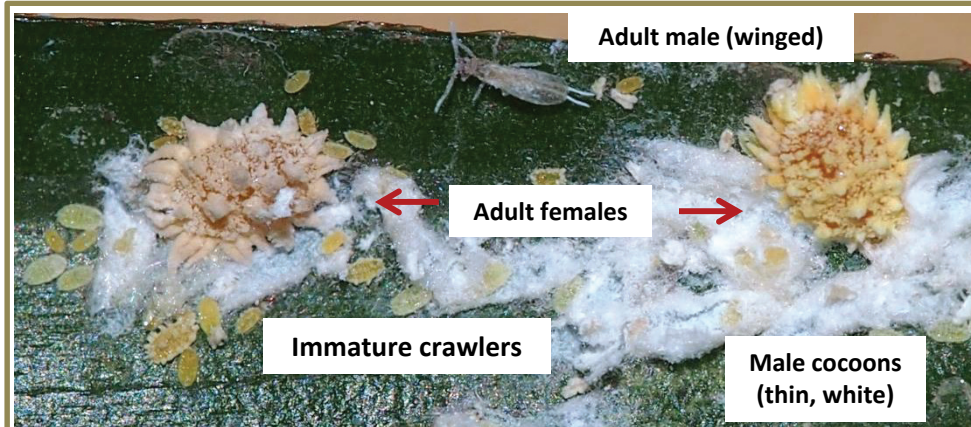


COCONUT MEALYBUG

Scientific name: *Nipaecoccus nipae* (Maskell)
 Order: Hemiptera Family: Pseudococcidae
 Common names: coconut mealybug, spiked mealybug



Scot Nelson and Mike Nagao, UH CTAHR



DESCRIPTION

Adult females range between 1.5 and 2.5 mm long, are oval, reddish-brown to orange and covered with yellowish-orange pyramid-shaped wax filaments. Males emerge from very thin, white cottony wax cocoons as adults with wings, eyes, and legs.

HOST PLANTS

Coconut mealybug is known to infest ornamentals and fruit trees, including:

avocado	ginger
bananas	grape
banyan tree	Heliconia
Chamadorea	hibiscus
citrus	kentia
coconut	orchids
coffee	potato
Cycas	rhapis
Dracaena	ti



Black sooty mold on foliage

DAMAGE



Little fire ants farming mealybugs

- Adult females and immatures feed on the sap of the host plant and secrete honeydew, which promotes black sooty mold growth and attracts ants.
- Black sooty mold can reduce photosynthesis and cause defoliation, and occasional death of a young plant.
- Ants defend the mealybugs from predators or parasitoids

LIFE CYCLE/BEHAVIOR

Egg to Reproducing Adult: approximately 1-2 months

Males and females cannot be readily distinguished from each other during the **first two instars**, but the **third instar female** begins to resemble the **adult**. When present, **immature males** change within a **pupal cocoon** during the third instar prior to emerging as a **winged adult**.

References: Williams, D.J. & Granara de Willink, M.C. 1992. *Nipaecoccus nipae*. In: Mealybugs of Central and South America. CAB International, London, England. 635 pp.
 Zimmerman, E. C. 1948. Insects of Hawaii, Homoptera: Sternorrhyncha. Univ. of Hawaii, Honolulu 5:1-464.

BEST MANAGEMENT PRACTICES FOR COCONUT MEALYBUG

	OPTIONS AVAILABLE
MONITORING TECHNIQUES	<ul style="list-style-type: none"> ▪ Scout for white waxy filaments of adult mealybugs on undersides of leaves and stems. ▪ Inspect for sooty mold and the source of honeydew. ▪ Inspect distorted, stunted and/or yellowed foliage for the presence of mealybugs.
SELECT BEST CONTROL METHOD	<ul style="list-style-type: none"> ▪ Dislodge mealybugs with pressurized water sprays. ▪ Carefully select insecticides that will not kill beneficial insects (lady beetles, green lacewings, parasitic wasps). ▪ Use horticultural oils and soaps against mealybugs (contact, no residual effect). ▪ Use effective systemic insecticides (imidacloprid, dinotefuran, acetamiprid, spirotetramat or IGR pesticides containing buprofezin) in chemical rotations against mealybugs. ▪ Control ant populations, which disrupt natural biological control of mealybugs.
TREATMENT BEFORE MARKET	<ul style="list-style-type: none"> ▪ Hot water treatment of plants at 120 °F for 12 minutes will kill mealybugs prior to shipment.
FINAL INSPECTION	<ul style="list-style-type: none"> ▪ Visually inspect for live mealybugs and remove plant from shipment.

PRECAUTIONARY STATEMENT / DISCLAIMER: These recommendations are provided only as a guide. Please read and follow all label directions.

J.A. Zarders, A. H. Hara, R.Y. Niino-DuPonte, S.K. Cabral, K.L. Aoki, 2013. University of Hawai'i at Mānoa, CTAHR, Komohana Research & Extension Center, Hilo, HI.