An aerial photograph showing a vast colony of American Oystercatchers on a sandy beach. The birds are densely packed in some areas and more spread out in others, with many standing and some in flight. The beach is light-colored sand, and the ocean waves are visible in the background.

2013 range-wide aerial survey

American Oystercatchers

American Oystercatcher Working Group

2003 AMOY aerial survey

- First comprehensive survey of the US Oystercatcher population
- Coverage from NJ to TX
- Survey period Nov to Feb
- Paired air/ground surveys
- Population estimate 10971 +/- 298
- Benchmark for tracking Oystercatcher population change



Aerial survey

- ▣ Survey period: January 2 to February 18 2013
- ▣ Designed to be a complete survey of the AMOY winter range in the US, completed in a short time window
- ▣ Simultaneous coverage of Atlantic and Gulf coasts

Survey methods

- ▣ Estimates of flock size
- ▣ Aerial photography (Digital SLR, 6.1 MP, 300 mm image stabilized lens) for detection rate within flocks
- ▣ Ground counts for flock detection rates
- ▣ Survey window High Tide +/- 2 Hours



Survey methods

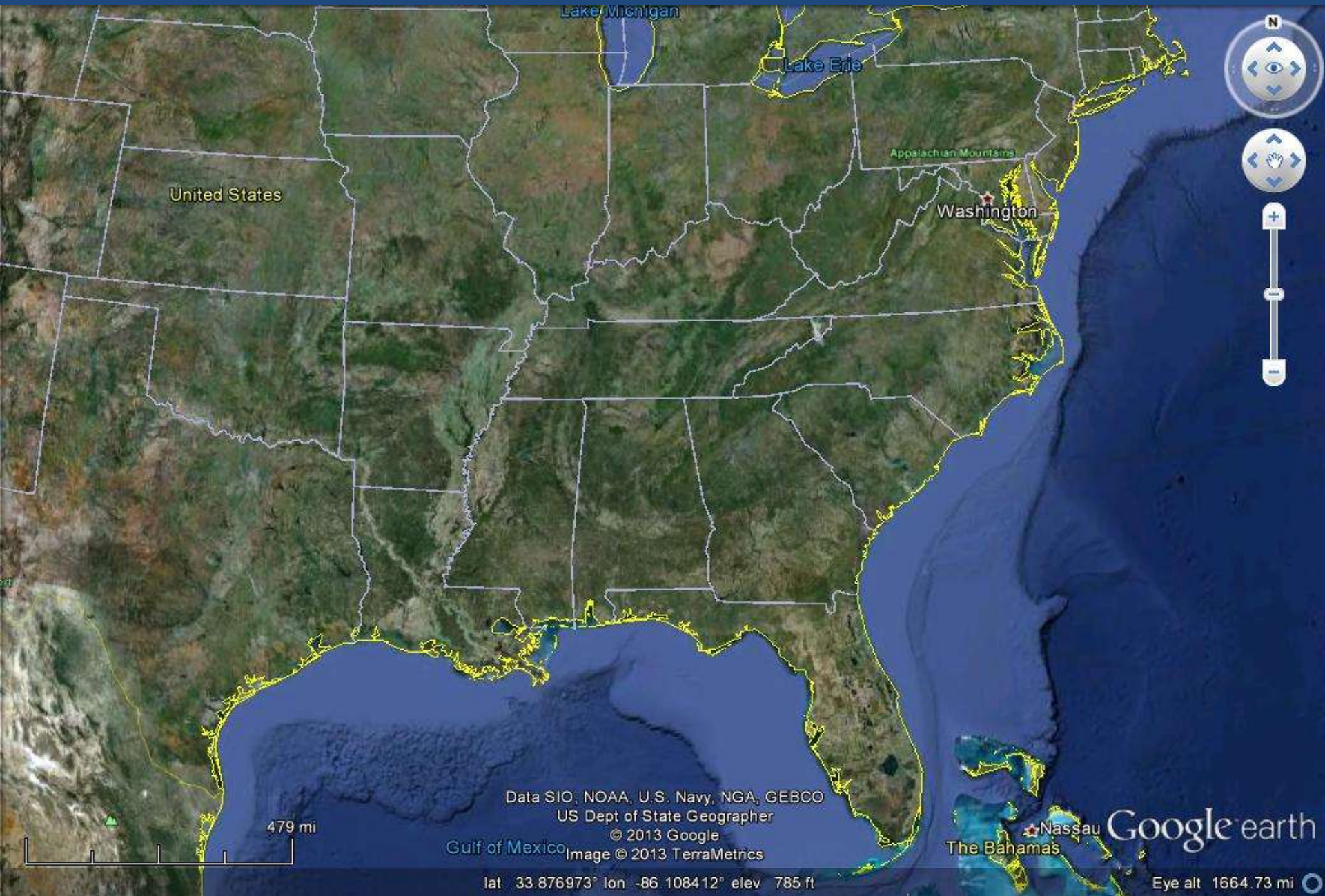
- ▣ Surveys occurred on the same tide cycle as aerial survey
- ▣ Observers recorded flock size, GPS location, time, and roost substrate type
- ▣ Gps points and tracks recorded to match up with aerial coverage



2013 Range-wide aerial survey

- Surveyed the entire coastline from New York to Mexico
- Over 9000 miles and 100 hours in the air over six weeks
- More than 20 partner organizations coordinated to complete this survey







Horseshoe Beach

Butler Island

Grassy Island

Bird Island

Cotton Island

Google earth
Big Pine Islands

8758 ft

© 2013 Google

Image © 2013 TerraMetrics

lat 29.415344° lon -83.248184° elev 0 ft

Eye alt 37860 ft

Imagery Date: 1/18/2012 1994





Detection rates

- Detection rate for flocks

- Calculated from ground counts

- Separated into large (>50) and small (<50) flocks

- Detection rate for large flocks: 1.00 ($n = 25$)

- Detection rate for small flocks: 0.78 (SE = 0.012, $n=35$)

- Detection rate for birds within flocks: 0.90 (SE 0.004, $n=111$)



2013 survey results

- 2003: 10,971 +/- 298
- 2009: 10,100 +/- 345 (model)
- 2013: **11,284 +/- 313**



2013 Range-wide aerial survey

