

A snapshot of the range-wide movements of White-crowned Pigeons tracked by satellite

Gina Kent* and **Ken Meyer** - Avian Research and Conservation Institute

Ricardo Miller - Jamaica National Environment and Planning Agency

Alexis Martinez - Department of Natural and Environmental Resources of Puerto Rico

Predensa Moore - Bahamas National Trust

Paul Watler - National Trust for the Cayman Islands



@ Paula Cannon

*ginakent@arcinst.org



Funded by:

- Neotropical Migratory Bird Conservation Act (NMBCA)
- BirdsCaribbean
- USFWS, Florida Keys NWRs
- Florida Fish and Wildlife Conservation Commission
- Puerto Rico Department of Natural and Environmental Resources



@ Jonathan Mays



Thanks to:

Lisa Sorenson: BirdsCaribbean

Frank Rivera-Milán: USFWS

ARCI Biologists: Amanda Powell,
Marjesca Brown, Brehan Furfey

Denny Moore (Bahamas National Trust (BNT), Gina Kent (ARCI), Kristina Maillis (BNT member), Amanda Powell (ARCI), and Pericles Maillis (BNT board)



Brehan Furfey (ARCI), Paul Watler (National Trust for the Cayman Islands), and Gina Kent (ARCI)



Ricardo Miller (NEPA, Jamaica)
Susan Koenig (Windsor Research Centre)



Julissa Irizarry and Alexis
Martinez (DNER, Puerto Rico)



Sheylda Diaz-Mendez
(Caribbean Endemic Bird
Festival)

Range-wide Objectives

- Seasonal movements
- Survivorship and breeding effort
- Habitat associations and home-range areas
- Threats: breeding, migration, over-wintering

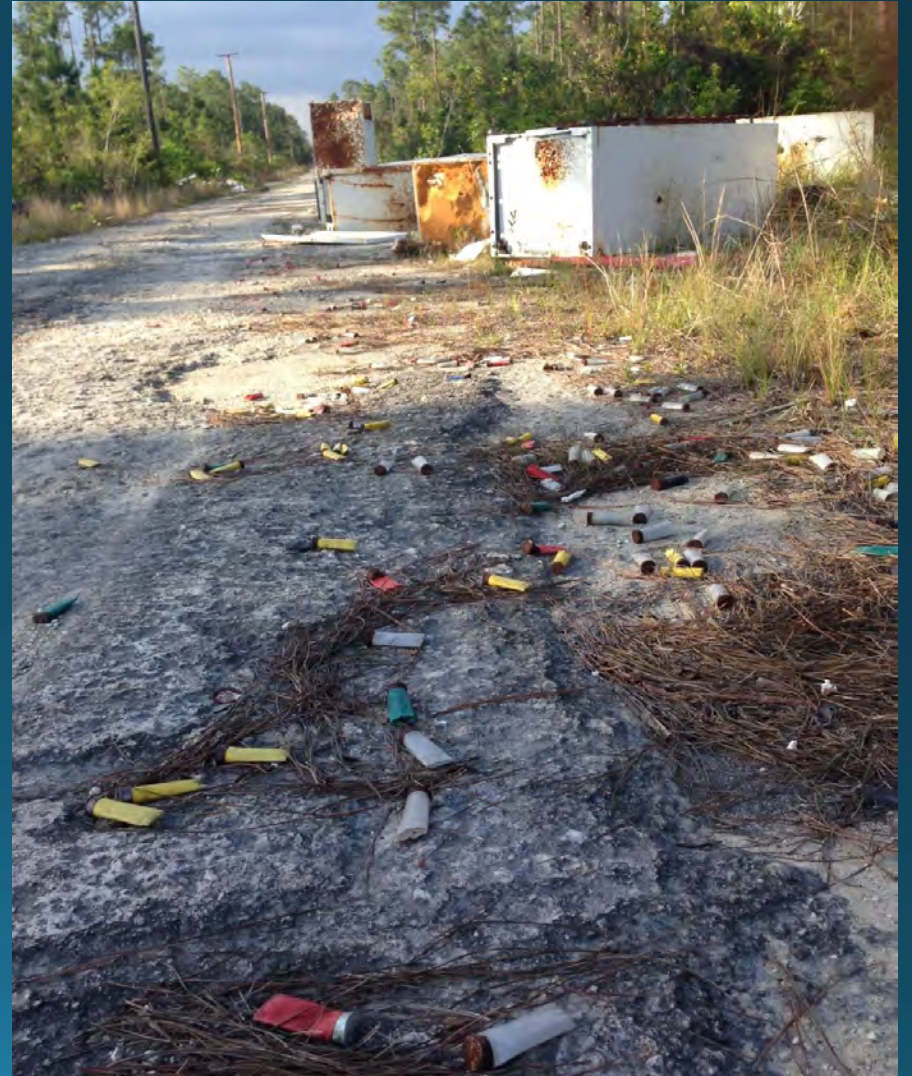


White-crowned Pigeon Distribution



Bancroft and Bowman, 2001 (Birds of North America)

Threats: Natural and Human



- 5-gram solar-powered satellite transmitter
- 5 year life expectancy
- PTT-100, Microwave Telemetry Inc.
Columbia, Maryland







Highly sensitive birds require
extra careful handling



7/17/2015

Florida

Tagging locations and movements of 16 satellite-tagged White-crowned Pigeons



The Bahamas



Nassau

Havana

Cuba

Cockburn Town

Grand Cayman



Jamaica

Kingston



Haiti

Port-au-Prince

Dominican Republic

Puerto Rico

San Juan

St Christop

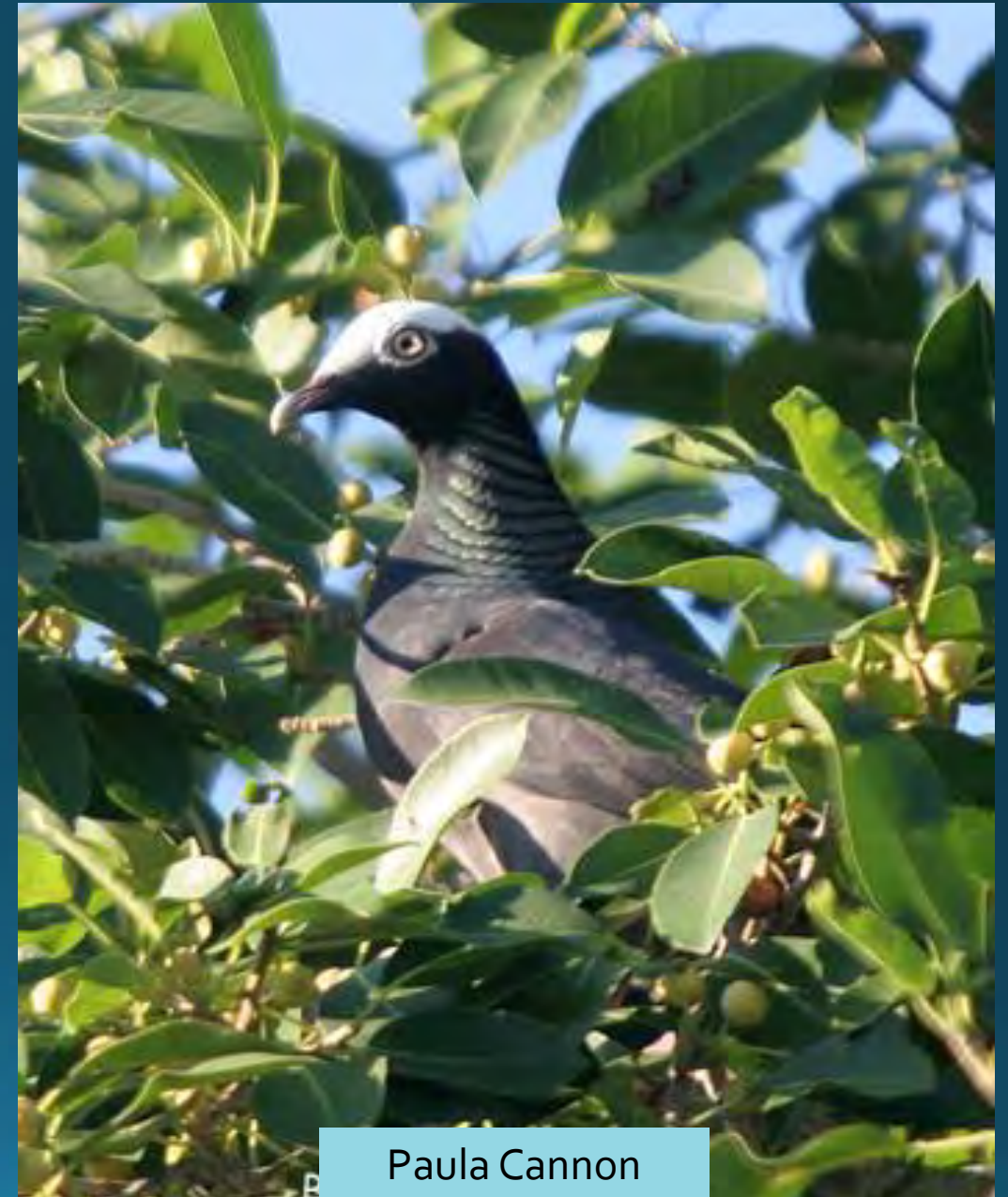


US Dept of State Geographer
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat
© 2016 Google

ARCI 
Google earth

Imagery Date: 12/13/2015 lat 21.756492° lon -73.662935° elev -4199 ft eye alt 1243.90 mi

Number of Days Tracked	Number of White-crowned Pigeons
< 50	2
50-150	2
151-250	1
251-350	4
351-450	3
751-800	2
801-950	2
404 = Mean	
12-915 = Range	



Paula Cannon

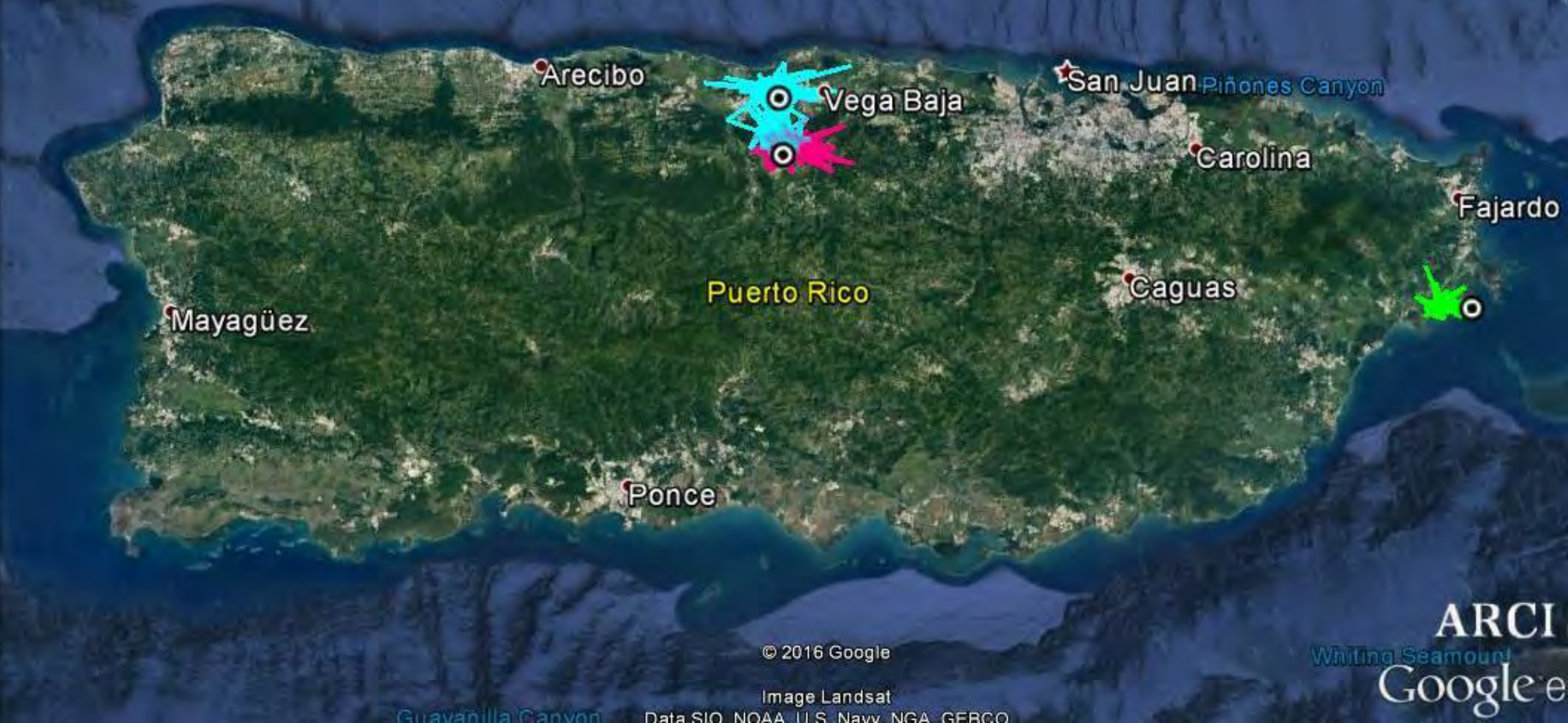
Initial finding:

More residency and point-to-point migration than previously thought

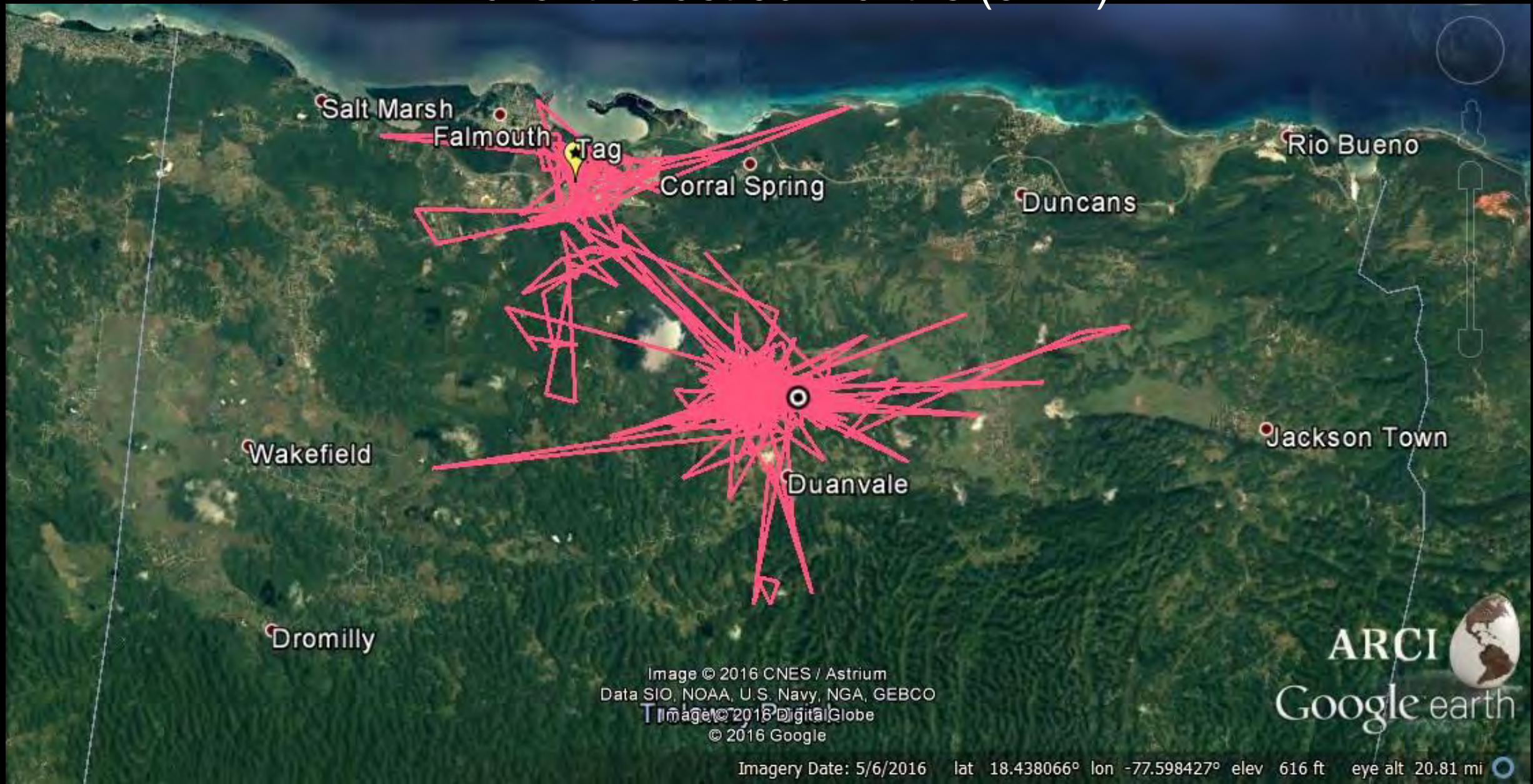
Less nomadic than expected



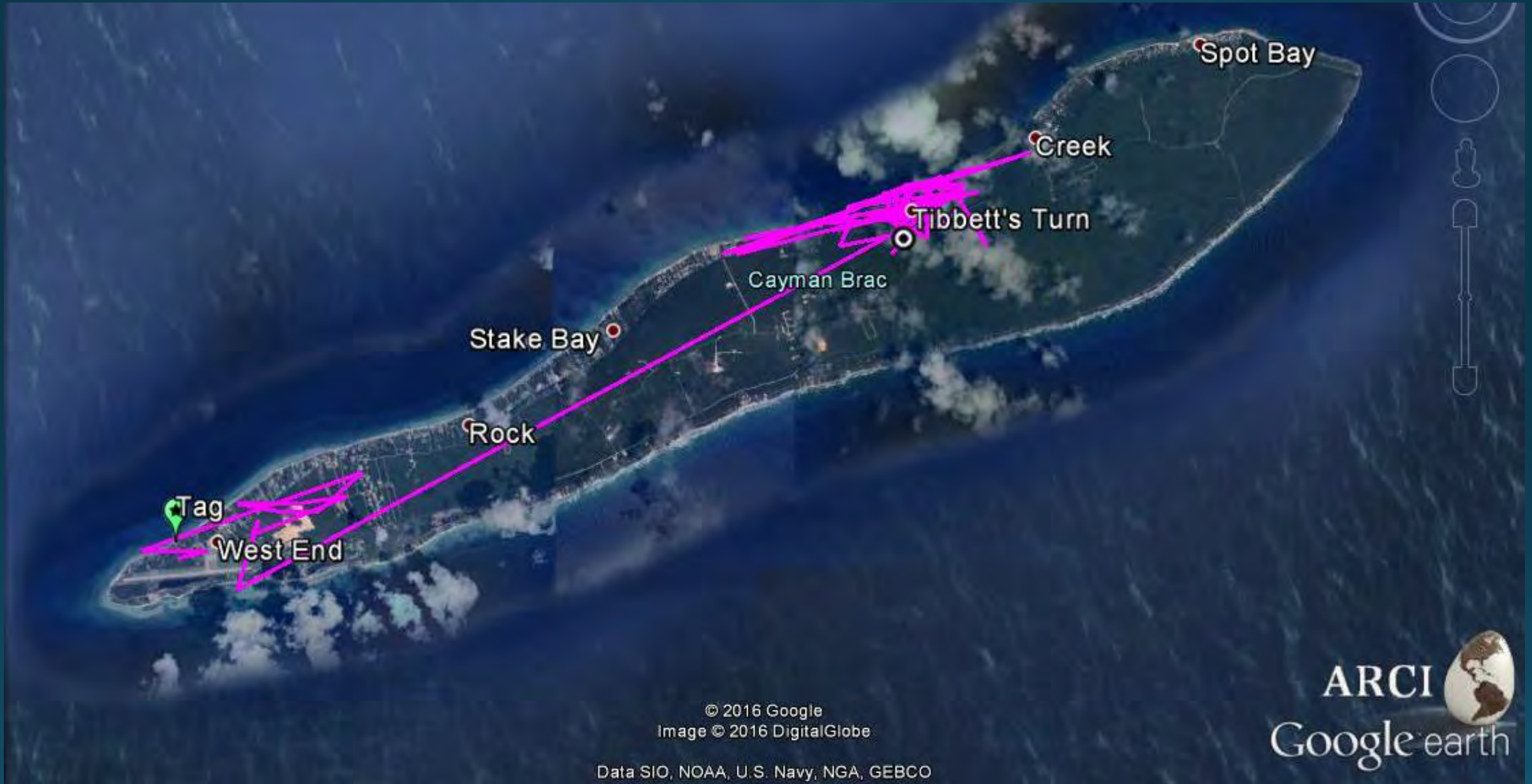
Movements of 3 WCPI in Puerto Rico over the last 14 months



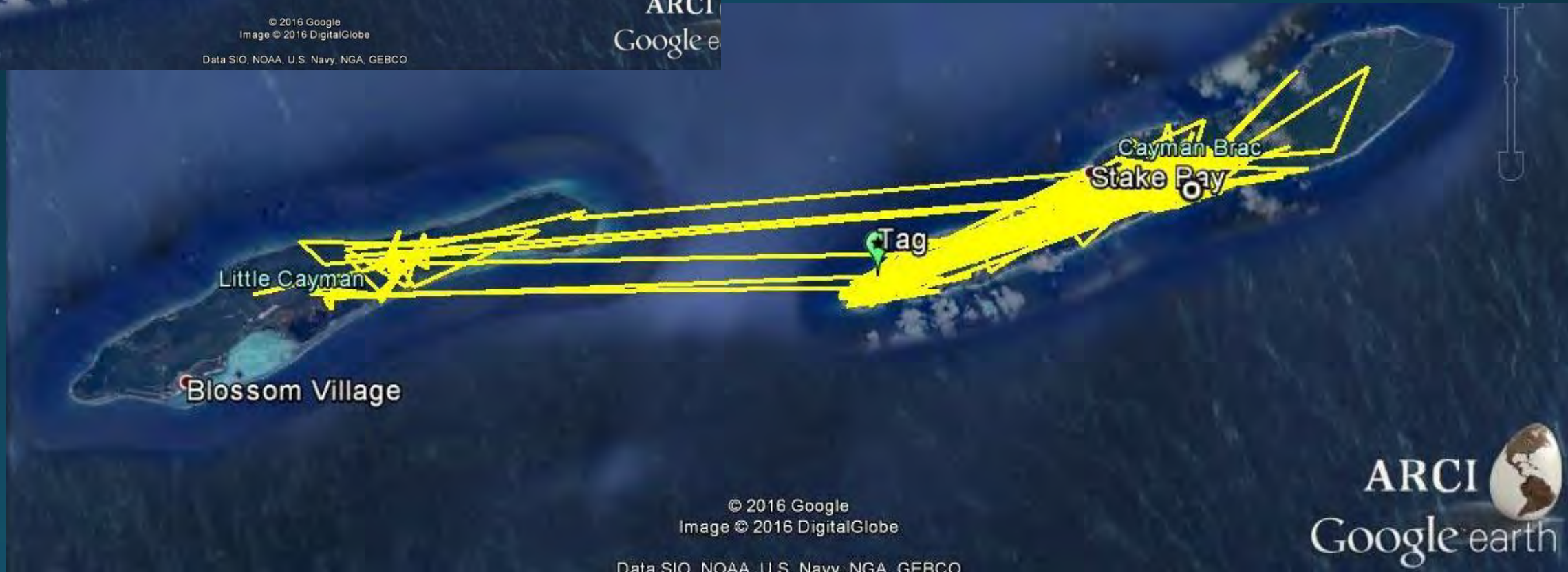
Movements of 1 WCPI in Trelawny Parish, Jamaica, over the last 30 months (8 km)



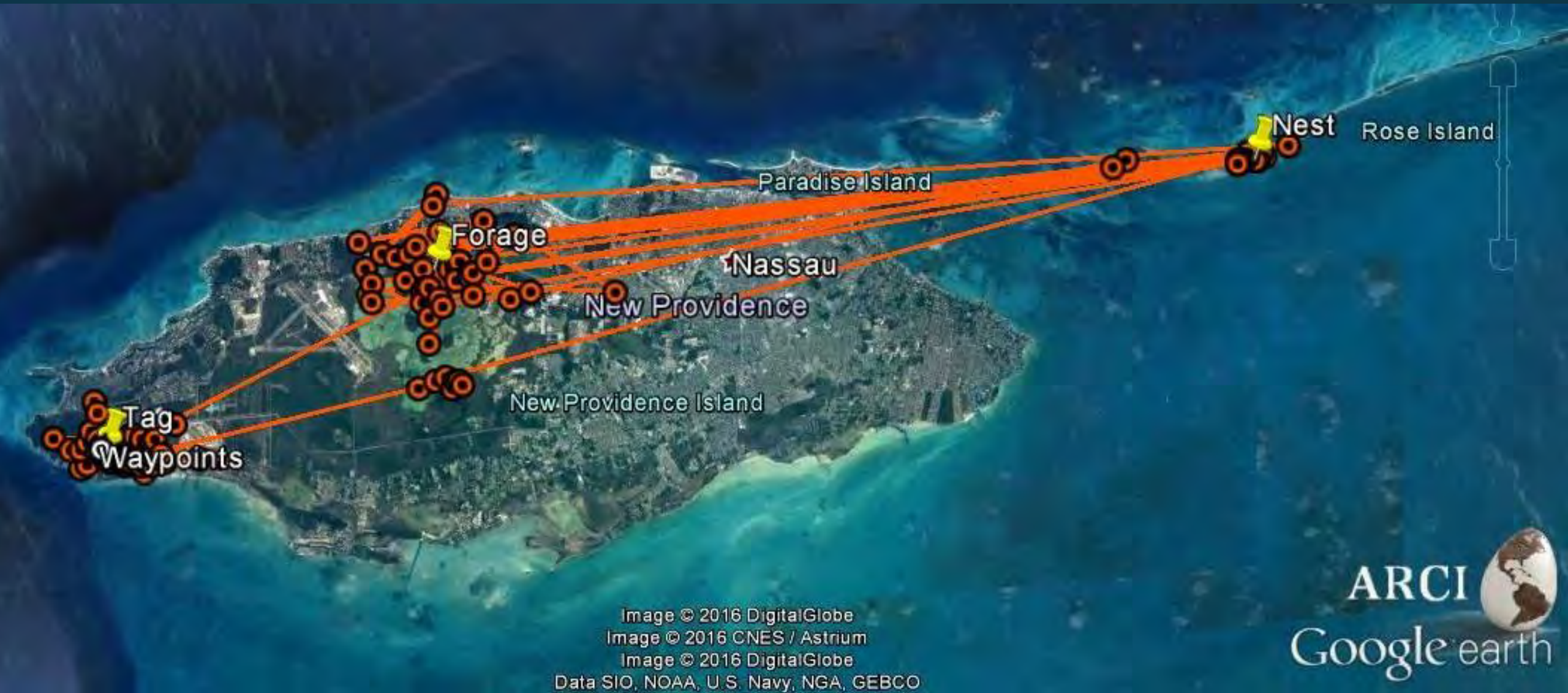
Movements of 1 WCPI on Cayman Brac for 2 months in 2015 (12 km)



Movements of 1 WCPI on Cayman Brac over 25 months (9.5 km and 14 km between cays)



Movements of 1 WCPI on New Providence, Bahamas over 8 months (25 km)



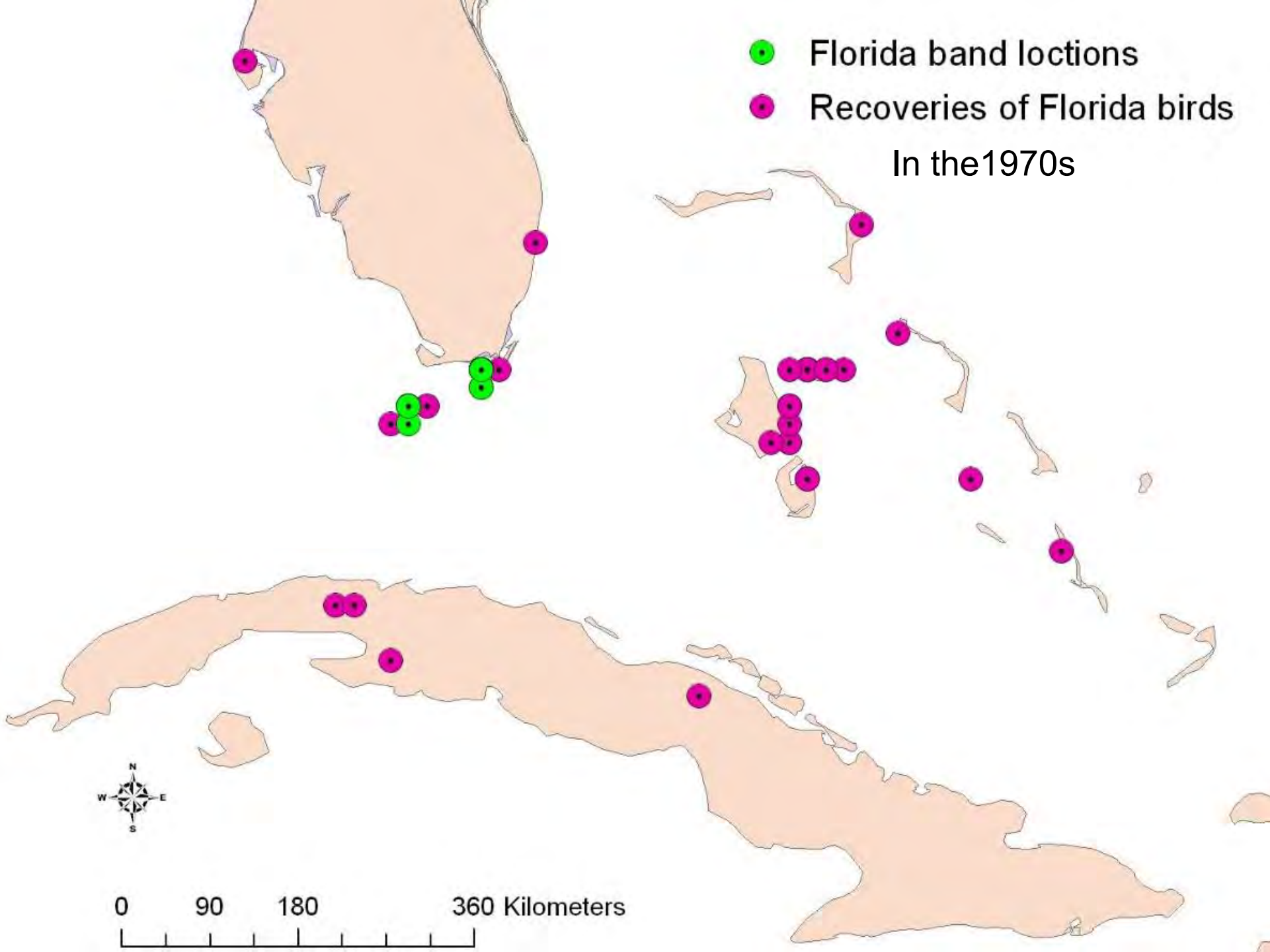
Movements of 1 WCPI between New Providence and Grand Bahama Islands over 28 months (200km)



Initial finding:

WCPI tagged in Florida
did not migrate to the
Bahamas





Hunted in the Bahamas



7/17/2015

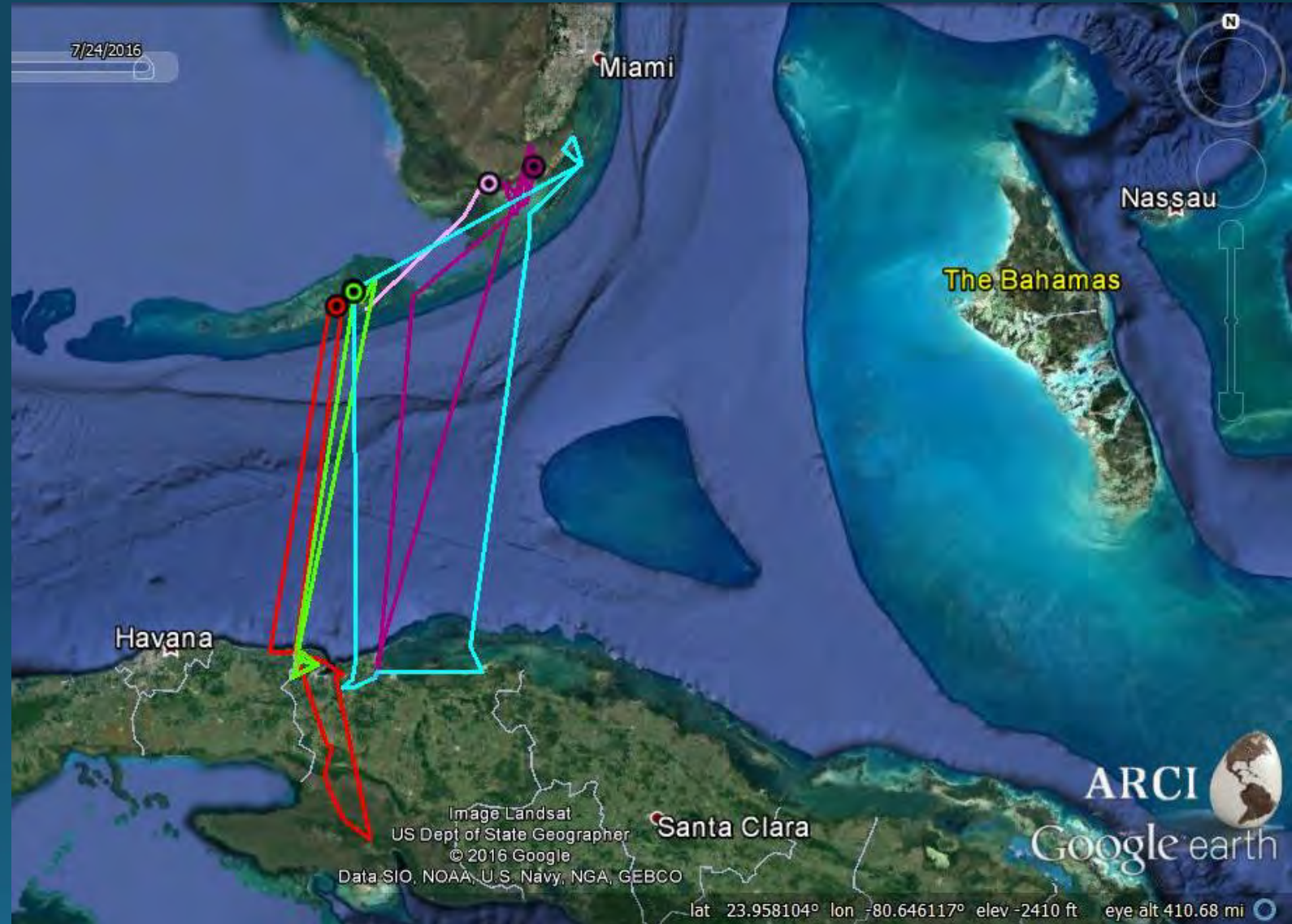
Miami

Homestead

Image Landsat
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2016 Google

ARCI 
Google earth

4 WCPI from Florida
that wintered in Cuba
(180-260 km)



3 WCPI from Florida that wintered in Florida (85-110 km)

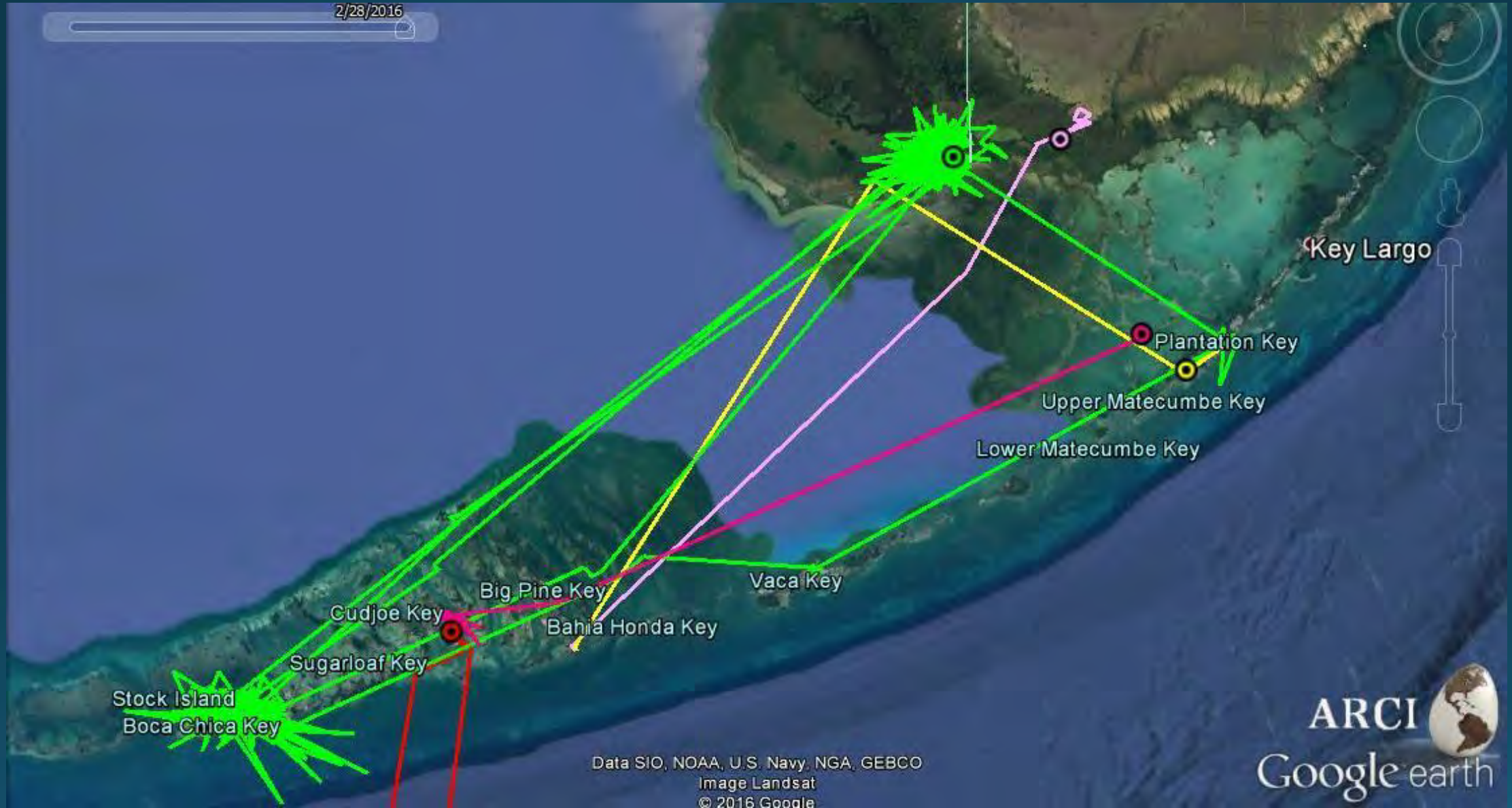


Initial finding:

WCPI that wintered in
Cuba had higher
apparent survival
than WCPI wintering
in Florida



Final satellite-tracking locations of 5 WCPI that died in Florida



Summary:

1. More resident, less nomadic than expected
2. WCPI tagged in Florida did not migrate to the Bahamas
3. Florida WCPI wintering in Cuba had higher apparent survival than those in Florida



@ Reinhard Geisler

Thank you! ginakent@arcinst.org