

Welcome

Environmental Law Symposium



To the

To the

NSU Halmos College of Oceanography and Natural Sciences

10 things you might not know about the NSU Halmos College of Natural Sciences and Oceanography



NOVA SOUTHEASTERN
UNIVERSITY

College of Natural Sciences
and Oceanography



#1: Established: 1966, Account Code 1-10000

Then: First NSU Center

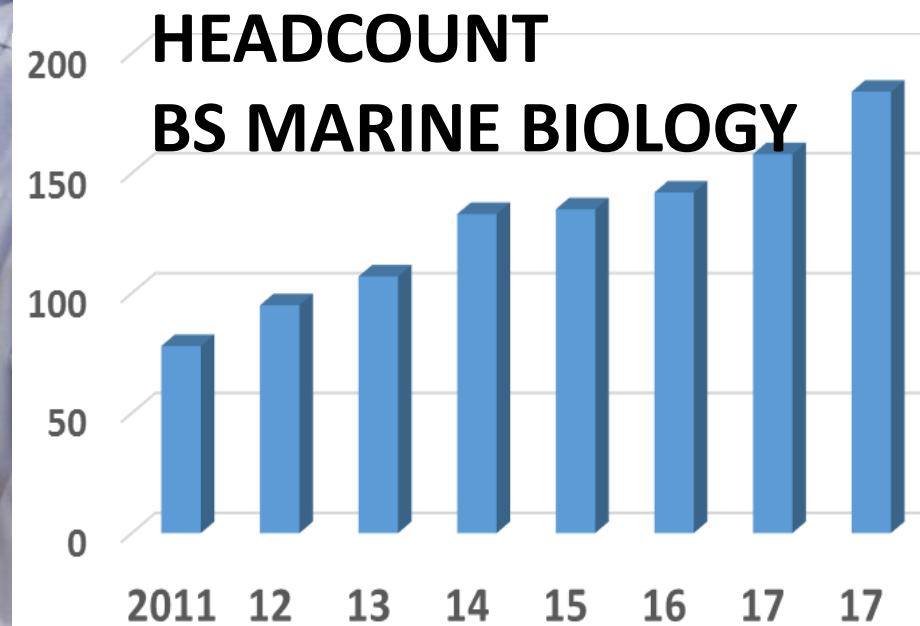


NOW: One of Largest NSU Colleges



#2: HCNSO is a NSU Academic Leader, e.g.,

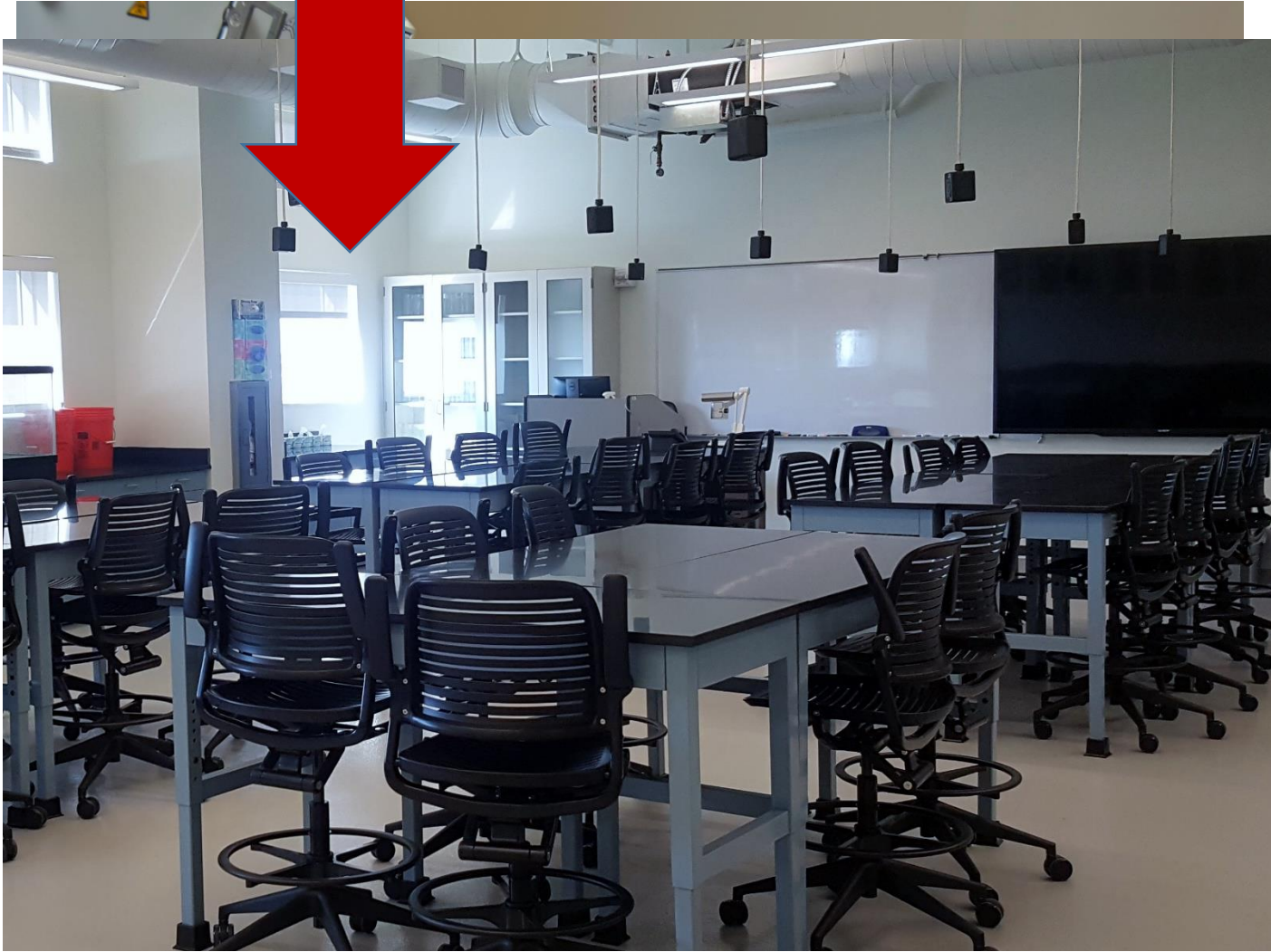
- **HCNSO BIOLOGY** is the largest NSU Undergraduate Major
- **HCNSO Marine Biology:** Large and fast growing Majors
- **HCNSO Chemistry and Math Majors** new and growing



#3: DUAL Campus Splits



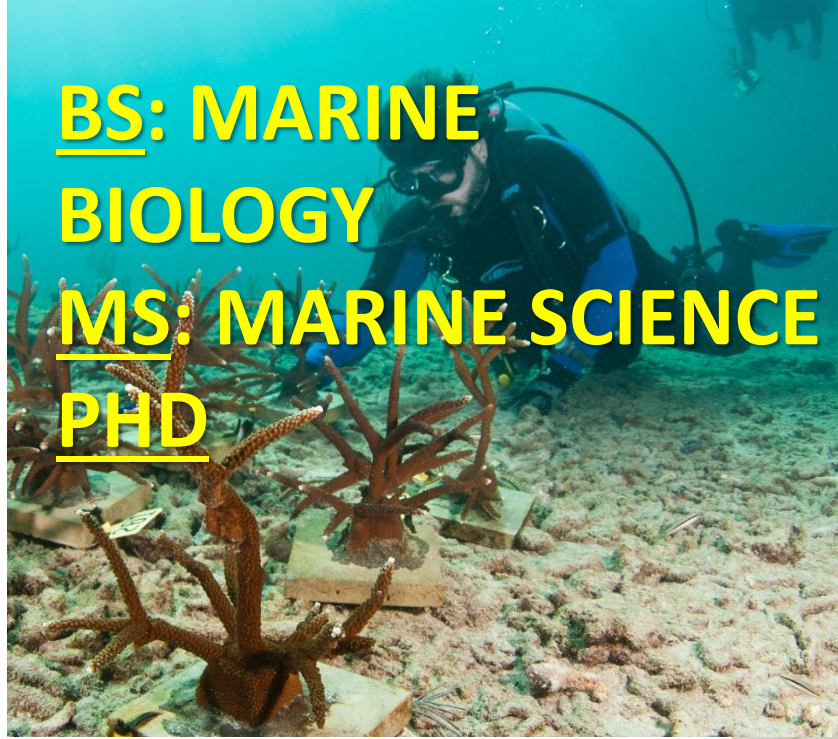
- Labs and Classrooms Co-Located at the Ocean Campus and Main Campus



#4: Departments

- Biology
- Chemistry and Physics
- Marine and Environmental Science
- Mathematics

BS: MARINE
BIOLOGY
MS: MARINE SCIENCE
PHD



BS: MATH



BS & MS:
BIOLOGICAL
SCIENCES



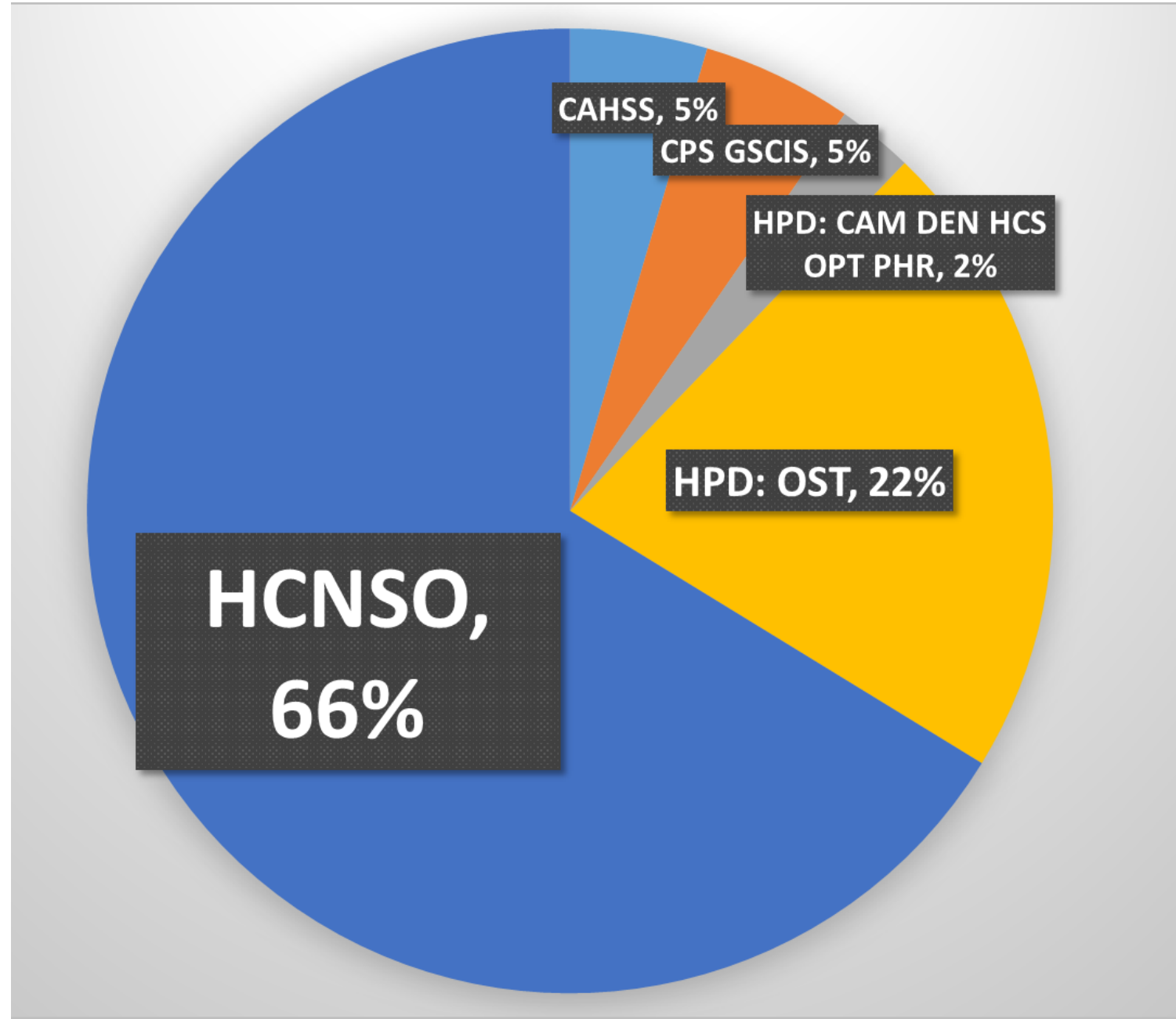
BS: CHEMISTRY



#5: HCNSO is NSU's Leader In RESEARCH

Grants & Contracts

**NSU Active
Extramural
Research
Funding
\$54,023,334
(as of Jan, 2018)**



#5: Research: Some Focus Areas Highlights

Corals & Coral Reefs

- Value: \$6B/71K jobs
- Assessment
- Restoration
- Mapping



Marine Conservation: Shark & Billfish Ecology/Forensics/ Migrations



Invertebrates

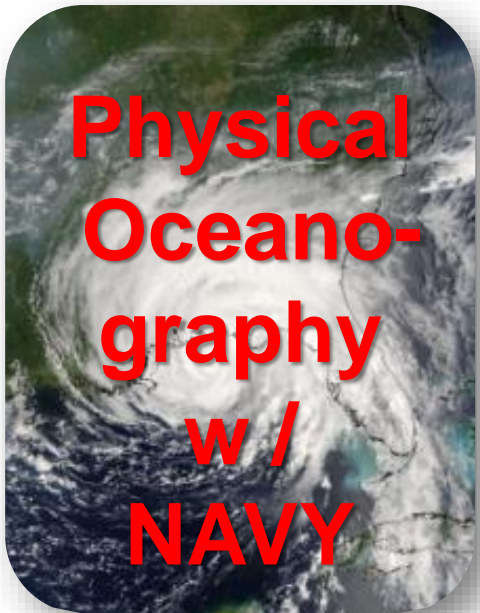


Ecotoxicology



Seacor

Genomics,
Metagenomics
Bioinformatics



Physical
Oceano-
graphy
w /
NAVY

#6 Distinguished Namings

- **Dr. Charles and Hamilton Forman Building**
- **Dorothy & Alexander Schure Building**
(originally NYIT engineering)



#6 Distinguished Names & Namings!

- **Walter Banks Marina**



#6 Distinguished Names & Namings!

- Guy Harvey Oceanographic Center of Excellence
 - GHRI
- Halmos College of Natural Sciences and Oceanography



#7:

marine
research



participation

FLORIDA HAS THE
**WORLD'S
THIRD LARGEST**
CORAL BARRIER REEF SYSTEM

SOUTH FLORIDA
REEFS PROVIDE OVER
\$6 BILLION
IN ECONOMIC IMPACT PER YEAR
71,000 JOBS

BY 2050 THE EARTH'S
POPULATION WILL DOUBLE
GREATLY INCREASING THE NEED FOR
FOOD, ENERGY & CLEAN WATER

4 MAJOR UNIVERSITIES,
HUNDREDS
OF RESEARCH PROJECTS
ON REEF RESTORATION,
BIOMEDICINE, FISHERIES & ECOSYSTEMS

SOUTH FLORIDA
MARINE
INDUSTRY PROVIDES
\$11.5 BILLION
IN ECONOMIC IMPACT
136,000 JOBS

MANY PRIVATE YACHTS HAVE
**OCEANOGRAPHIC
RESEARCH
CAPABILITY**

THE OCEANS
CONTAIN
MORE THAN
96% OF THE EARTH'S
WATER
95% IS UNEXPLORED

8 MAJOR INDUSTRIES
WILL BENEFIT FROM A
MARINE RESEARCH HUB*

**\$13
BILLION**
INVESTED
IN AQUACULTURE WATER
SYSTEMS GLOBALLY BY 2030

*Bio-medicine, Biotechnology, Energy, Marine Engineering,
Defense, Aquaculture, Marine Recreation, Environmental

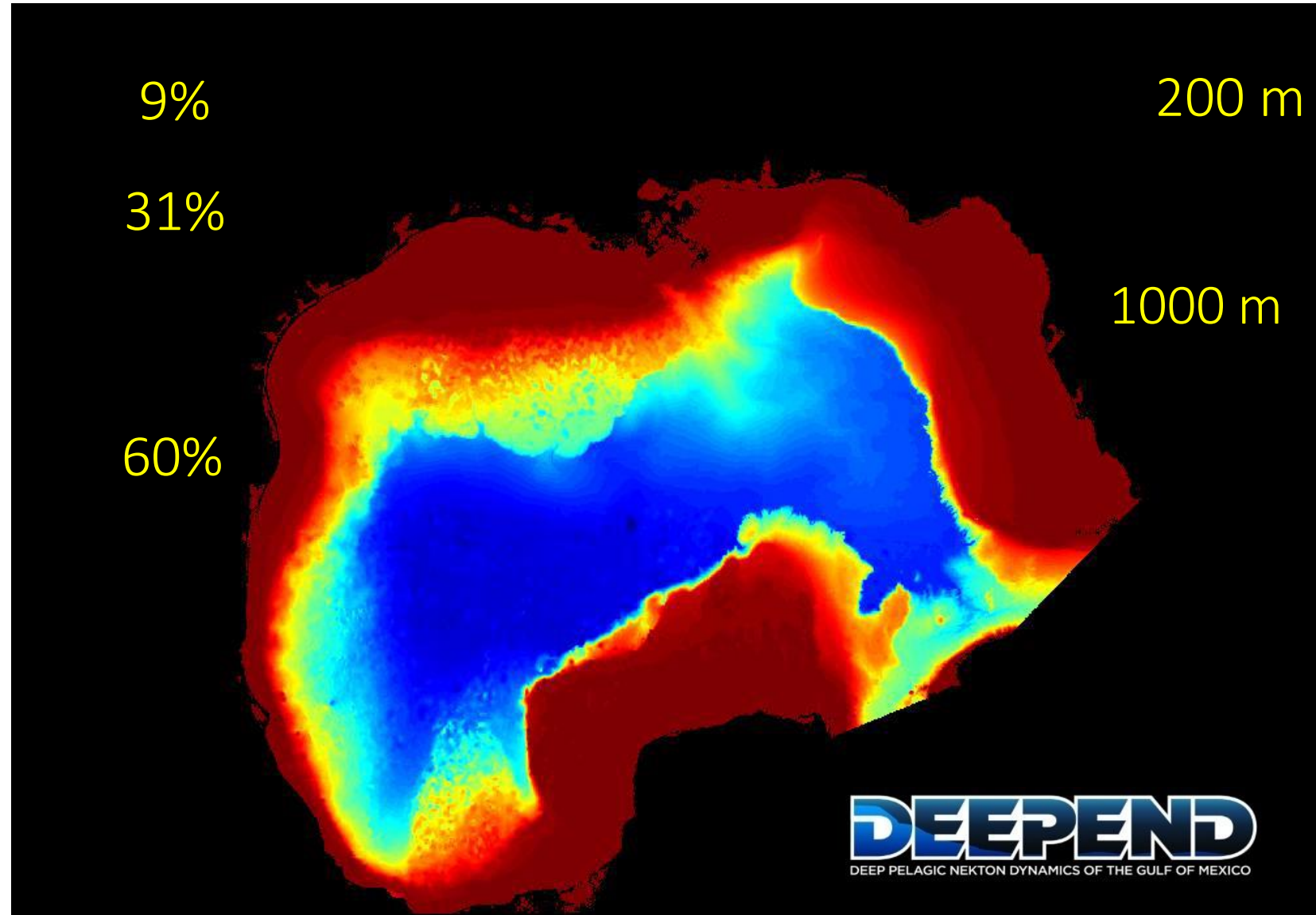


#8: HCNSO is Off The DEEP-END

Bathypelagic realm below
1000 m =earth's largest
living space

NSU Sample set: largest
in oceanographic history
Outnumbers all previous
samples combined;
Of the 900 fish species
collected from the Gulf
since DWH, 180 are new
records and ~22 are new
species.

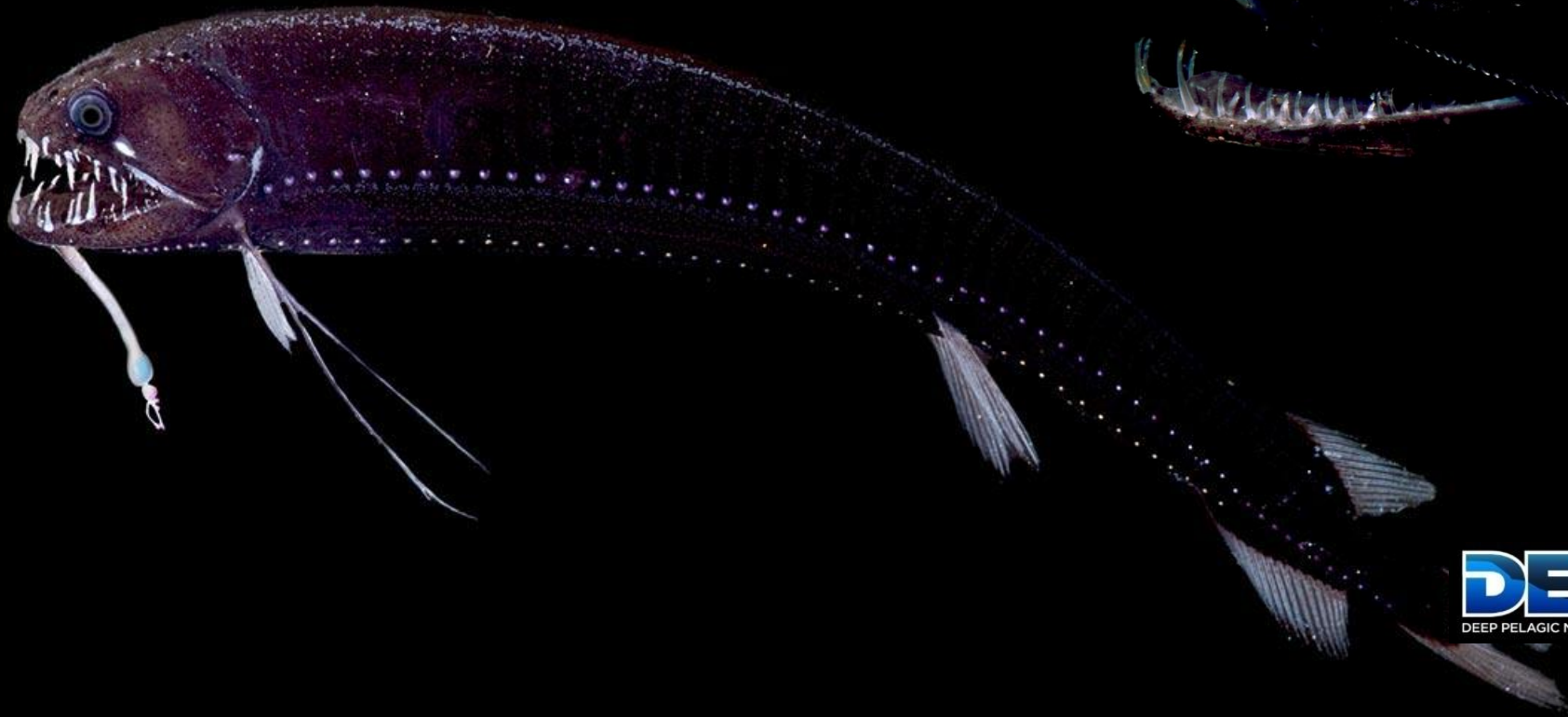
3-D Morphology of the Gulf of Mexico



The epipelagic at night - dragonfishes



Fishes of the mesopelagic realm - dragonfishes





Fishes of the mesopelagic realm

-

other nasties...

Telescope fish



So.....Should you worry?

Phew!



#9: HCONSO is for the Turtles

2017



Nesting

- **3,587 Nests (most since 1981)**
Loggerhead, Green, Leatherback
- **62% of Season Nests Excavated**
 - 70% Live Hatchlings; Over 217,000 Eggs!
- **Strandings, Education, & Outreach**
 - Hatchling Releases, School Presentations
 - 158 Events/44,000+ Participants
- **MEEC**
- Opened Mar 2018; 10,000 visitors!
- School Programming Sci. Standards
- Hosts events with multiple groups

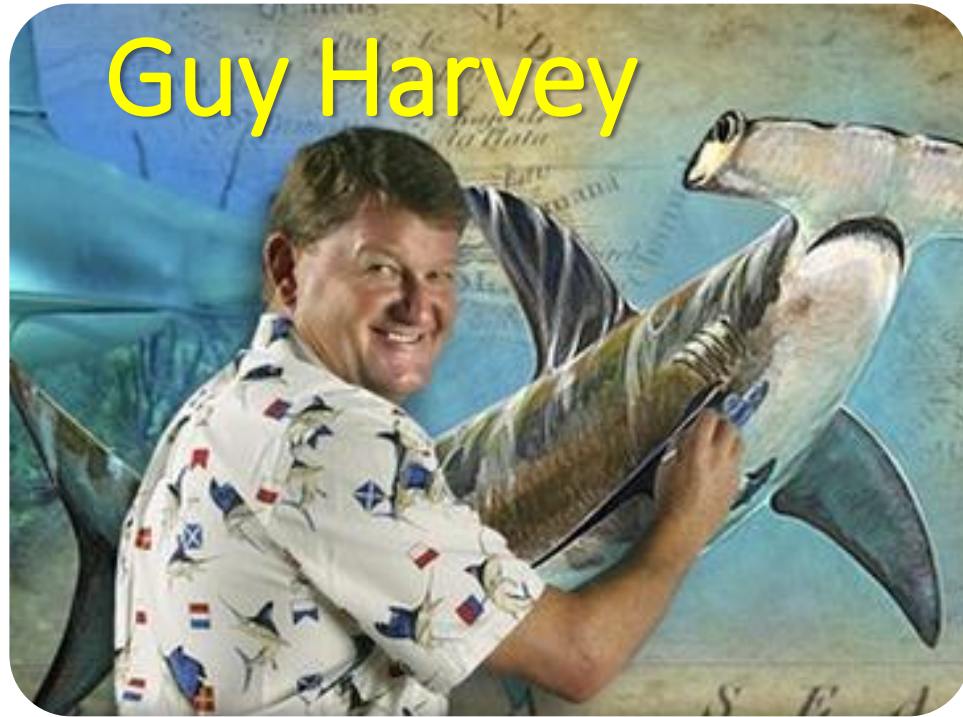


Marine Environmental Education Center
CARPENTER HOUSE

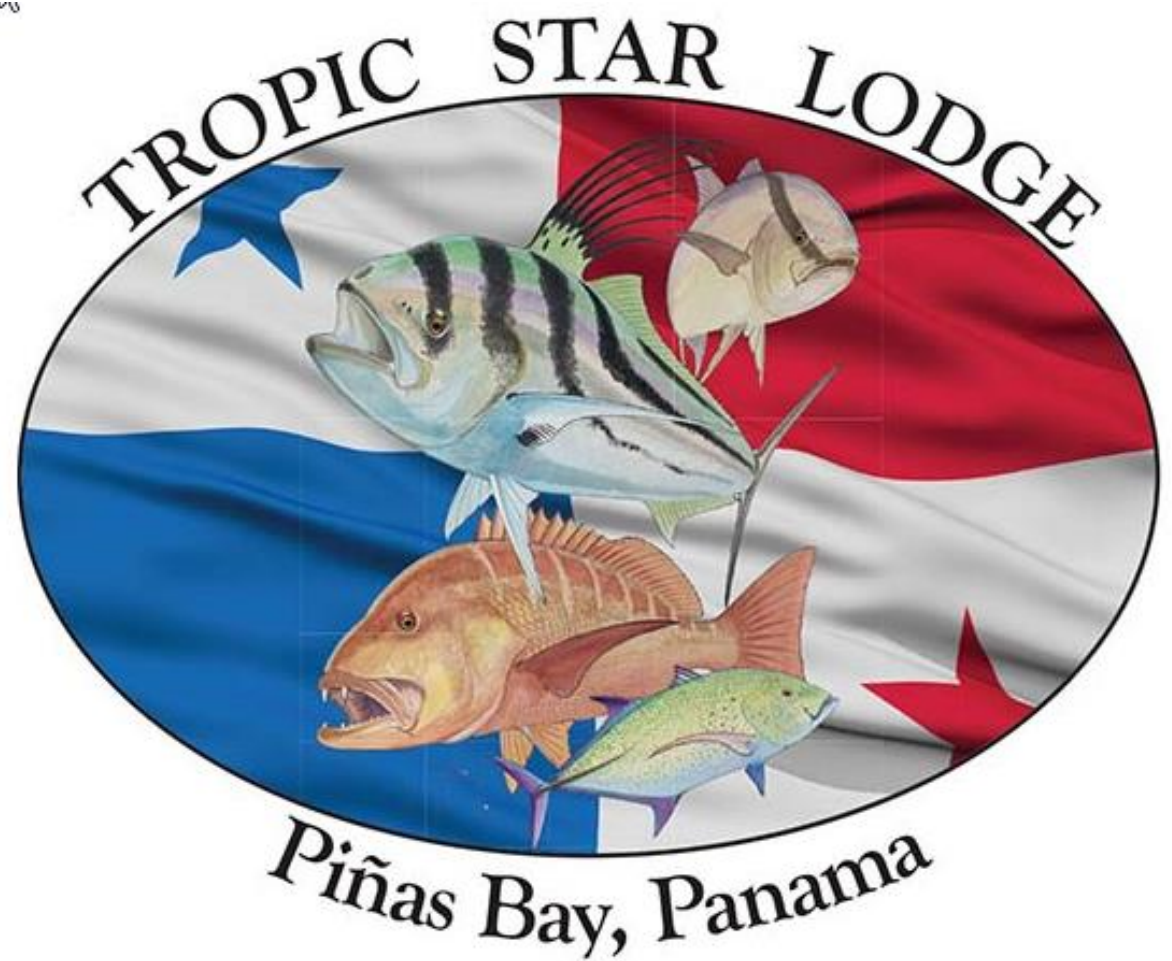
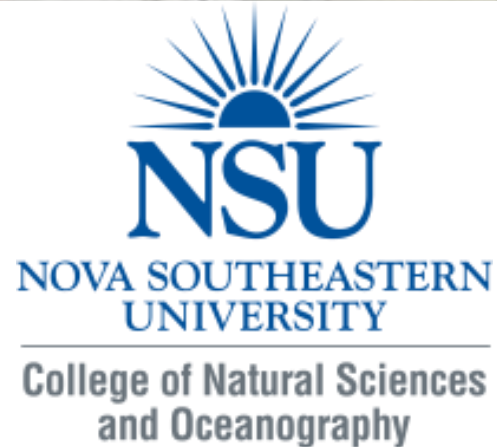
Broward County Parks and Recreation
Nova Southeastern University



#10: FISHERIES RESEARCH with Partners

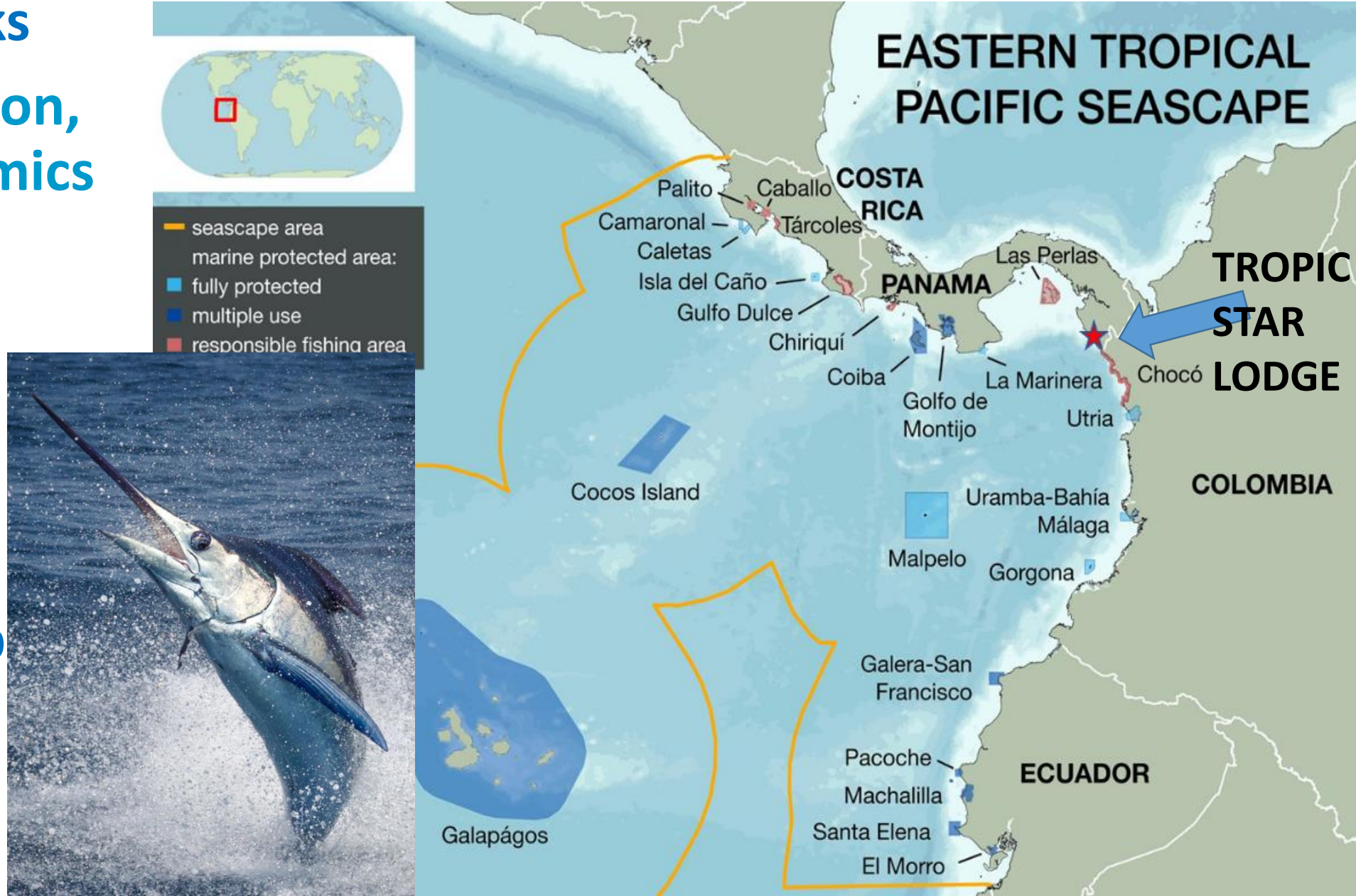


Guy Harvey



#10: PANAMA FISHERIES RESEARCH PARTNERSHIP

- Gamefish/Sharks
- Ecology, Migration, Genetics, Genomics
- Management & Conservation
- Partners:
 - NSU, Guy
 - Harvey, TSL
- PhD Scholarship
- 5 year duration
- Support Opportunities !





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#11 THANK YOU!!

Environmental
Law Symposium