsiflorus*, *Croton sparsiflorus*, *Euphorbia pulcherrima*; FABACEAE: *Cajanus*, *Cajanus cajan*, *Cajanus indicus*, *Crotalaria fulva*, *Dalbergia sissoo*, *Strongylodon*, *Tephrosia purpurea*; MALVACEAE: *Abutilon*, *Abutilon indicum*, *Hibiscus*, *Hibiscus rosa-sinensis*, *Malachra capitata*, *Malvastrum coromandelianum*; MENISPERMACEAE: *Cyclea*, *Cyclea burmanni*; MORACEAE: *Ficus*, *Morus alba*; POACEAE: *Oryza sativa*;

Rhamnaceae: *Ziziphus jujuba*; *RUBIACEAE*: *Coffea robusta*; *Solanaceae*: *Brunfelsia nicotiana*, *Cyphomandra betacea*, *Datura*, *Datura alba*, *Datura fastuosa*, *Datura metel*, *Datura stramonium*, *Lycopersicon esculentum*, *Nicotiana tabacum*, *Physalis maxima*, *Physalis peruviana*, *Sida*, *Sida cordifolia*, *Sida rhombifolia*, *Solanum*, *Solanum auriculatum*, *Solanum biflorum*, *Solanum giganteum*, *Solanum hispidum*, *Solanum incanum*, *Solanum indicum*, *Solanum melongena*, *Solanum nicotianum*, *Solanum tuberosum*, *Solanum xanthocarpus*, *Withania somnifera*; *STERCULIACEAE*: *Dombeya*; *TILIACEAE*: *Triumfetta*; *ZYGOPHYLLACEAE*: *Tribulus*.

Several of these host plants are important to agriculture and forestry on Guam.

Distribution

Distribution on Guam is unknown.

C. insolita is recorded from the following regions and countries (Veilleux et al. [2001]):

AFROTROPICAL: Kenya, Madagascar; Rodrigues Island, South Africa, Tanzania, Zanzibar; AUSTRALASIAN: Western Samoa; ORIENTAL: Bangladesh, Burma (=Myanmar), India, Laos, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam; PALAEARCTIC: China, Saudi Arabia.

Note that prior to our discovery of *C. insolita* on Guam this species was known only from two Pacific island nations: the Philippines and Western Samoa. Our discovery is the first report of *C. insolita* for a United States territory.

Pest Status

Given the broad plant host range and lack of known natural enemies for *C. insolita* on Guam, this species has the potential to become a major pest impacting Guam's agriculture and its natural environment.

Control

There are no control recommendations available at present.

Acknowledgments

Thanks to Dr. Gillian Watson, California Department of Food and Agriculture, for quick species determination. Dr. Watson volunteered to identify specimens in response to a message and links to images posted on PestNet. Thanks to the PestNet community for advice on this and other emerging invasive species problems impacting Pacific islands.

References

K. Veilleux, D.R. Miller, and Y. Ben-Dov. ScaleNet Database, Catalogue page for *Coccidhystrix insolita*, 2001. URL <http://www.sel.barc.usda.gov/catalogs/Pseudoco/Coccidhystrixinsolita.htm#Coccidhystrixinsolita>.



Figure 1: Eggplant leaf infested with *Coccidohystrix insolita*.



Figure 2: Adult *Coccidohystrix insolita* females with ovisacs.



Figure 3: *Coccidohystrix insolita* nymphs. Note transverse pigmented lines on abdomen.