

# Snail Kite Coordinating Committee: Developing Snail Kite Management and Research Priorities

Joint Working Group/  
Science Coordination Group meeting

April 2, 2014

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On behalf of the Committee

# History of Snail Kite Coordinating Committee

Population crash concerns

Alternative hypotheses of  
problems/solutions

Research done in isolation

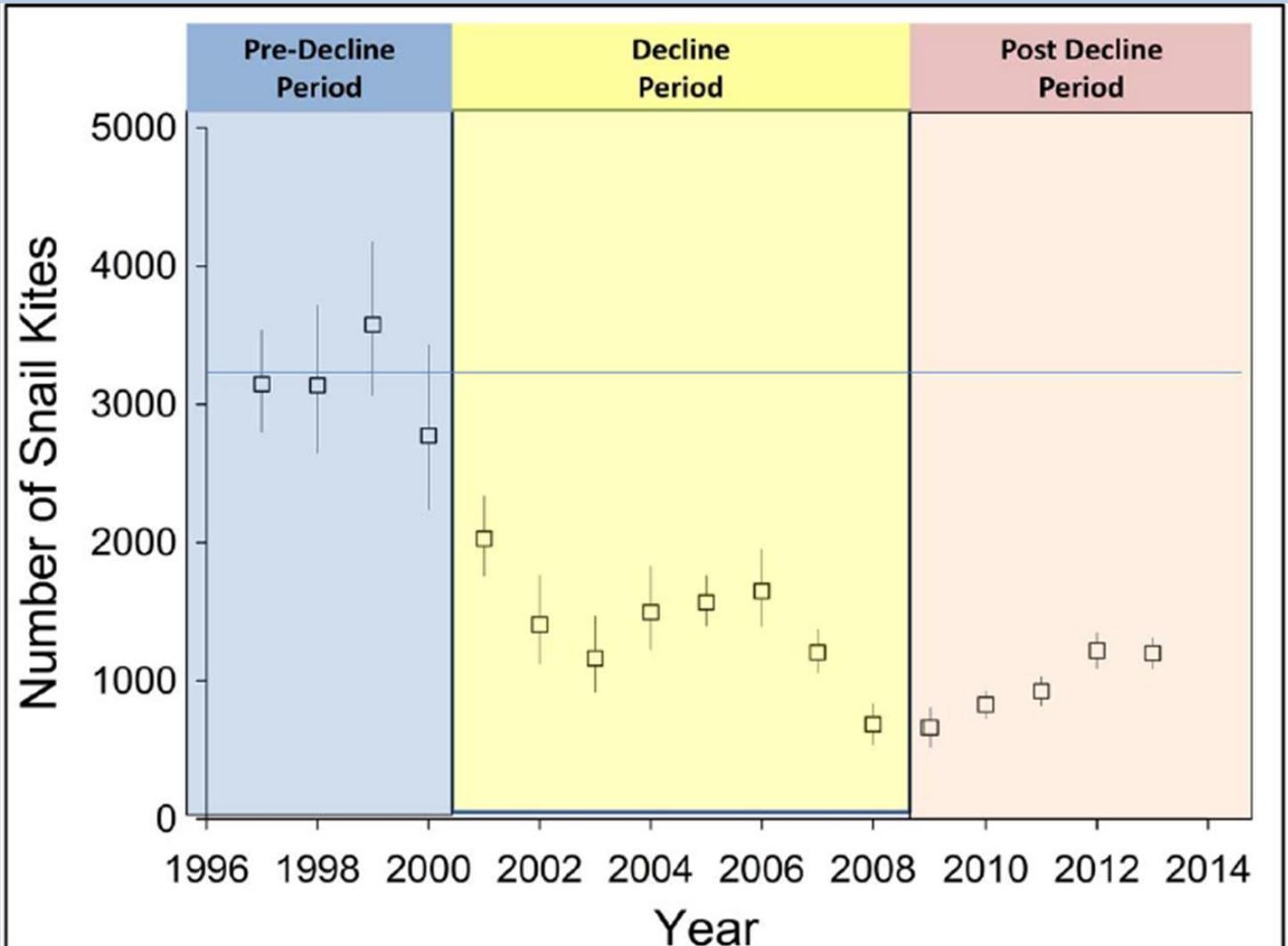
Need for coordination/clearinghouse  
for ideas and actions

First two meetings in 2013

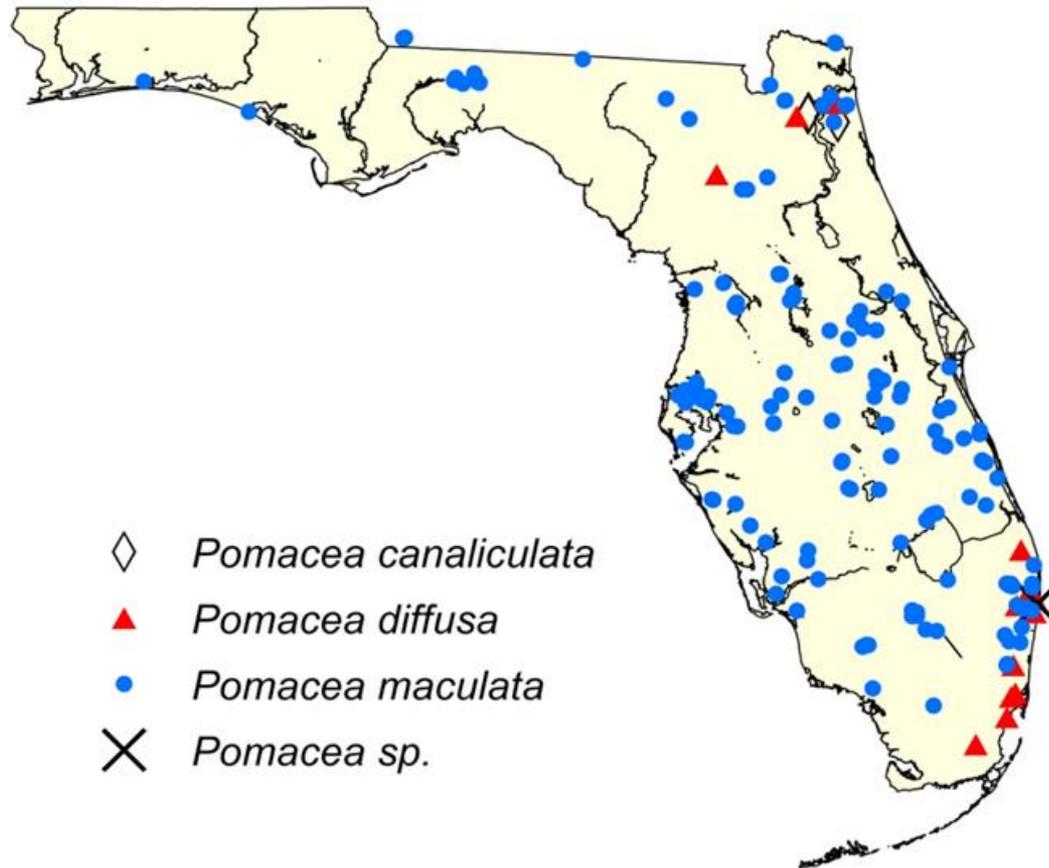
Specialized to eat apple snails



# Kite population trends

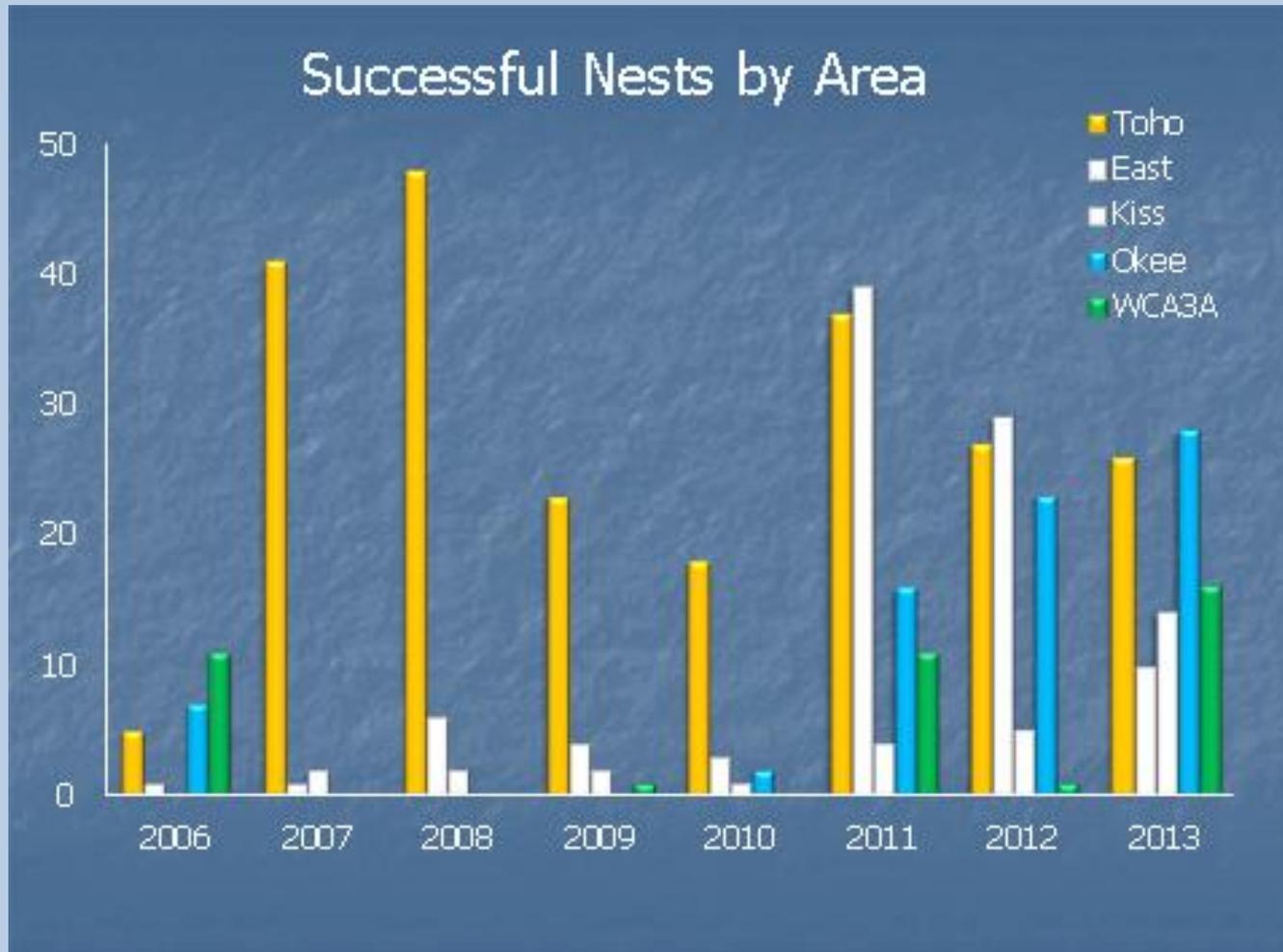


# Exotic snail invasion

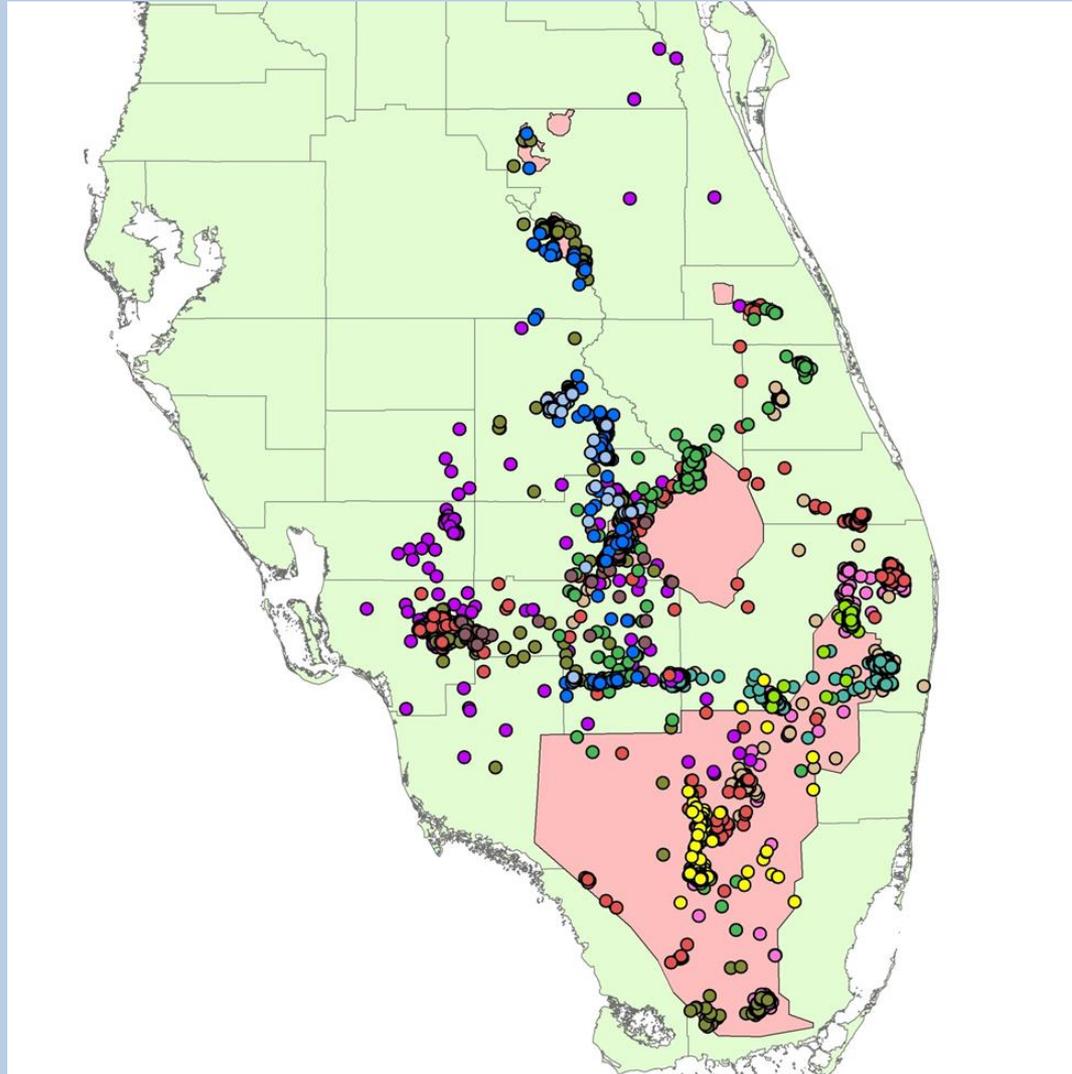




# Kite nesting distribution changes



# 35,734 GPS/satellite locations for 12 adult Snail Kites (1 color/bird) in 2012 and 2013



# Excerpt from the Snail Kite Coordinating Committee Mission Statement

The Coordinating Committee is a voluntary, cooperative group improving communication and coordination among the researchers, managers, and others working with kites.



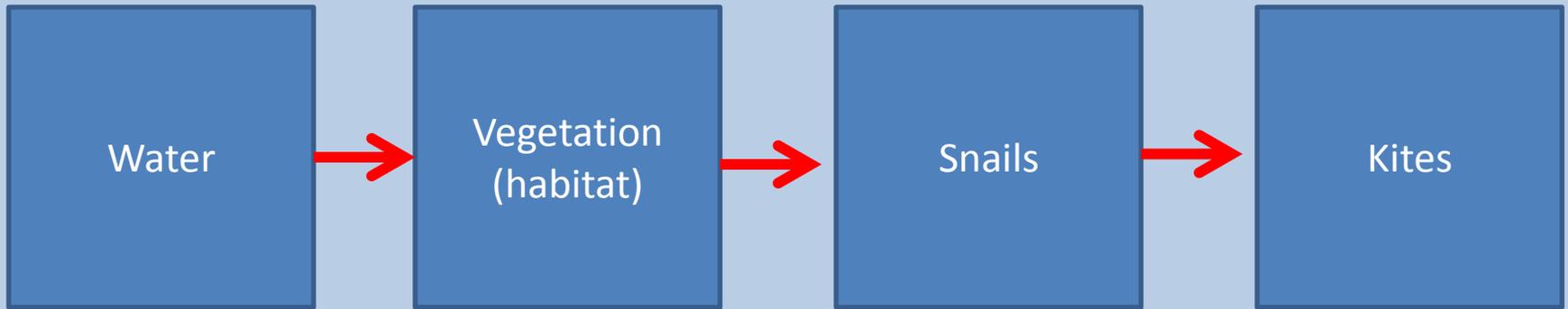
# Participants to date

- Federal
  - National Park Service
  - US Army Corps of Engineers
  - United States Fish and Wildlife Service
  - United States Geological Survey
- State
  - Florida Fish and Wildlife Conservation Commission
  - South Florida Water Management District
- University
  - Florida Atlantic University
  - University of Florida
  - University of West Florida
- Other
  - Audubon Florida
  - Avian Research and Conservation Institute
  - Miccosukee Tribe
  - Palm Beach Solid Waste Authority



# Committee members submitted priority issues

- Priorities vary according to entity and their responsibilities
- One goal of the next committee meeting is to develop consensus-based science priorities, and use these to coordinate Snail Kite science and management among participants



# APPLE SNAILS:

## most-mentioned topic of interest

- Why are natives failing to thrive?
  - Hydrology—too long, short, erratic?
  - WCA3 remains without dense populations, natives declined before exotics arrived
  - Does not appear to be competition with exotics
  - Contaminants?
- What are tradeoffs with exotics?
  - Plant community impacts in STAs and natural systems
  - Differential responses of native vs. exotic snails

# APPLE SNAILS AND KITES

- Does snail density drive Kite use?
  - How is density related to reproductive success?
  - What is density/availability interaction?
- How much are exotics changing Kite distribution, reproduction, and survival?
  - Kites still an indicator?
- Optimal sampling approach for linking snails to Kites?
  - Sampling matrix: on-site and regional

# Kites

- Monitoring: getting accurate counts in the face of change
  - Exotic snails
  - Hydrology/habitat variability
  - Peripheral wetlands present new issues
- Demography: nest success, survival of adults and juveniles
  - What environmental factors are most important to the above (e.g., vegetation, hydrology, weather, snail densities and distribution, contaminants)?
  - Limiting factors for population growth

# Kites cont'd

- Hydrology: what yields best habitat?
  - Needs at different life stages, e.g., nesting substrate, foraging
  - What vegetation characteristics are the best Kite predictors, and what is the best way to monitor and measure them?
    - Species
    - Structure
    - Heterogeneity

# Management

- Kites and regulation schedules (ERTP, LORS, KCOL, Water Supply Management)
  - Hydrological changes during and after restoration
- STAs: exotic snails and eat-outs, nesting, buffer zones for workers
- Aquatic plant management: disturbance, habitat alteration, sub-lethal effects

# Summary

- Need to integrate studies between hydrology, vegetation, snails, and Kites
  - Includes data mining
- Snails: we need lab and field studies
- Monitoring program designed to deal with many issues, but needs ongoing evaluation to address current issues
  - Track population changes
  - Use as a management and research tool

# Snail Kite Coordinating Committee Fall meeting

- Committee-wide priorities
- Breeding season summaries
- Research progress
- Monitoring progress
- Management issues

