

# Biocontrol of Cape Ivy

Kirsten Sheehy  
Tom Dudley  
Adam Lambert



RIVRLAB

RIPARIAN INVASION RESEARCH LABORATORY



San Diego Weed Management Area meeting, 06/06/19

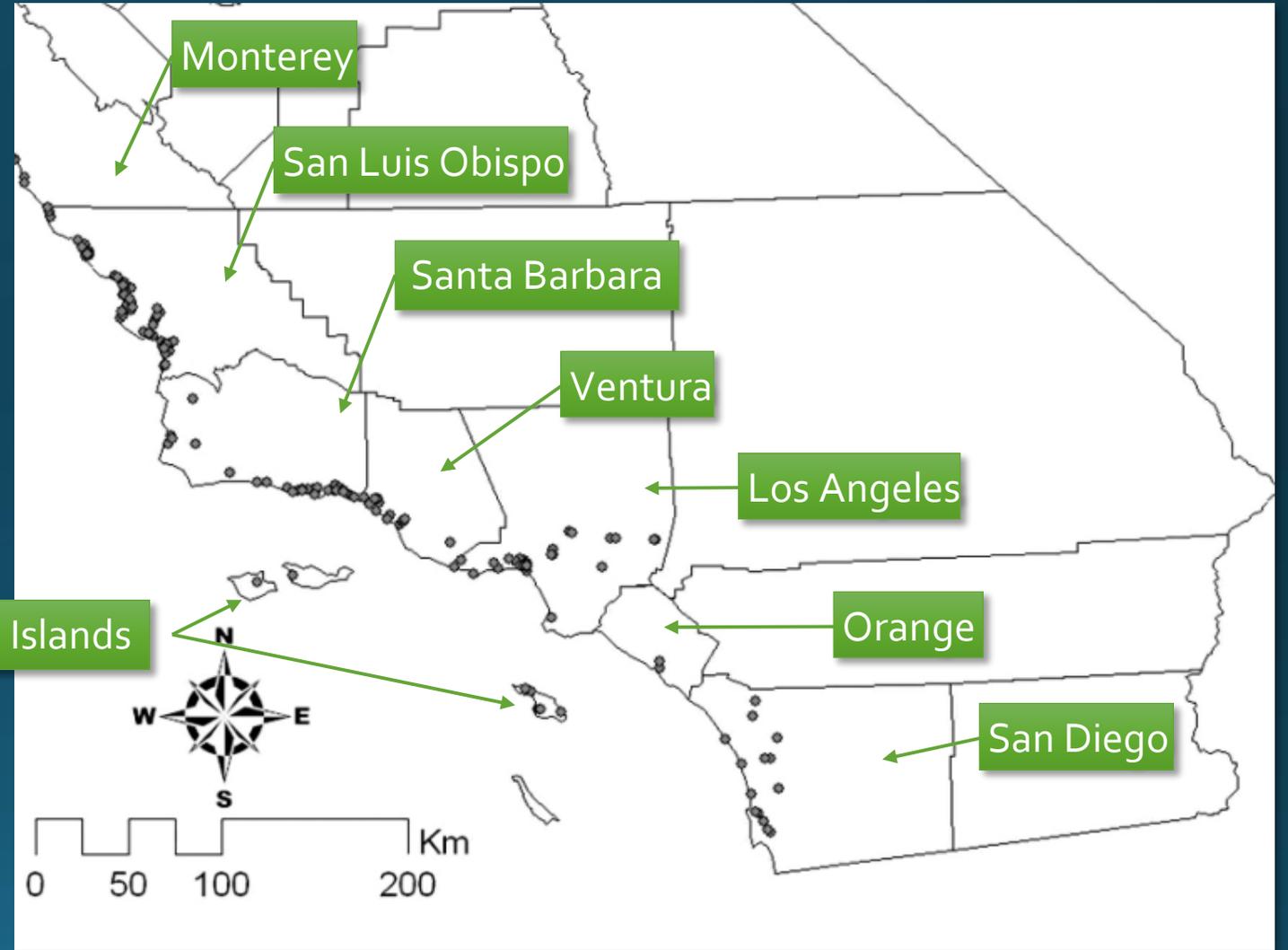
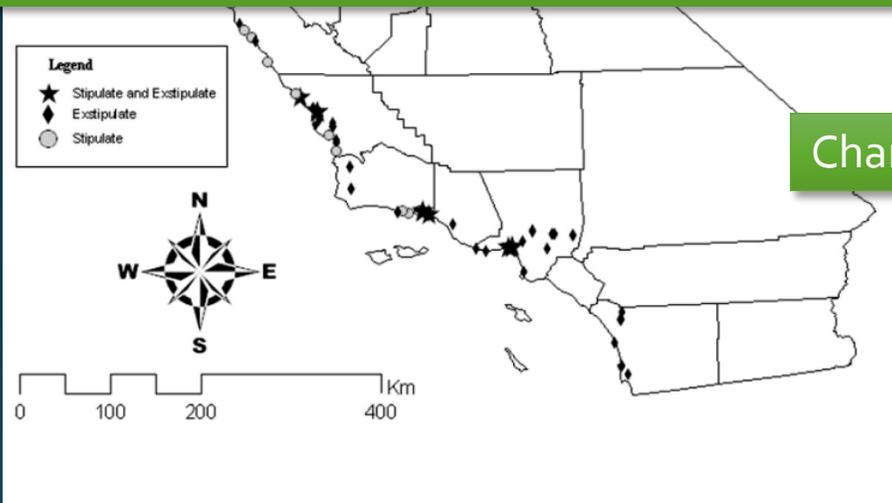
# Cape Ivy, *Delairea odorata*

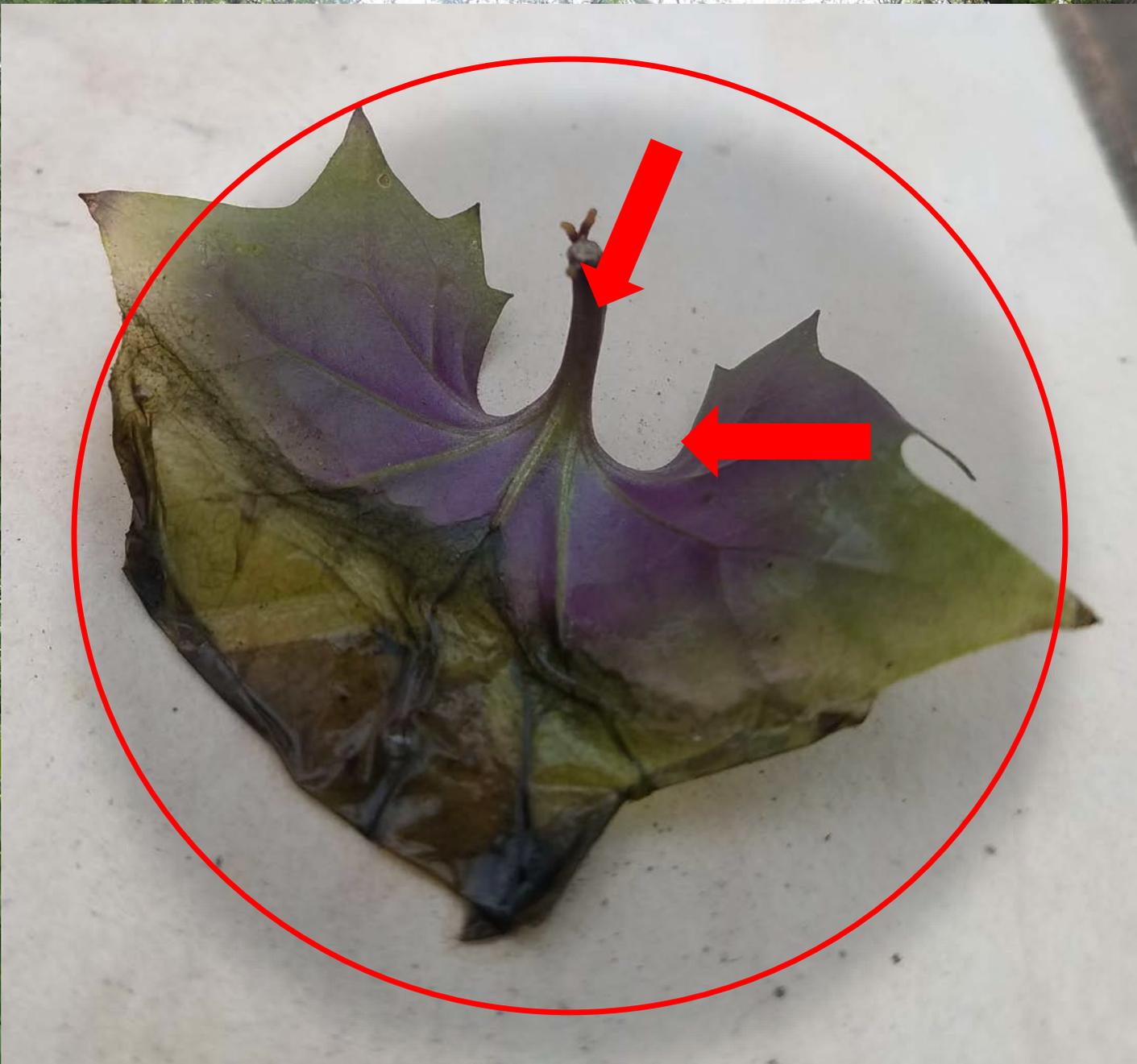
- Perennial, flowering vine
- Native to South Africa
- Brought to California in 1950's



# Distribution

Cape Ivy currently occupies more than 500,000 acres in California  
- CalIPC





# Cape Ivy

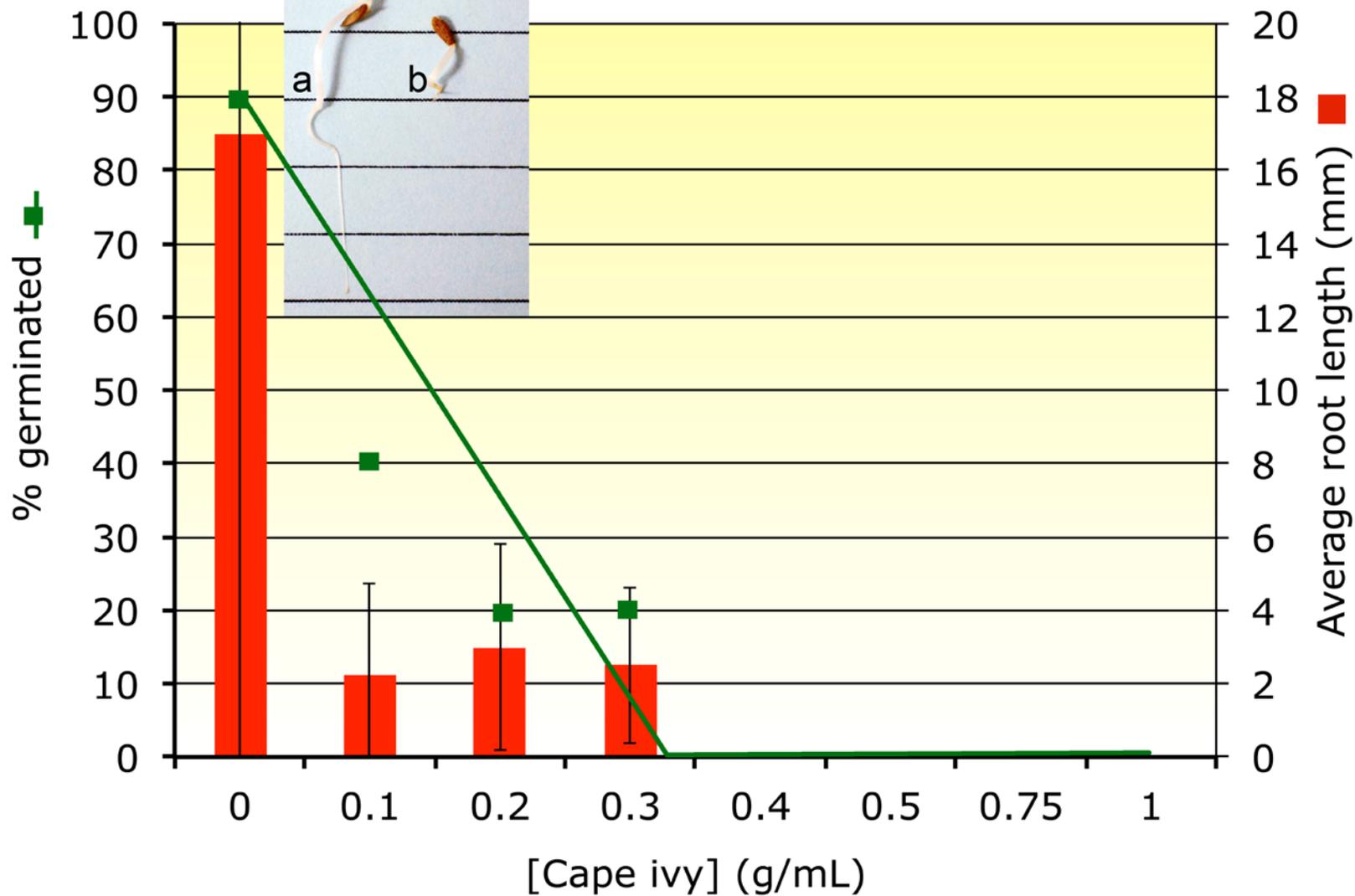
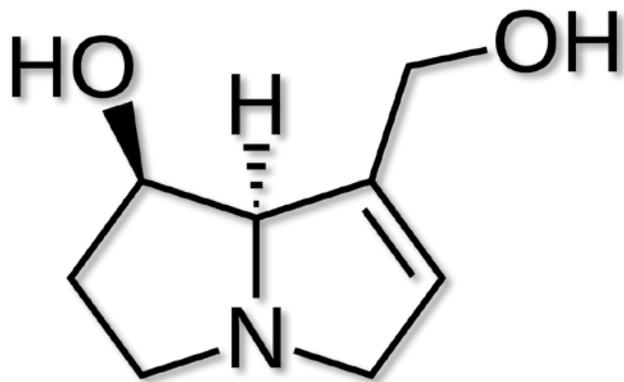
- Found primarily in wet areas
- Smothers vegetation
- Productive in winter
- Flammable when dry
- Spreads easily

Cape Ivy had 36% fewer native plants than plots that had not been invaded by Cape Ivy

- Alvarez & Cushman (2002)

# Toxicity?

pyrrolizidine alkaloids



A. Koszic and C. Case. *Allelopathy and Biotoxicity of Cape Ivy Delairea odorata*, Biology Department, Skyline College, San Bruno, CA.

# Current Control of Cape Ivy



# What is biocontrol?



Biocontrol is the use of one organism to control another



# The Biocontrol Process

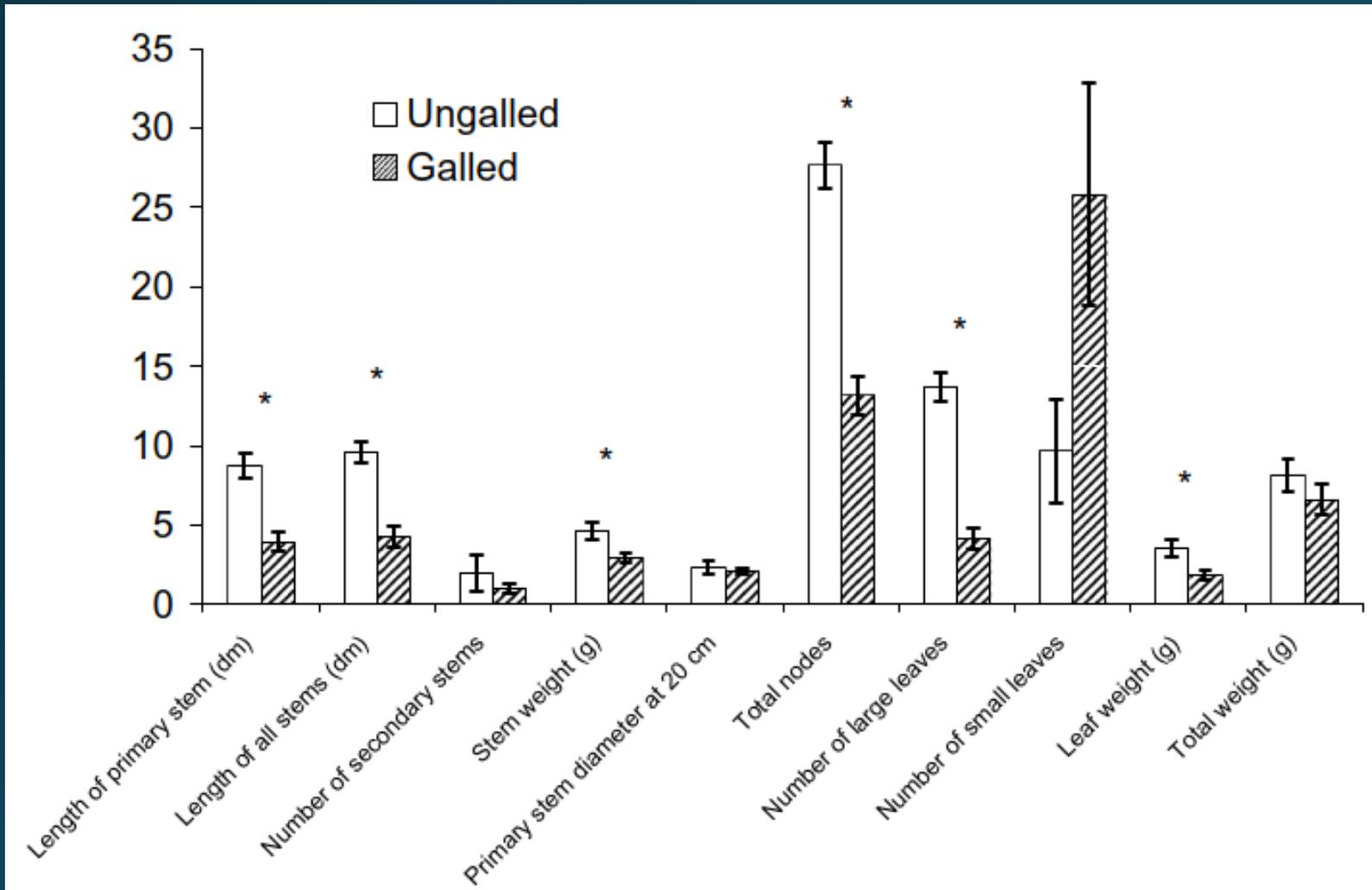
- Identify target organism (often exotic)
- Identify an enemy
- Test and petition for agent approval
  - Choice and No-choice trials
  - Petition the Technical Advisory Group (TAG)
  - USDA review and approval
- Introduce and establish agents



# Cape Ivy Fly, *Parafreutreta regalis*

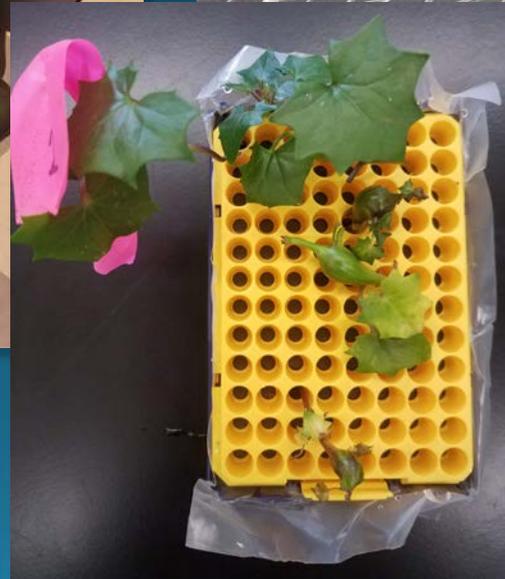


# The Cape Ivy Fly is an effective biocontrol



Balciunas, J. & Smith, L. Prerelease efficacy assessment, in quarantine, of a tephritid gall fly being considered as a biological control agent for Cape-ivy (*Delairea odorata*). *Biol. Control* 39, 516–524 (2006).

# Rearing methods for *Parafreutreta regalis*



# Mass Rearing

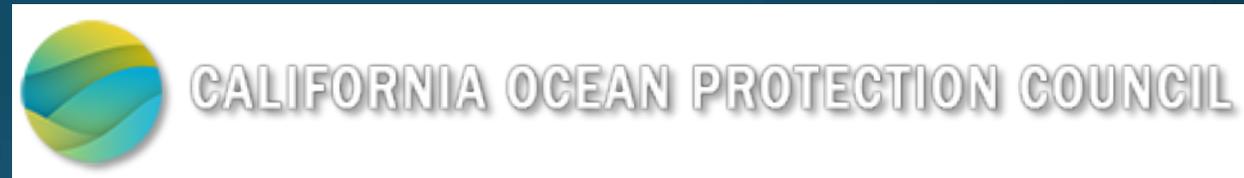


# Field Releases



- ground cover
- canopy cover
- number of flies
- galls produced

# Acknowledgements



# Questions?

