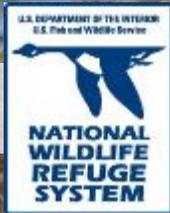
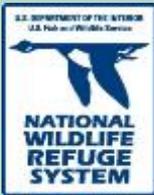


Bird Species of Special Concern

Florida Keys NWR Complex



Kate G. Watts, Lead Wildlife Biologist



Bird Species of Special Concern



White-crowned Pigeon



Reddish Egret



Magnificent Frigatebird



Great White Heron

White-crowned Pigeon

Patagioenas leucocephala

Species status:

ESA: Not yet listed

Florida: State Threatened

FNAI: Globally Rare, State Rare

Audubon: Watchlist

IUCN Red List: Near Threatened



Primary Threats:

- Liberal hunting regs in Caribbean countries (especially Bahamas)
- Habitat degradation and deforestation in Keys (hardwood hammock)

Indicator species for
tropical hardwood hammock
AND
mixed mangrove island health

Habitat Requirements

FORAGING

- Tropical hardwood hammock (berries)

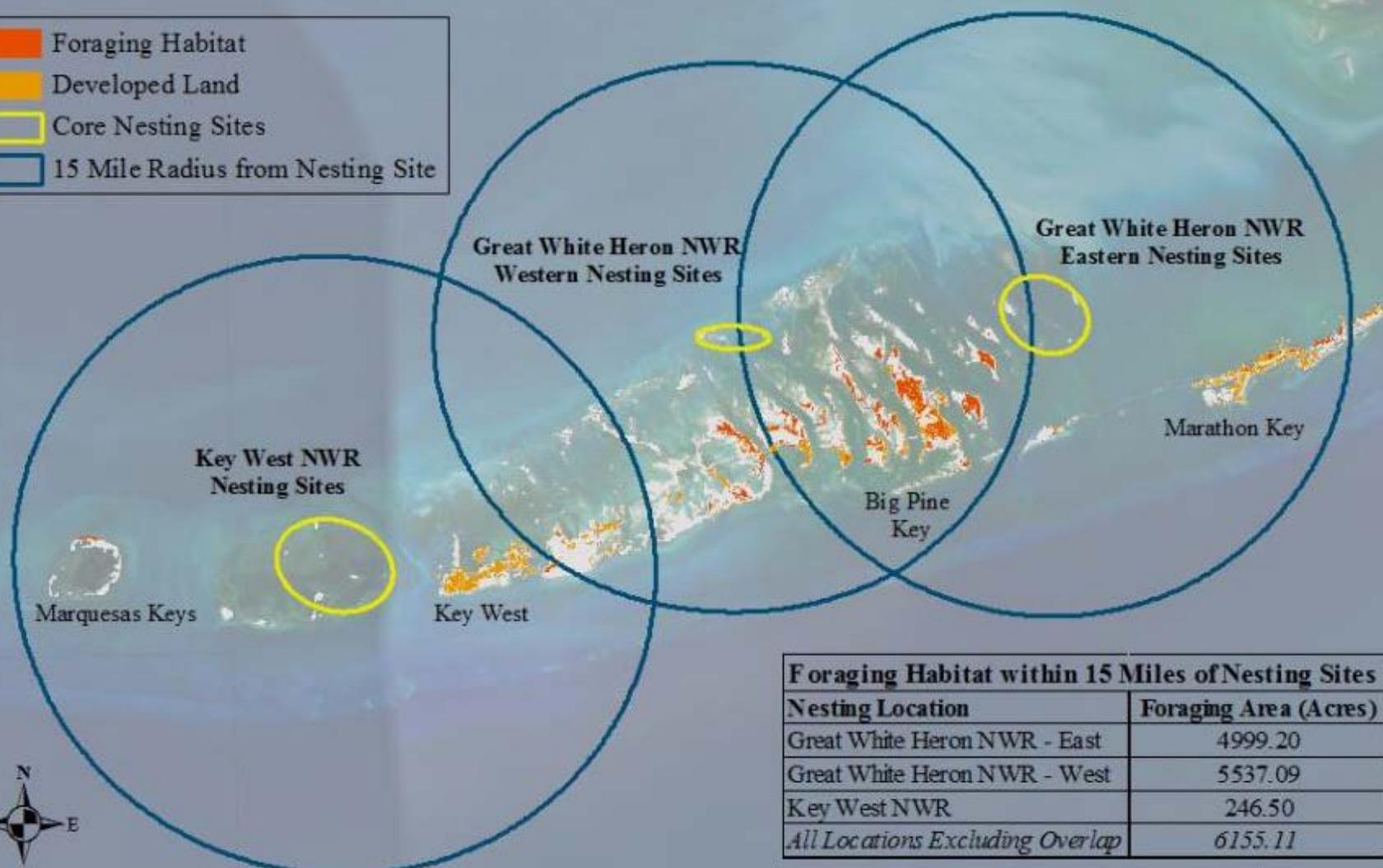
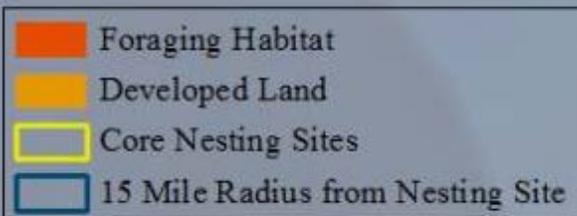
NESTING

- Red and black mangrove islands in Great White Heron and Key West NWR
- Preferably, the island is void of major predators (black rats and iguanas)
- Within 15 miles of foraging area



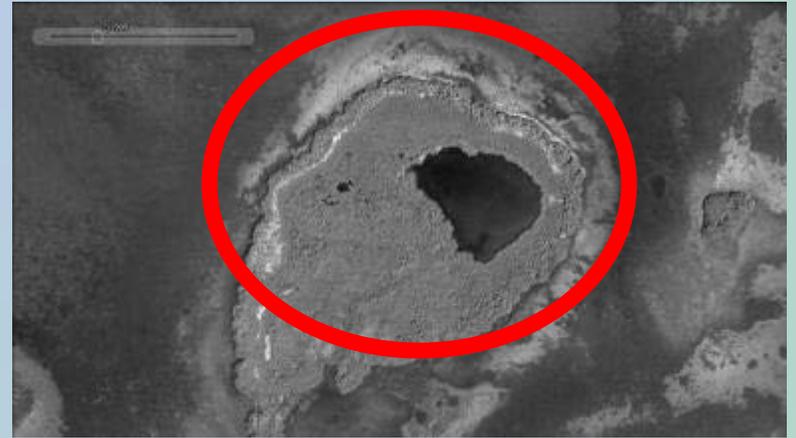
White Crowned Pigeon Foraging Habitat Florida Keys National Wildlife Refuges Complex

DRAFT



Foraging Habitat within 15 Miles of Nesting Sites	
Nesting Location	Foraging Area (Acres)
Great White Heron NWR - East	4999.20
Great White Heron NWR - West	5537.09
Key West NWR	246.50
<i>All Locations Excluding Overlap</i>	<i>6155.11</i>

Sawyer Key Nesting Area, Post-Hurricane



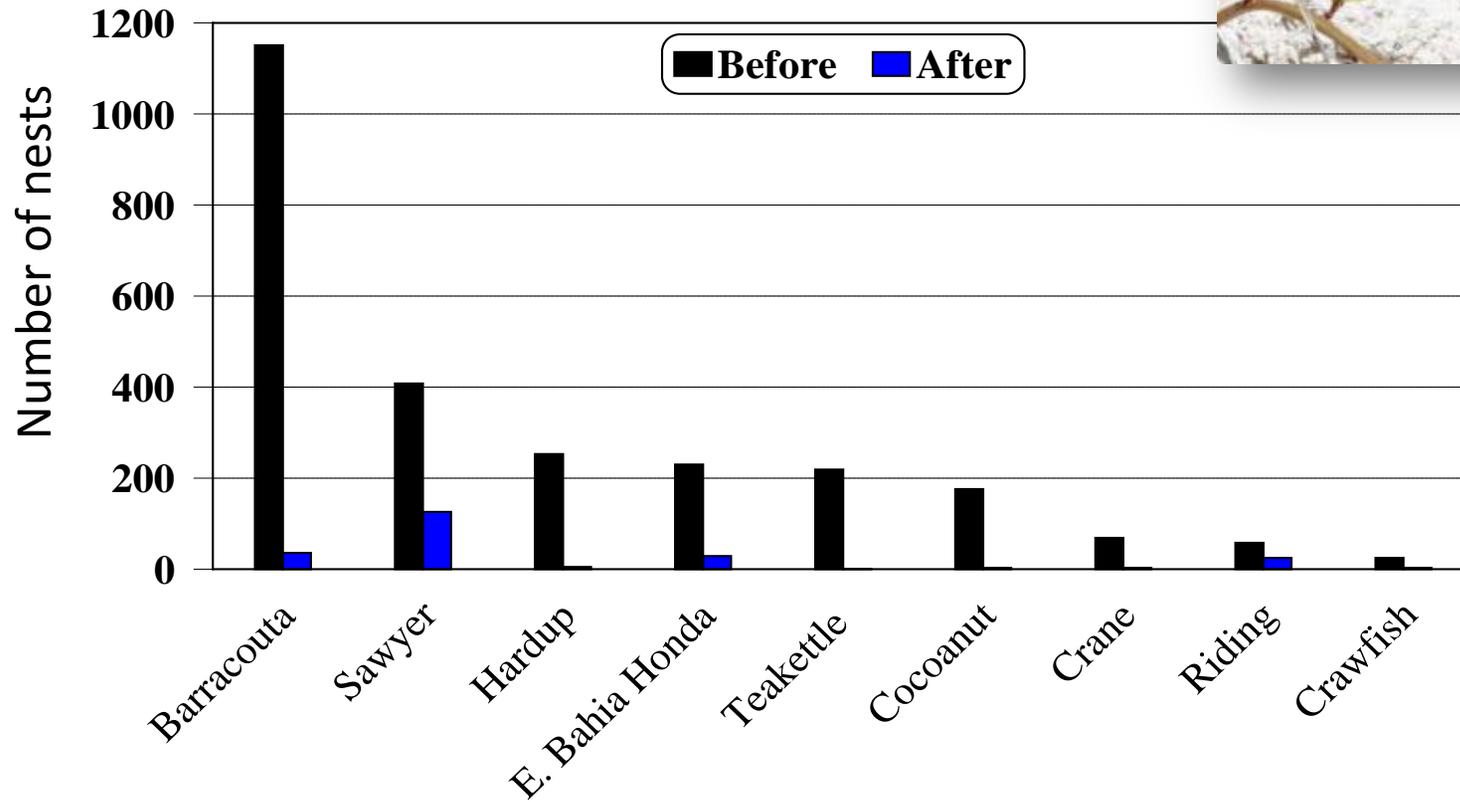
Nesting and foraging habitat losses from major storms

Barracouta Key, 1999, 2006, 2010

Impacts of Major Storms



Number of nests before and after Hurricane Dennis.



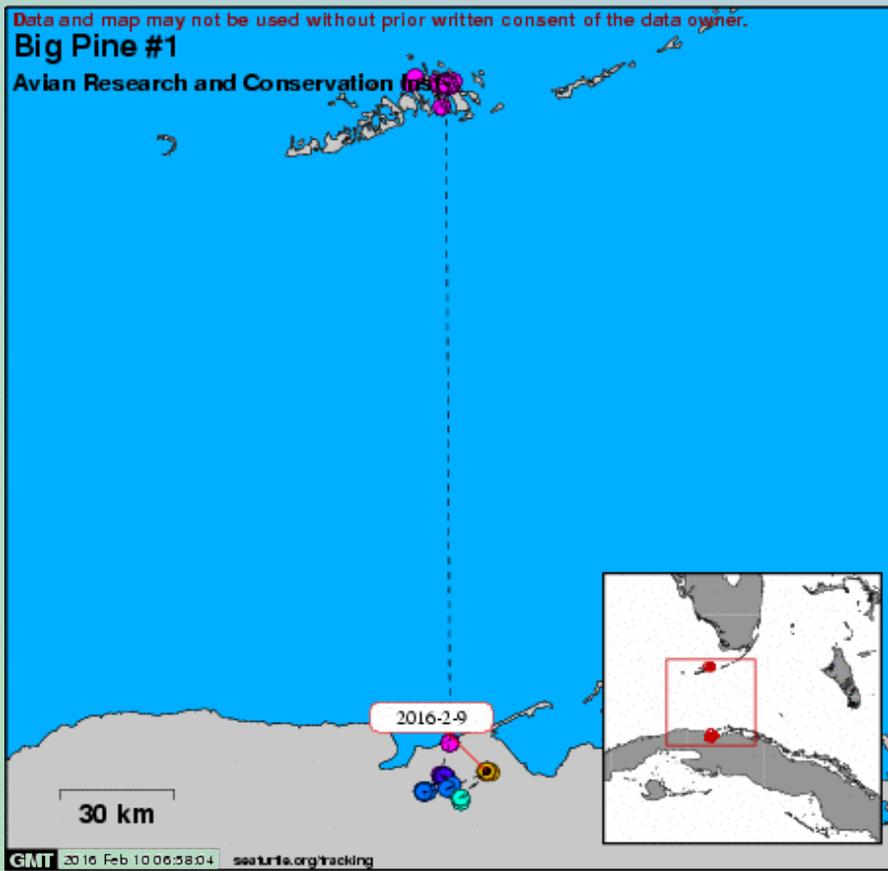


Satellite Telemetry White-crowned Pigeons



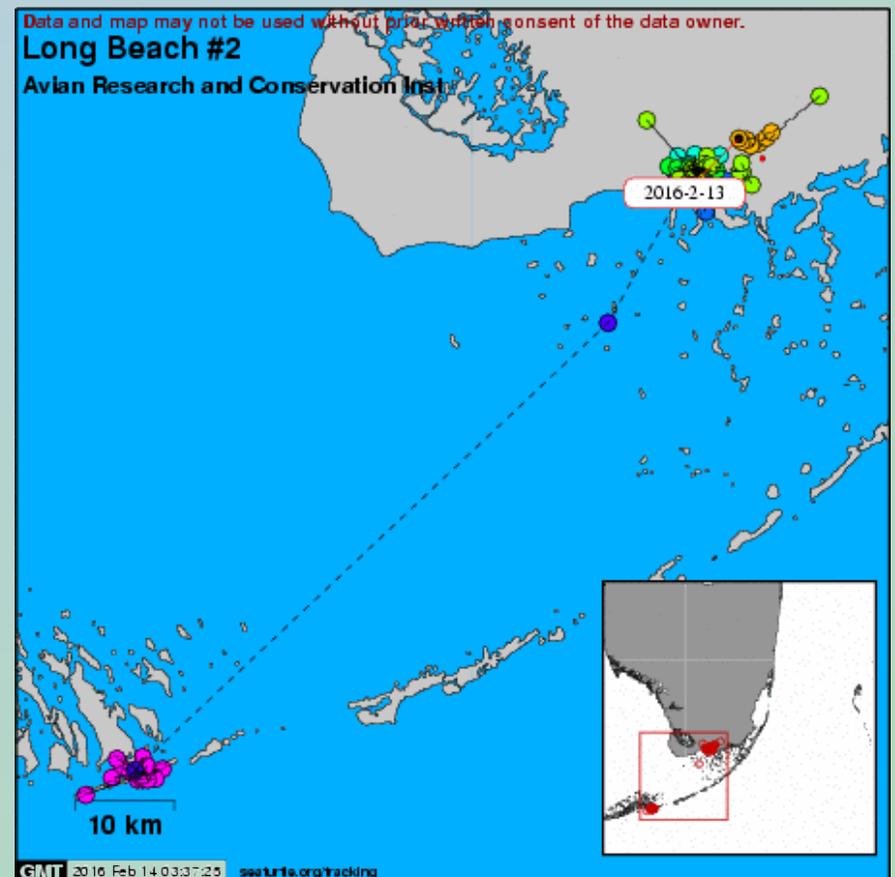


Satellite Telemetry White-crowned Pigeons



Distance Traveled: 313 km Straight-line Distance: 190 km

Female: Sept 2015 - Present



Distance Traveled: 280 km Straight-line Distance: 86 km

Gender Unknown/Sub-Adult:

Oct 2015 - Present

Species status:

ESA: Not yet listed

FWC: Species of Special Concern

FNAI: State Imperiled

Audubon: Watchlist

IUCN Red List: Near Threatened

Primary Threats:

- Human disturbance
- Limited foraging area
- Unknown cause of low productivity



Reddish Egret

Egretta rufescens

Indicator species for **shallow tidal flats and salt pond** health

Habitat requirements:

FORAGING

- ❖ shallow tidal streams with firm, unvegetated bottoms that flow between areas of deeper water or drain tidal pools



NESTING

- ❖ Small red and black mangrove islands lacking predators





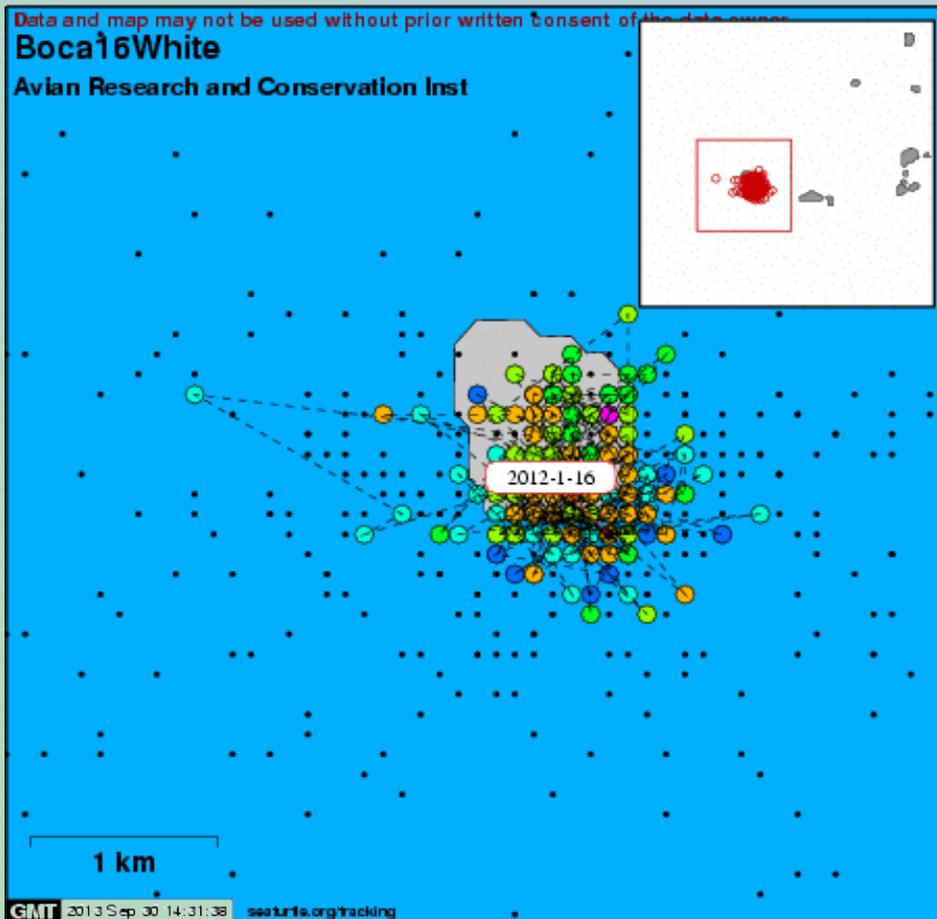
Primary Reddish Egret Nesting Areas

 Reddish egret nesting



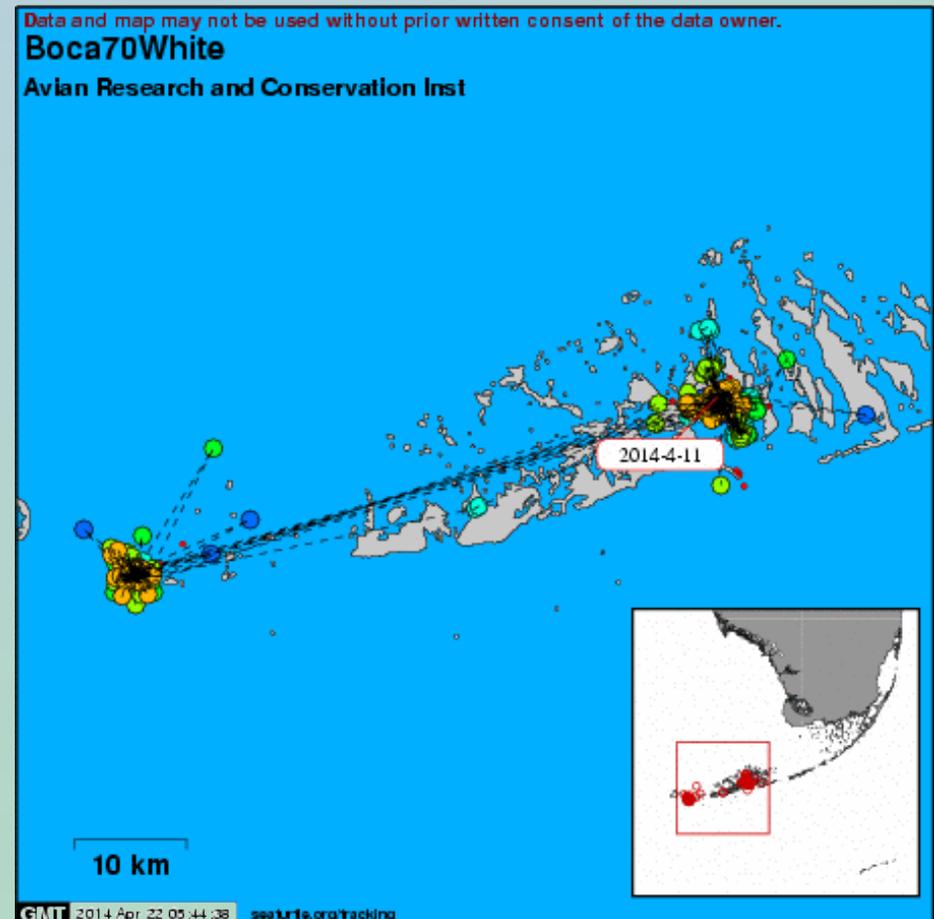


Satellite Telemetry REDDISH EGRETS



Distance Traveled: 118 km Straight-line Distance: 0 km

Male: Jul 2010 – Jan 2012



Distance Traveled: 1420 km Straight-line Distance: 54 km

Female: Jan 2009 – Apr 2014

Species status:

ESA: Not yet listed

FNAI: Critically Imperiled in FL

Audubon: Watchlist

IUCN Red List: Least Concern

Primary Threats:

- Hunting in Caribbean
- Human disturbance during nesting
- Declines in foraged populations



Magnificent Frigatebird

Fregata magnificens

Indicator of **marine ecosystem** health
(and good fishing spots!)

Habitat Requirements

Nesting

- Mature black/red mangroves
- Minimal disturbance
- Leeward side of island
(1.5-2 year breeding period,
post-fledge freeloaders)

Foraging

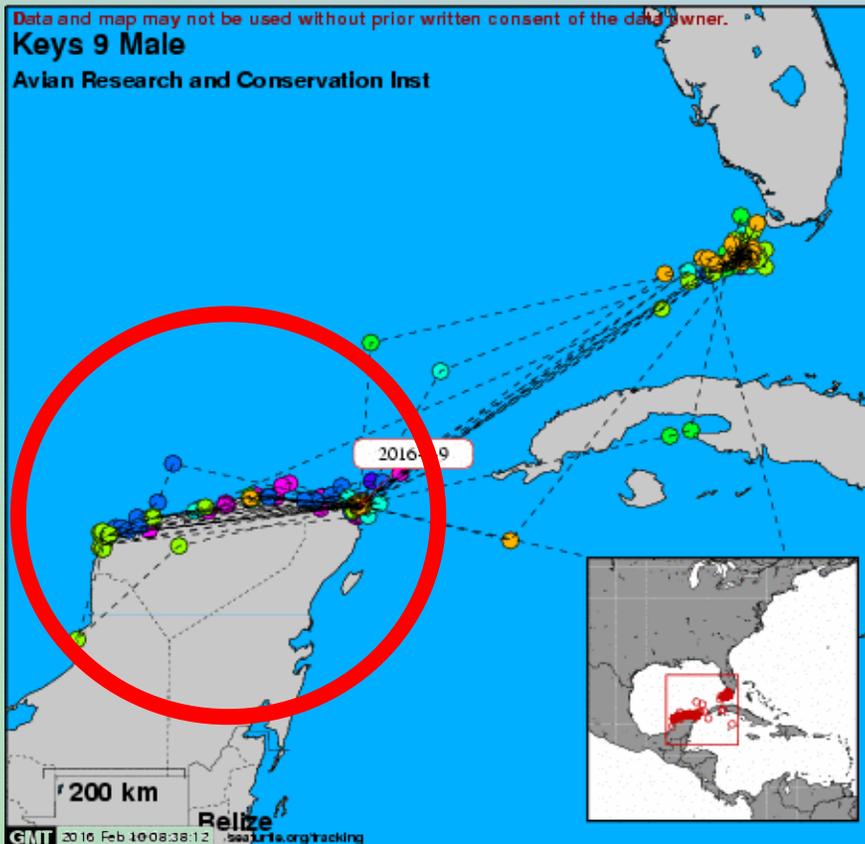
- Kleptoparasites (aren't able to get wet)
- Flying fish/squid/jellyfish/baitfish spp.

Wintering/Roosting (Non-Breeding)

- Black/red mangroves
- Minimal disturbance
- Leeward side of island



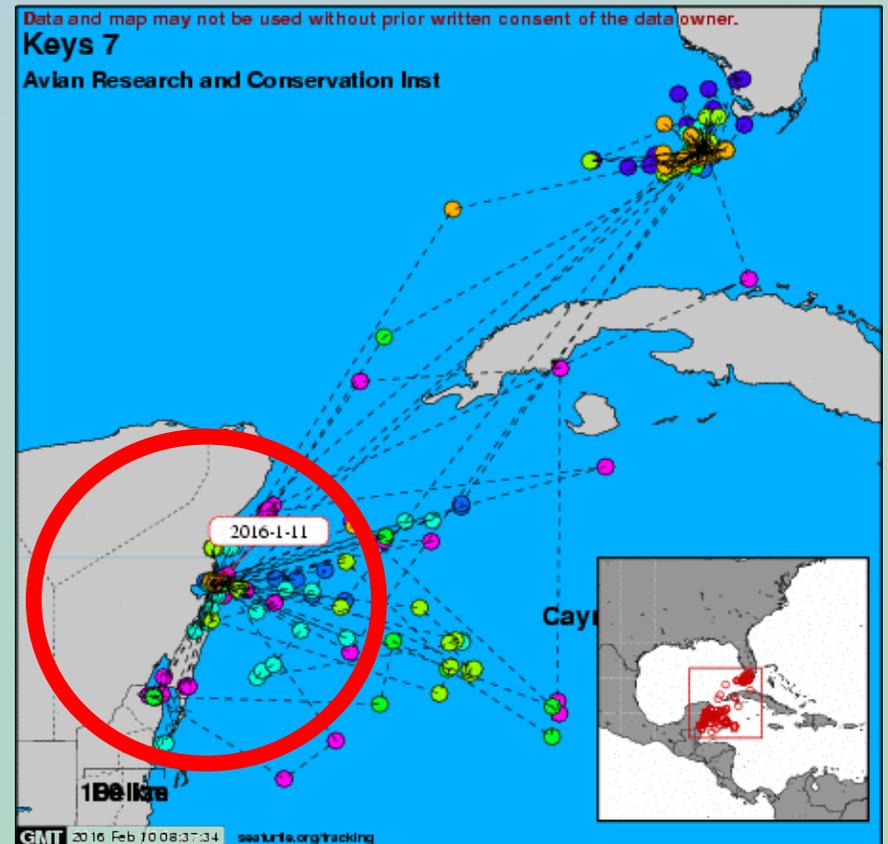
Satellite Telemetry MAGNIFICENT FRIGATEBIRDS



Distance Traveled: 25822 km

Straight-line Distance: 621 km

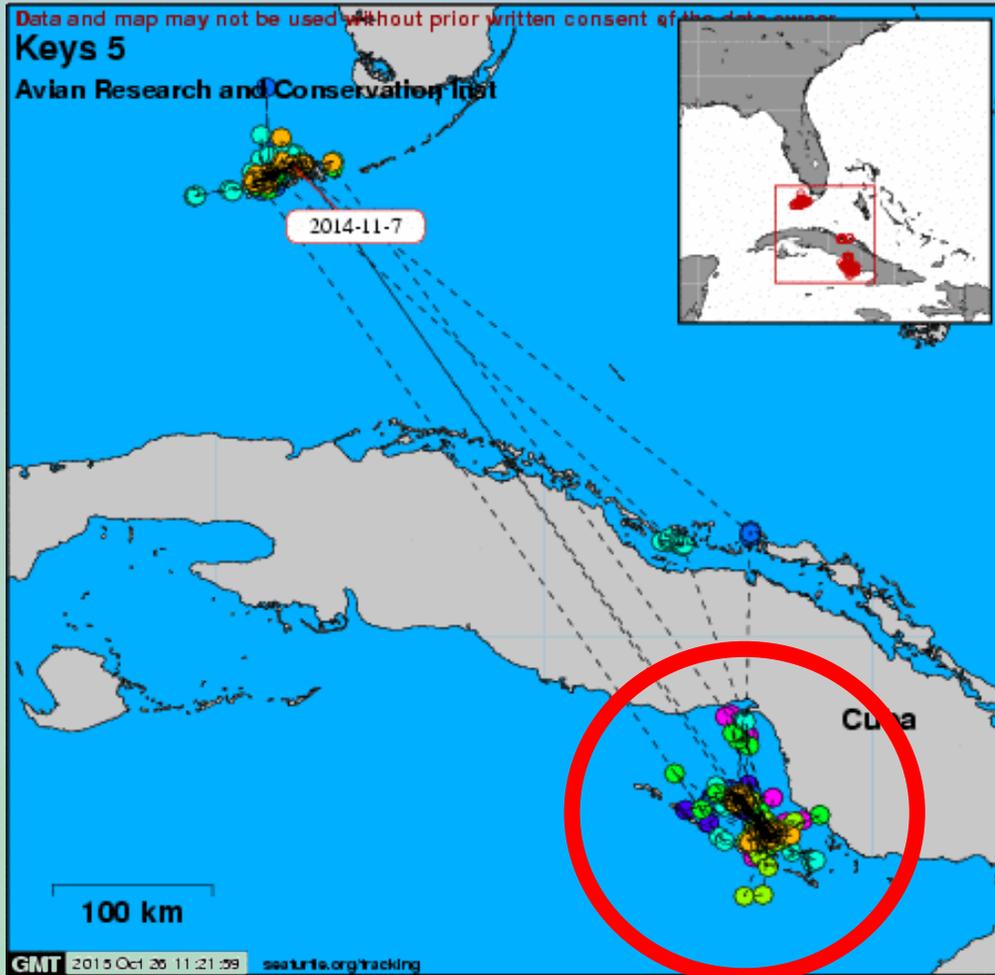
Keys Male: Oct 2012 – Present



Distance Traveled: 24849 km

Straight-line Distance: 820 km

Keys Female: Oct 2012 – Present



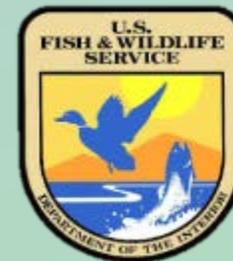
Distance Traveled: 9206 km

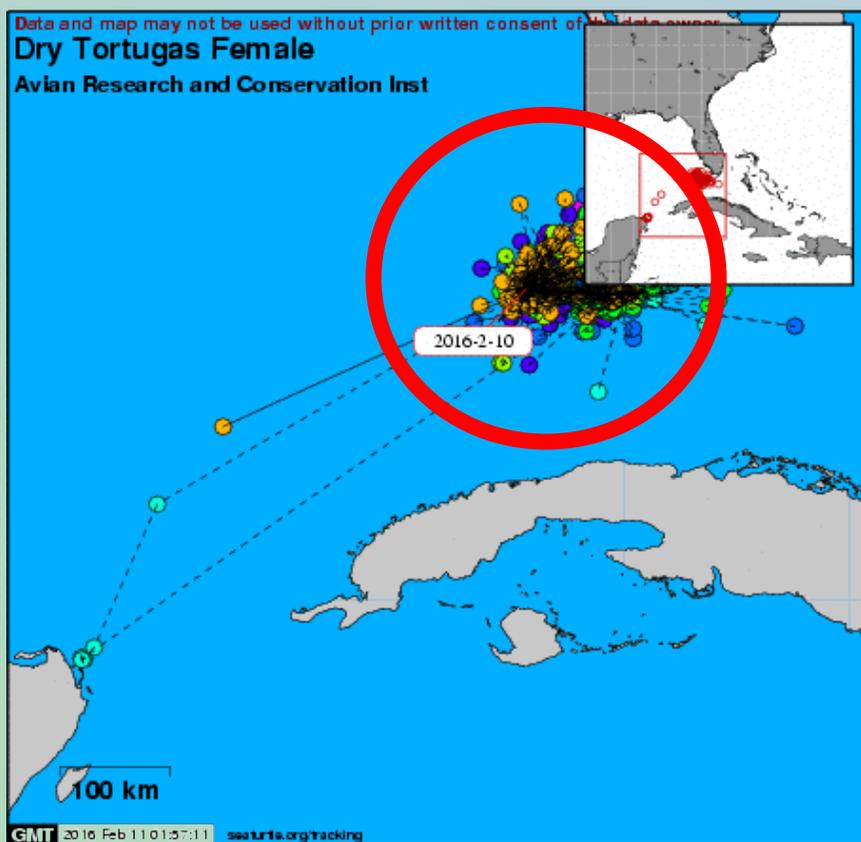
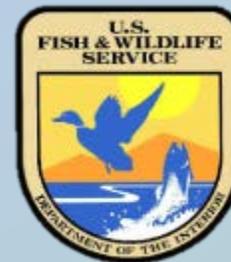
Straight-line Distance: 6 km

Keys Female: Oct 2012 – Nov 2014



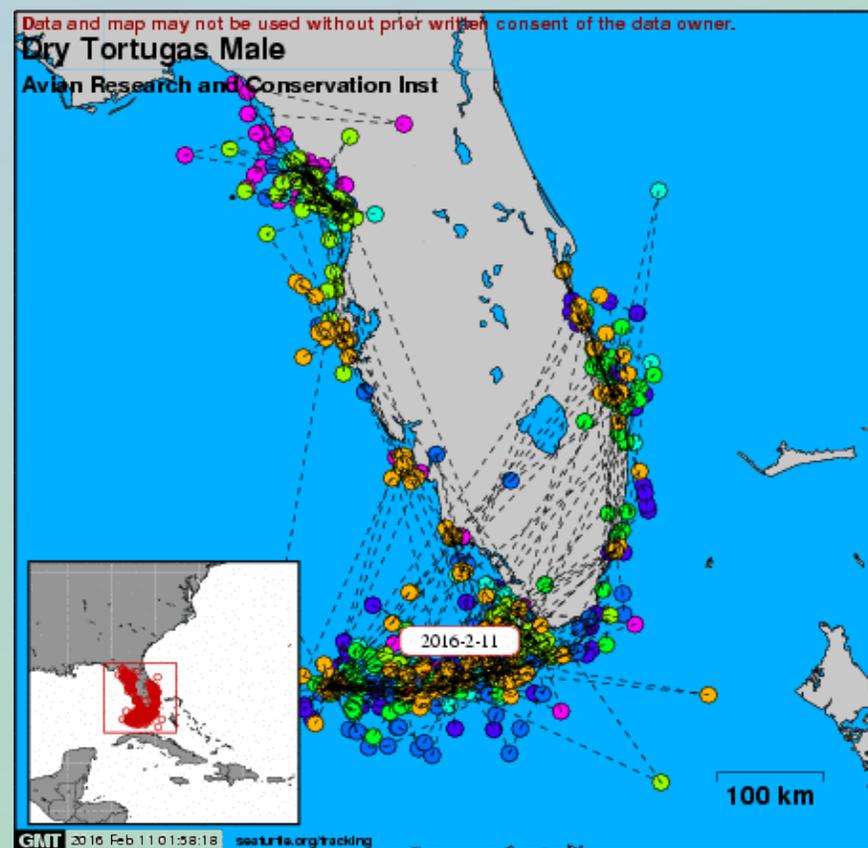
Satellite Telemetry MAGNIFICENT FRIGATEBIRDS





Distance Traveled: 29197 km Straight-line Distance: 8 km

Dry Tortugas Female:
May 2013 – Present

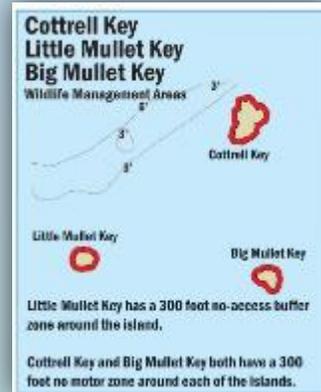
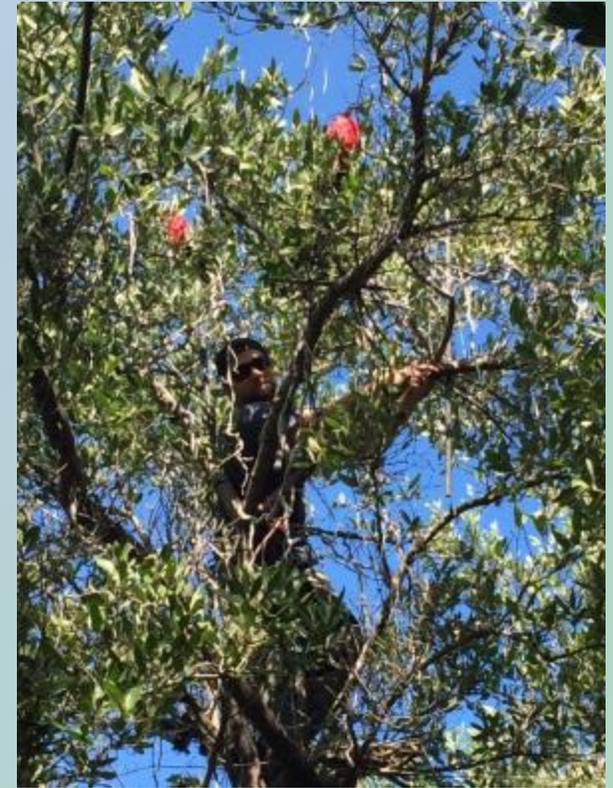


Distance Traveled: 46097 km Straight-line Distance: 73 km

Dry Tortugas Male:
May 2013 – Present

Historic nesting on Marquesas Key





Social Attraction Pilot Project

~5 Breeding Seasons

Three sites within Key West NWR

Decoys, audio callers,
supplemental nesting materials

Monitoring bird response



Species Status:

ESA: Not yet listed

FWC: Species of Special Concern

FNAI: Globally Imperiled/Imperiled in Florida

Audubon: Watchlist

IUCN Red List: Not Recognized as Species/Subspecies

Threats:

- Formerly human predation caused drastic decline
- Loss of contiguous seagrass foraging areas
- Major storms can cause significant mortality
- Human disturbance



Great White Heron

Ardea herodias occidentalis

- Indicator species for contiguous seagrass beds *AND* mixed mangrove island health

Habitat Requirements:

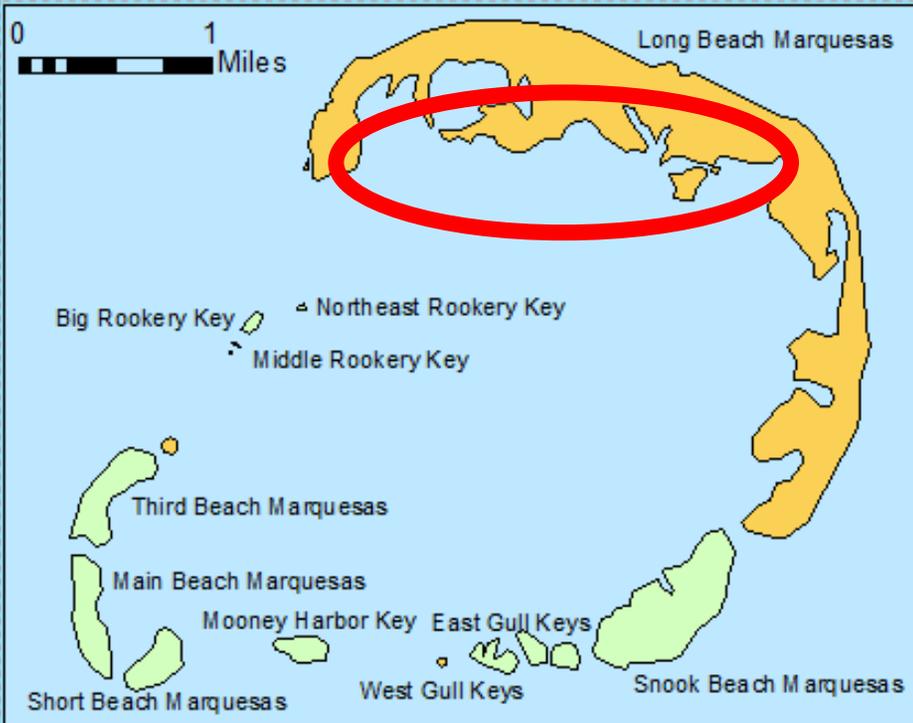
Nesting

- Coastal & estuarine areas, usually black and red mangroves (minimal disturbance)

Foraging

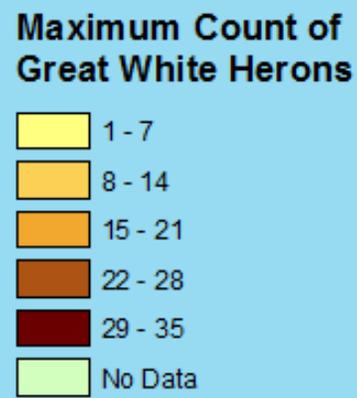
- Feeds on *Thalassia* beds and mudflats along coast & interior (primarily fish and crustaceans)





NESTING

High Counts of Great White Herons since 2005

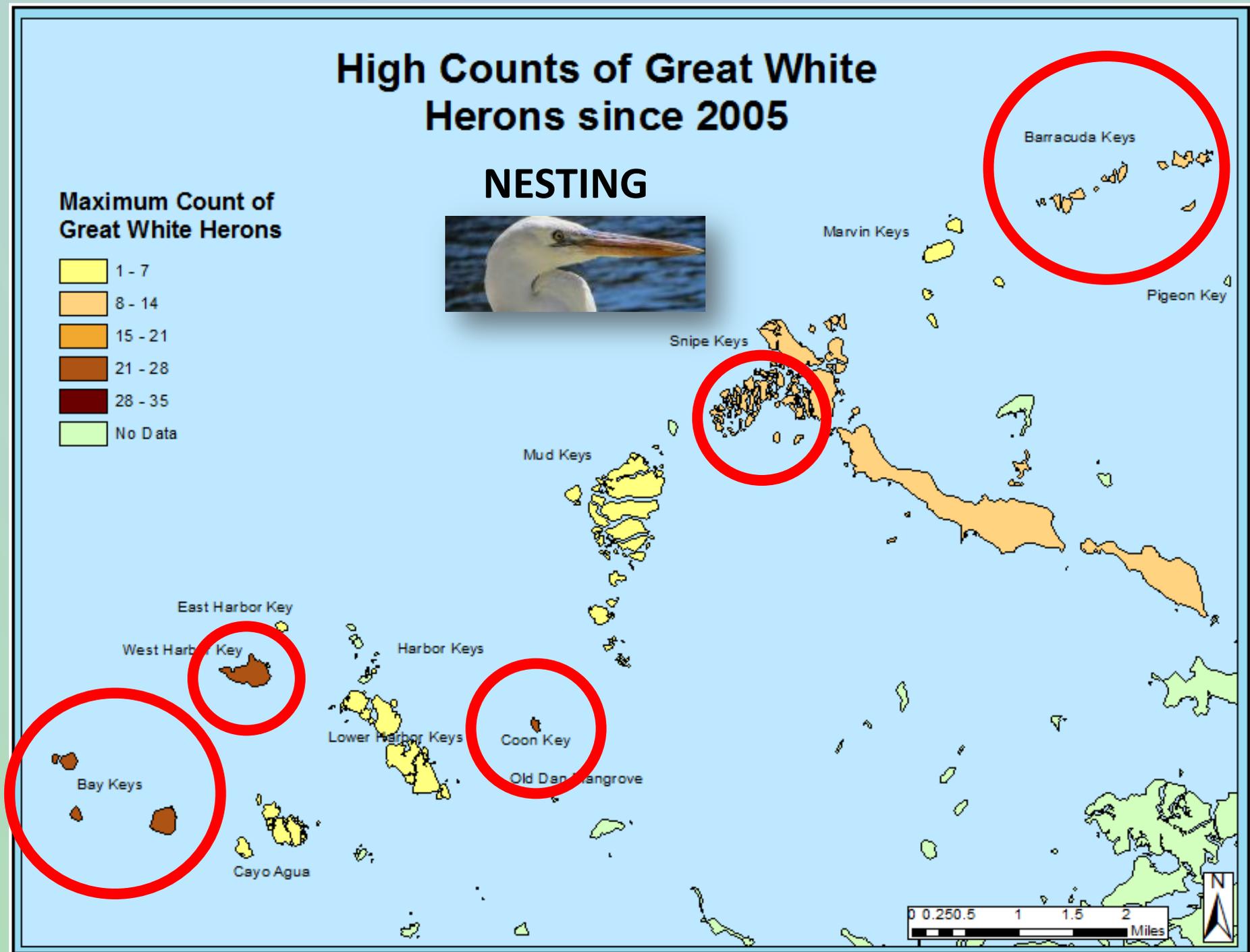
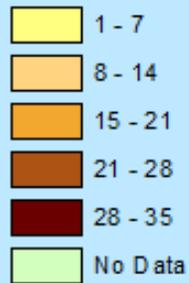


High Counts of Great White Herons since 2005

NESTING



Maximum Count of Great White Herons

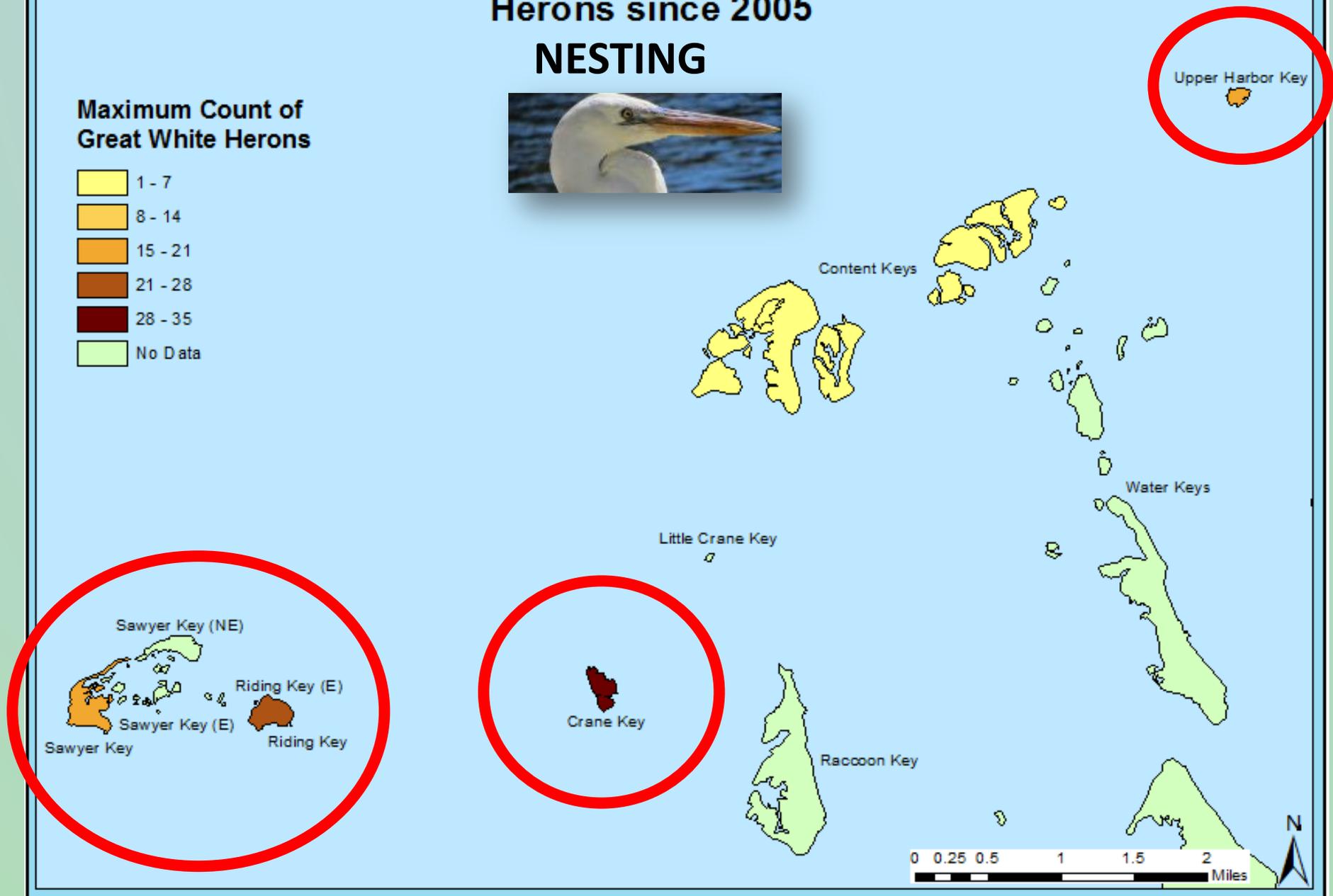
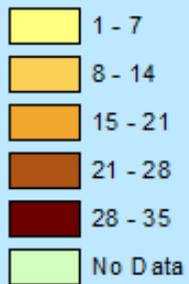


High Counts of Great White Herons since 2005

NESTING



Maximum Count of Great White Herons







Thank You



All photos were provided by FWS staff