



Myoporum Thrips: Two Invasive Species on Myoporum or Naio

Arnold H. Hara and Dick M. Tsuda

University of Hawaii at Manoa

College of Tropical Agriculture & Human Resources

Dept. of Plant Protection and Environmental Sciences

arnold@hawaii.edu and dmtsuda@hawaii.edu

- *Galling on naio papa or *Myoporum sandwicense* first submitted to UH/HDOA in March 2009 from Waikoloa Village (Nakashima CPS) .
- *First observed in Fall/Winter of 2008 by various landscapers.
- *Infestations also found in Kona Village, Kona Palisades, Maunalani Resort, Hapuna Beach Resort (Conant HDOA).



04/16/09

- *Thrips tentatively identified as *Myoporum* Thrips, *Klambothrips myopori*
- *First described in CA in 2007.
- *Originated from Australia or New Zealand.
- *Specific to *Myoporum* spp. or naio, false sandalwood



Dead *Myoporum laetum* plants killed by
Myoporum Thrips in San Diego



Control of Myoporum Thrips, *Klambothrips myopori*

Based on trials in California
Bethke and Shaw (UC CES)

- *The minute pirate bug, *Orius* sp., a thrips predator, has controlled the myporum thrips in CA and will also impact thrips in HI. Avoid broad-spectrum insecticides will impact these predators.
- *Conserve reduced thrips numbers and damage in California.
- *Avid did not reduce thrips numbers as much as Conserve or Merit.
- *The neonicotinoids, Merit and Safari has shown to be effective.
- *Merit results has not been consistent and negatively impacted the pirate bugs in CA.
- *Talstar works well as a preventative treatment according to landscapers, but will negatively impact the pirate bugs.
- *Suggested treatments are Safari drench and Conserve foliar application.

Myoporum Thrips Infestation
at Maunalani "Kamilo"

← Before Talstar application



Ca. 3 weeks after
Talstar application →



Scirtothrips sp. another thrips attacking Naio Papa

- *High population of *Scirtothrips* sp. observed on naio papa, Maunalani Point causing bronzing, stunting, thickening, and deformed, curled leaves, but minimal galling (04/16/09).
- *Previously, plants were infested with galling myoporum thrips.
- *Sprayed with Talstar for myoporum thrips in March 09.





Probably, chilli thrips, *Scirtothrips dorsalis*, on naio papa (Tsuda UH-CTAHR)

*Infestation first noted on naio papa, previously infested by the galling myoporum thrips, *Klambothrips myopori*.

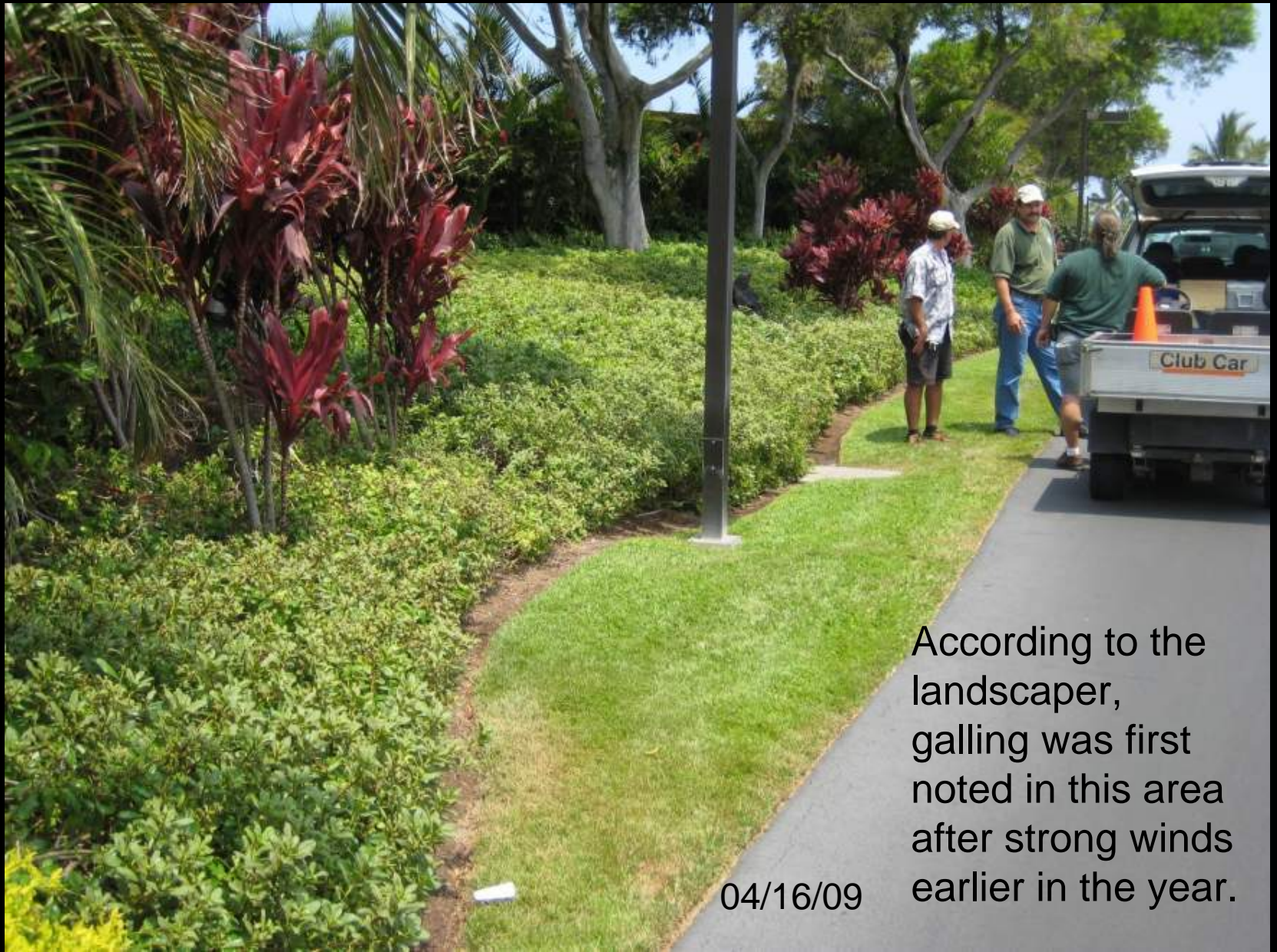


Adult



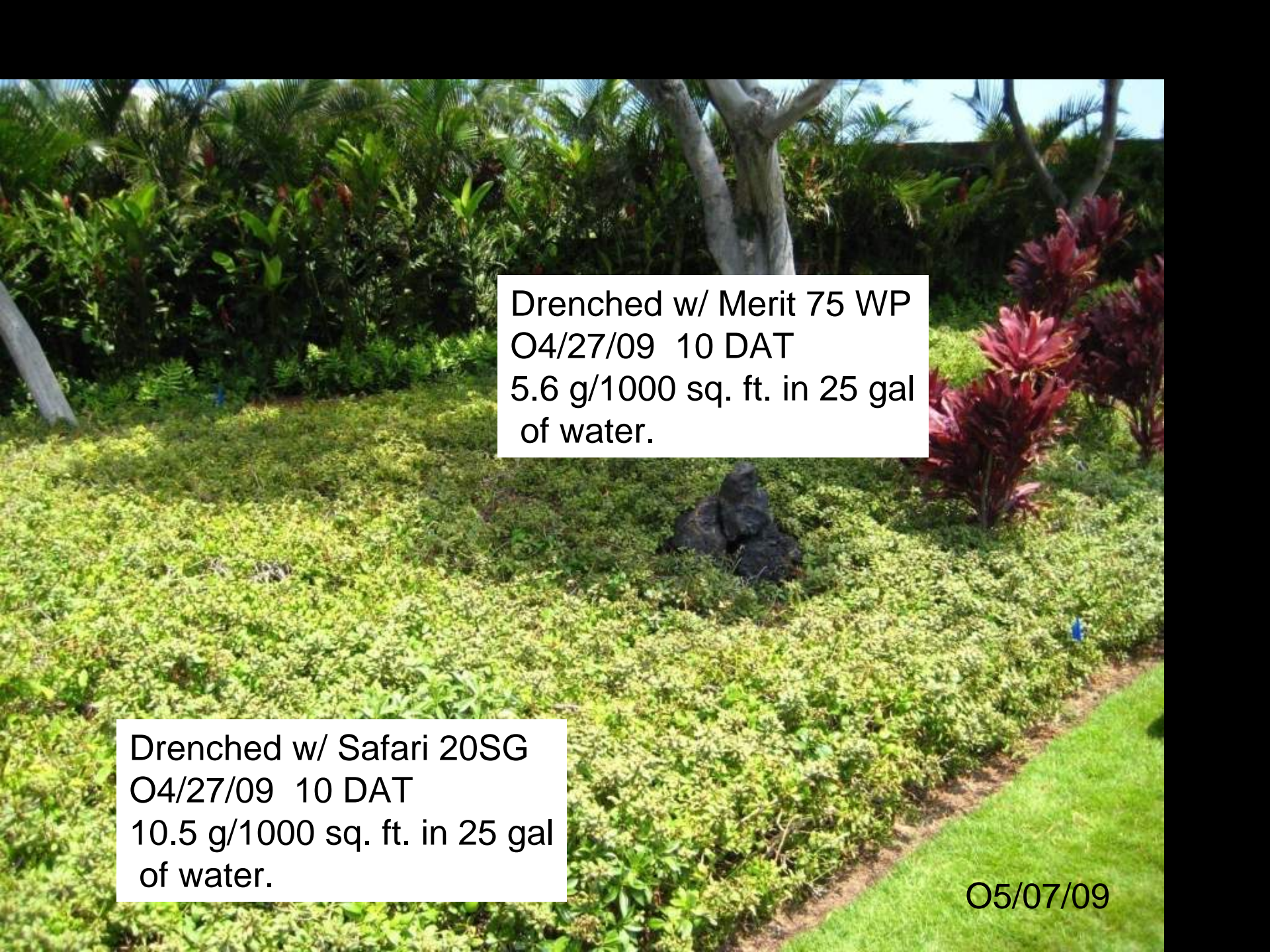
Adults an nymphs

Scirtothrips sp. infestation on naio papa, Maunalani Point
(Previously infested by the galling myoporium thrips.)



According to the landscaper, galling was first noted in this area after strong winds earlier in the year.

04/16/09



Drenched w/ Merit 75 WP
O4/27/09 10 DAT
5.6 g/1000 sq. ft. in 25 gal
of water.

Drenched w/ Safari 20SG
O4/27/09 10 DAT
10.5 g/1000 sq. ft. in 25 gal
of water.

O5/07/09

Areas drenched w/ Safari 20SG and Merit 75 WP 10 DAT remained infested with lots of adult *Scirtothrips* sp. Will resample at 24 DAT and plan to apply Avid and Conserve as a foliar.





Chilli thrips, *Scirtothrips dorsalis* is a polyphagous species with more than 100 recorded hosts from about 40 different families, including peppers, and roses. In Oahu since 1987, reported on African daisy, cucumber, joyweed, false heather.

Distribution: Widespread across Asia, South Africa, Pakistan, India, Bangladesh, Sri Lanka, Thailand, Malaya, Indonesia, New Guinea, Solomon Islands, Australia, Taiwan, Japan, Hawaii, Venezuela, Caribbean Islands Florida, Texas (Probably spreading in the world in the horticultural trade).

Chlorfenapyr (Pylon) was the most effective in reducing the densities of *S. dorsalis* adults and larvae followed by spinosad (Conserve) and imidacloprid (Merit). The performance of other insecticides in controlling *S. dorsalis* populations was inconsistent (Seal et al. 2006).

Bronzing Scirtothrips sp. vs Galling Myoporum Thrips



Two new thrips will probably impact Naio

1. *Klambothrips myopori*



2. *Scirtothrips* sp. prob. *dorsalis*, chilli thrips



Mauna Lani
Resort

Naio Tree
Myoporum sandwicense
This native Hawaiian tree was planted on April 22nd 2008 to commemorate Earth Day

The Reality

- *Many more new invasive species will arrive in Hawaii.
- *Once a new species is discovered in Hawaii, eradication is almost impossible.
- *Exclusion and very early detection is the only effective strategies to prevent the invasion of pest species.
- *Use of pesticides will increase in Hawaii because of these newly established invasive species.