



**Halmos College of Natural  
Sciences and Oceanography**



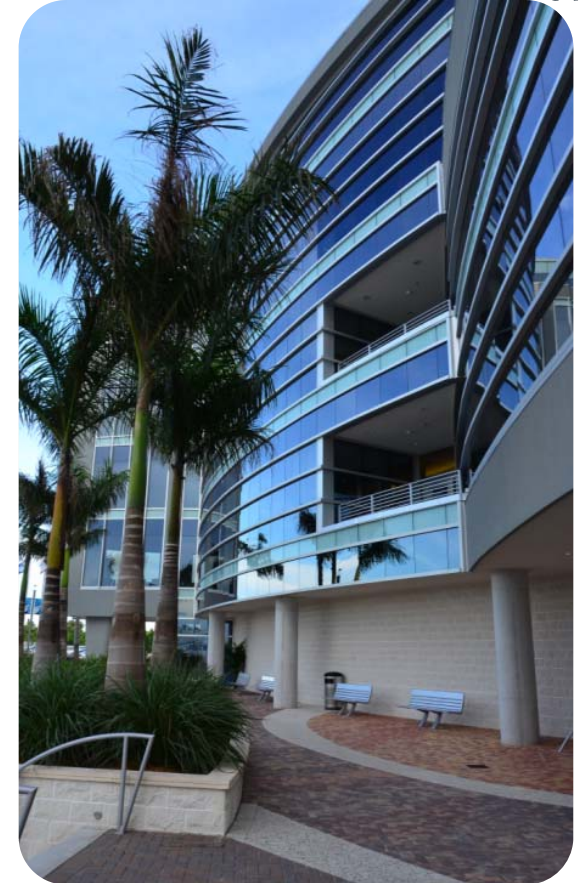
**Changing Climates, Sea Levels, and Species:  
Legal & Policy Responses for South Florida  
Friday, April 8, 2016 8:30 am - 3:00 pm**

# Nova Southeastern University



- 23,000 students; 167,000 alums
- 52st year!
- One of largest enrollment in US's 1,600 nonprofit private colleges & universities
- Largest in Florida
- FL Econ. impact ~\$1.5B
- Main Campus—300 acres
- One of FL's important resources!
- **18 Colleges**

# *NSU Halmos College of Natural Science and Oceanography (HCNSO)*



- **Two Campus: Davie and Ocean**
- **Classrooms; Teaching and Research Labs**
- **Emphasis: Education & Research**
- **4 Depts: Math, Chemistry & Physics, Biology, Marine  
Biology & Environmental Science**
- **65 Faculty & Researchers; 200 Staff & Research Assistants**

# *Halmos College of Natural Sciences and Oceanography*



# Mission



The mission of the Halmos College of Natural Sciences and Oceanography is to carry out innovative, basic, and applied research and to provide high-quality, graduate and undergraduate education in a broad range of natural, marine, & environmental sciences.



# HCNSO Academics

Graduate Certificate Program  
4 B.S., 4 M.S., 1 M.A. degrees,  
Ph.D. degree

Largest undergrad College

Largest Major: Biology

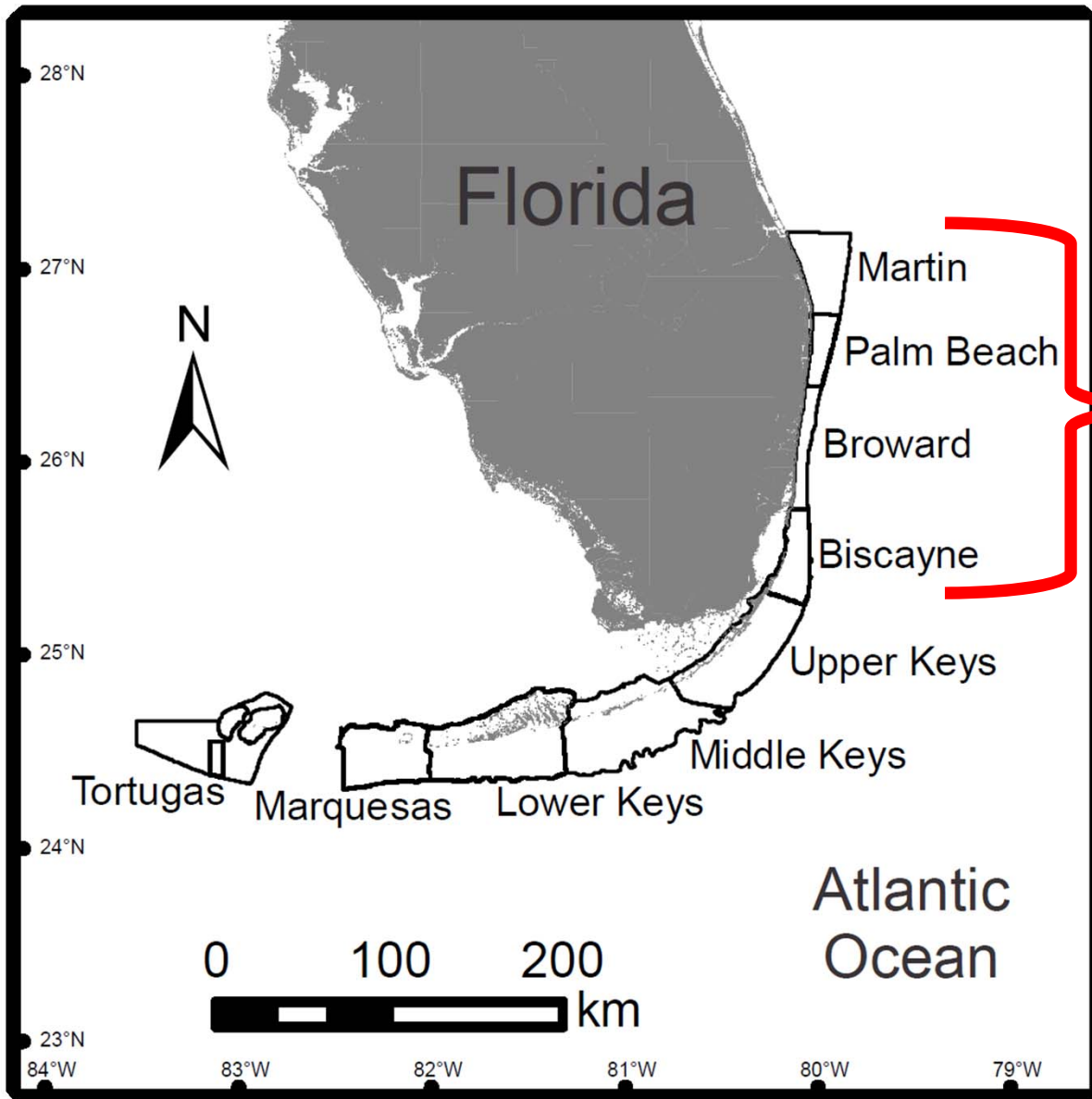
## HCNSO Research:

- Coral Reefs, Fish, Fisheries
- Conservation biology
- Math, Chemistry, Biology
- Physics of the Ocean
- Largest active Extramural Awards



# Florida's Extensive Coral Reefs

## 84% of Nation's reefs



**Coral Reefs in  
S. Florida:  
\$6.1B/y in sales  
& income  
71,000 jobs/y.  
Broward: \$2B/  
36K jobs!**

# **NSU Mapping Coral Reefs**

## **Satellite View of Florida, the Ocean State**





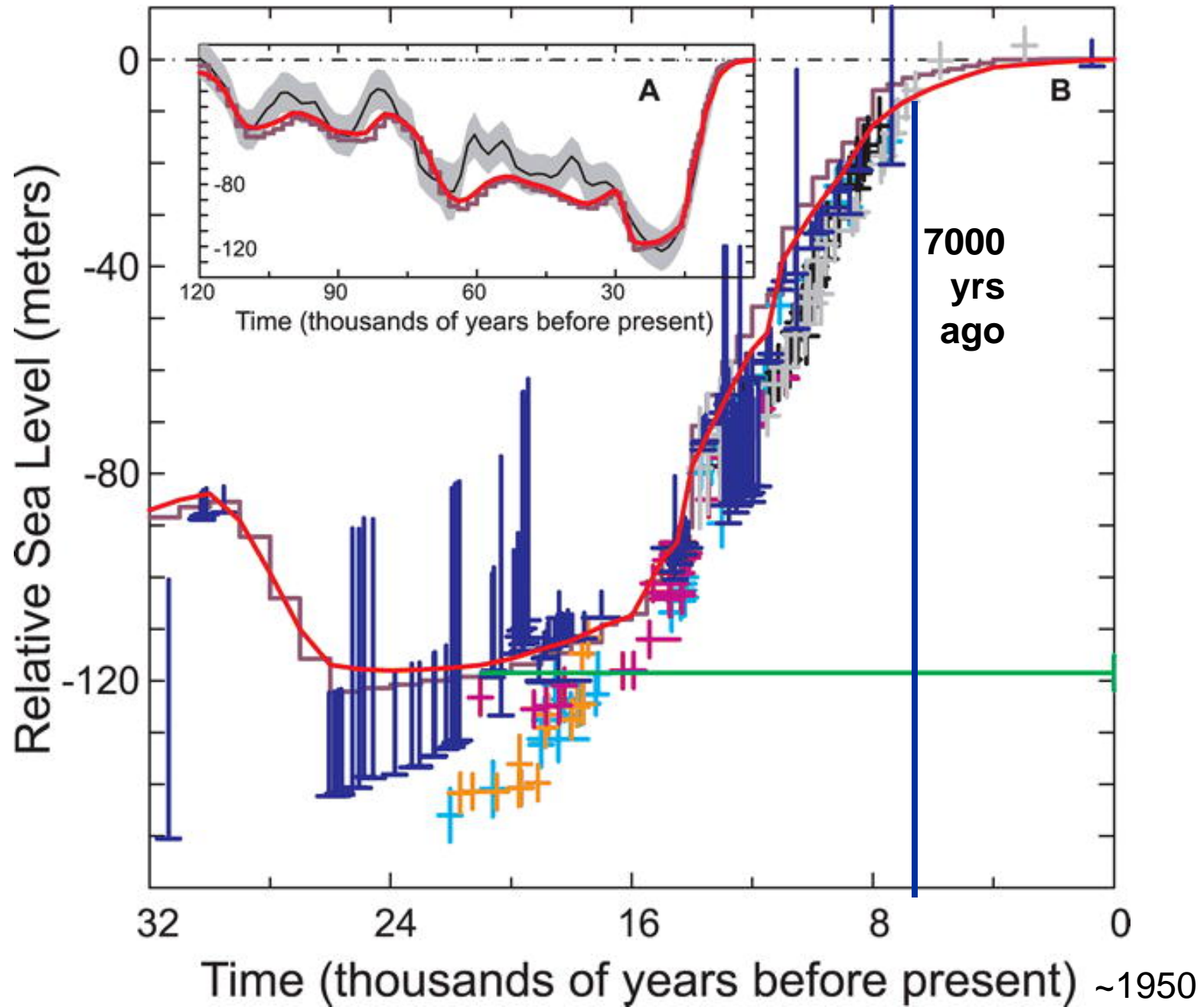
# *Fly Thru of Southeast Florida Reefs via Laser Bathymetry*

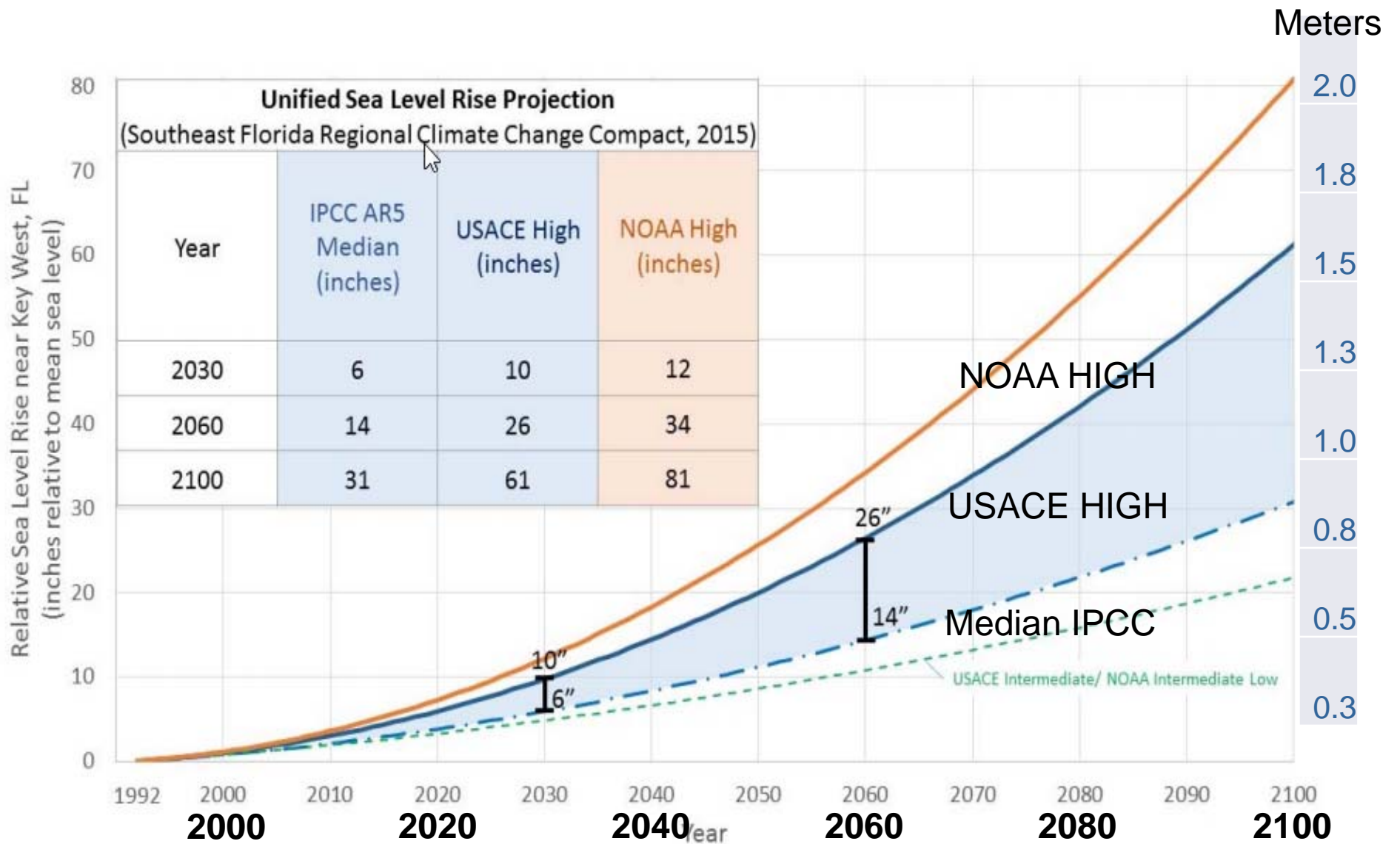


## SOUTHEAST FLORIDA CORAL REEF MAPPING FLYBY



GIS & SPATIAL ECOLOGY LAB  
BRIAN K. WALKER









# Coral Reef Restoration: Coral Nurseries



Land Based



Ocean Based



Kirk Kilfoyle / Nova Southeastern University



Kirk Kilfoyle / Nova Southeastern University

# *Coral Reef Restoration Through Coral Nurseries*



# *Additional Research Initiatives, e.g.,*



**Bioinformatics**



**Lion Fish**



**Deep Sea Life and  
Ecosystems**



**Ecotoxicity/  
Pollution Testing**



**Sex: Coral Mutants  
and Hybrids**





# Shark Research Investigations



Wanna track a shark?



ALEXA ELLIOTT/COURTESY

Researchers from NSU's Guy Harvey Research Institute deploy a tracking satellite transmitter on a tiger shark.



Top Predators, Overfishing; Cascading Ecosystem Effects; Genomics/Genetics/Conservation

# ***GHRI & SOSSC: Example: Shark Migrations***



# *NSU HCNSO Science & Academics: Poised for the future*

- Outstanding new infrastructure
- Research/Education: Natural Sciences & Oceanography!
- **Of course, Help Is Needed**



# Development Inspiration



# Thank you!

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