Invasion of Little Fire Ants

Michelle Montgomery Hawai`i Ant Lab

Wasmannia auropuncata Little Fire Ant

- One of the most invasive ant species in the world
- Tiny (1.5mm in length)
- Polygynous
 - Worker: Queen ratio385-549: 1
- Polydomous
 - 3-dimensional supercolonies
- Opportunistic nesters
 - Terrestrial/arboreal







Impacts

- Residential
 - People
 - Pets
- Agriculture
 - Farm phytophagous insects/vectors of plant diseases
 - Competition for nectar resources/reduced pollination
 - livestock
 - Sting workers
- Forest/Undisturbed areas
 - Extirpates other arthropods
 - Birds, reptiles, mammals













LFA in Hawai`i

- Detected in 1999 on Hawai`i Island (Big Island) and Kaua`i
 - Introduced early/mid 1990's to Big Island nursery system
 - Spreading for ~30 years of
- Steady stream of new detections on Maui, Oahu, and Kaua`i since 2015
 - More infestations exist than we know of



Progression and status - Maui



- First detected in 2009
- New site detections every year since 2013
 - Most infestations < 9 ac
- Largest infestation > 175 ac

Progression and status - Oahu



• First detected in 2013

- New site detections every year since 2013
 - Average size ~
- Largest infestation >

Progression and status - Kauai



• First detected in 1999

- New site detections every year since 2019
 - 2 large infestations detected 2022
- Largest infestation > 45 ac

Hawai`i is at a crisis point in regards to LFA

WHAT'S BEING DONE?

...AND WHO'S DOING IT?

Information and methods developed through academic research is applied in realworld situations to detect, manage, and eradicate pests.



Observations from applied work may support findings from academic research or lead to increased need of additional research.



Expertise - Man power - Community relationships - Funding - Policy

- Hawaii Ant Lab (Hawai`i and Oahu islands)
- Big Island Invasive Species Committee
- Maui Invasive Species Committee
- Oahu Invasive Species Committee
- Kauai Invasive Species Committee
- Hawaii Department of Agriculture

Leading research body on LFA in the world

Rapid response, management, eradications

Outreach, extension, trainings, community and industry consulting

Pesticide registrations

Consultant and project partner for island ISCs and HDOA

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Leading response group for Maui LFA

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What's the Future Like?

- Hurdles:
 - Sustainable funding the biggest problem

Cost-Benefit



What kind of Hawai`i do YOU want to live in?

Thank you