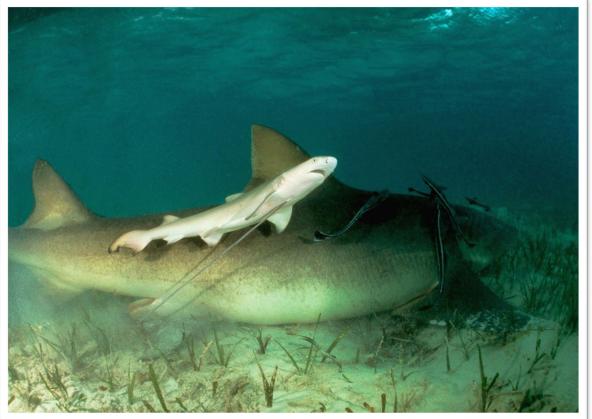


### BACKGROUND – DR SAMUEL GRUBER

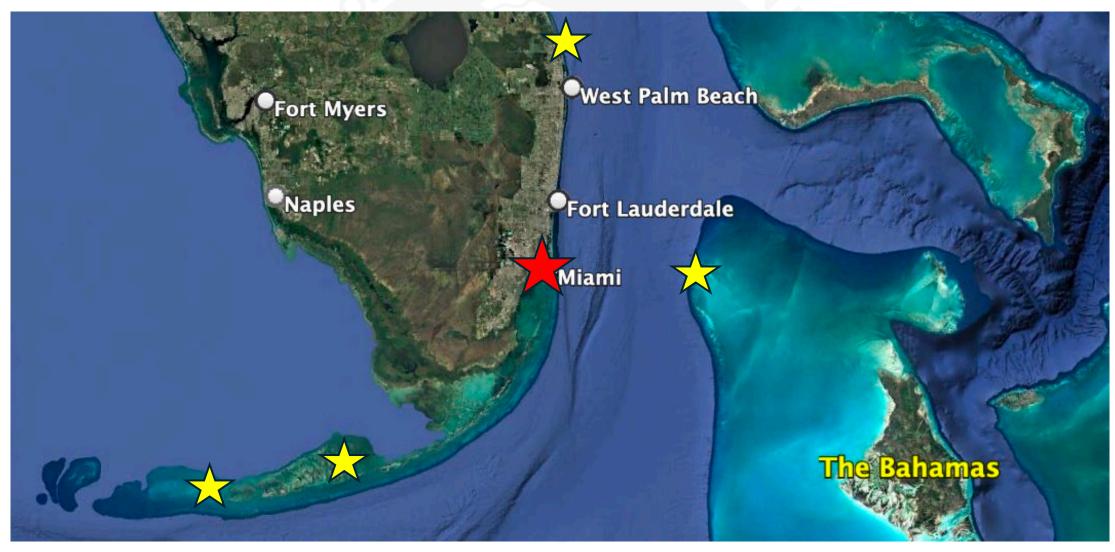


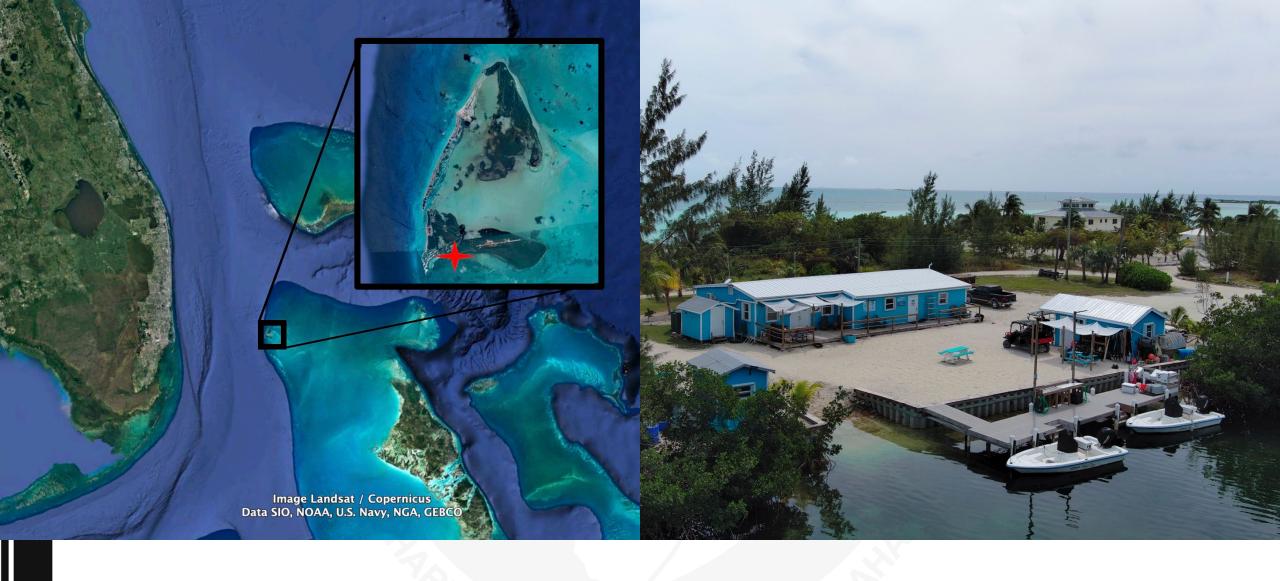




BACKGROUND – STUDY SITES







BACKGROUND

Founded by Dr. Samuel Gruber in 1990

Supported 24 PhD and 38 MSc Students

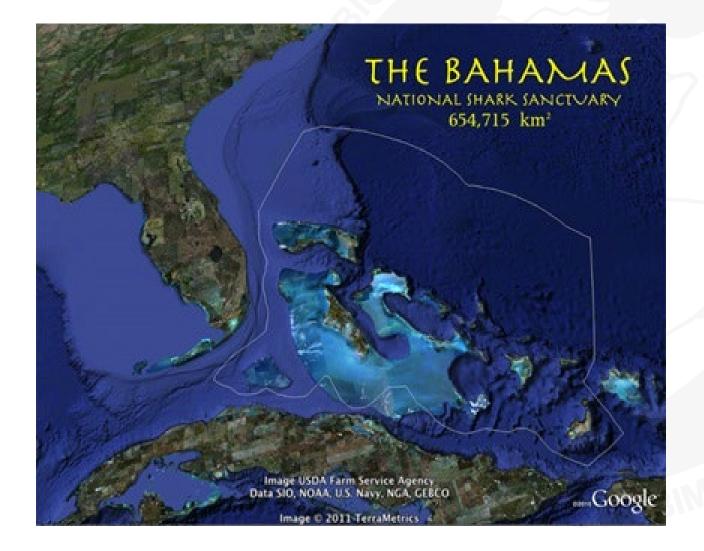
Over 1,000 international volunteers

- 150 peer reviewed publications
- 200 documentary productions

Exploring new depths with new tech



#### **RESEARCH - BIMINI**





#### **THE BAHAMAS**

Low historical shark harvest

Commercial longlines banned in 1993

Shark Sanctuary in 2011

STATION COLLEGE STATION COLLEG

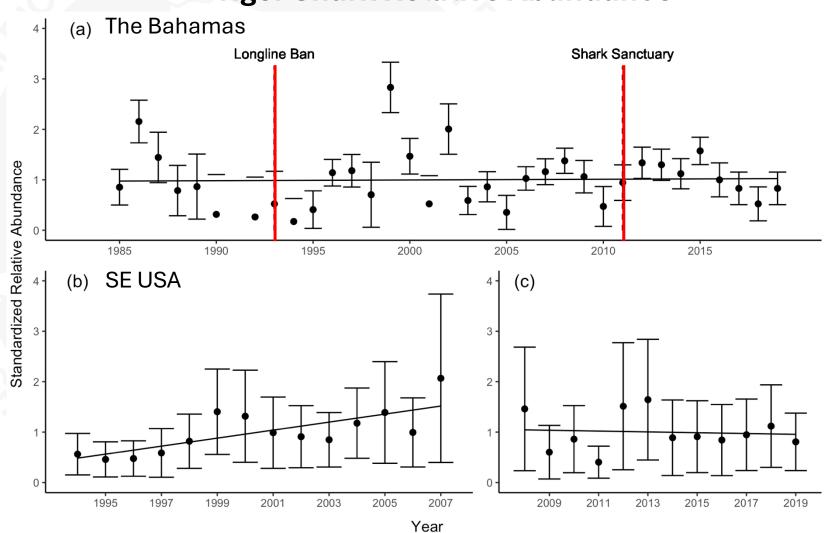
#### **RESEARCH - BIMINI**

### **Tiger Shark Relative Abundance**





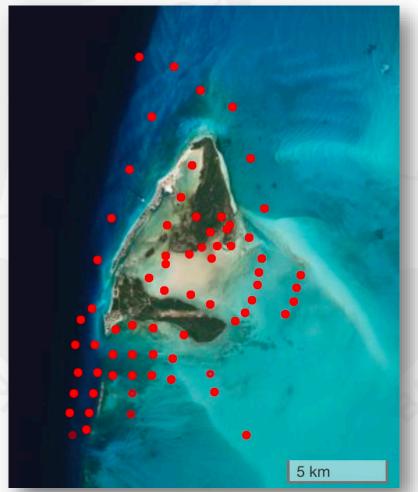




### RESEARCH - BIMINI





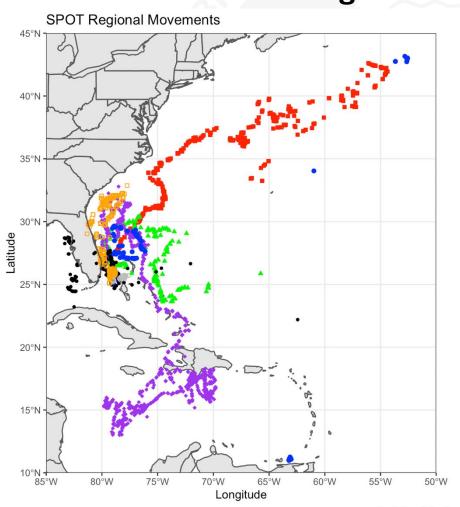


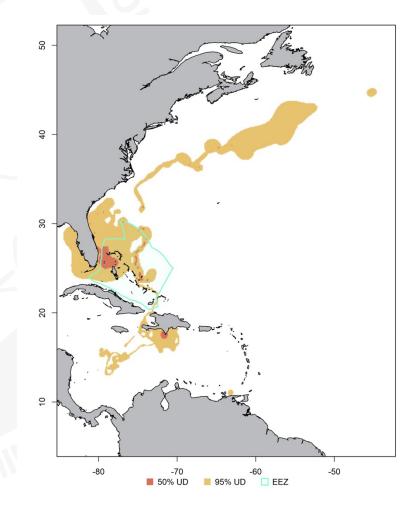




#### **RESEARCH - BIMINI**

### **Tiger Shark Regional Movements**



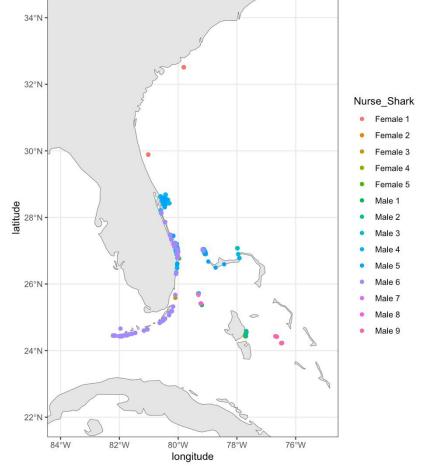


**RESEARCH - BIMINI** 



#### **Nurse Shark Regional Movements**

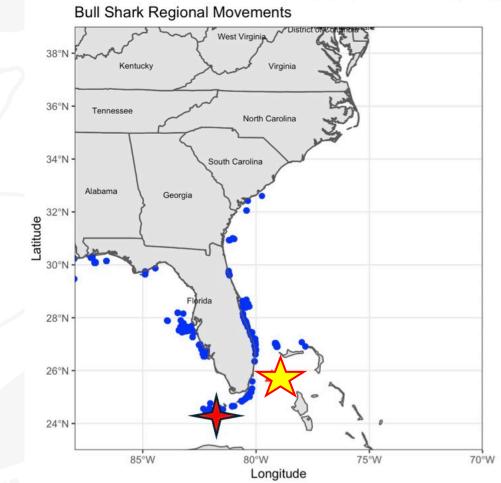




### RESEARCH – BIMINI



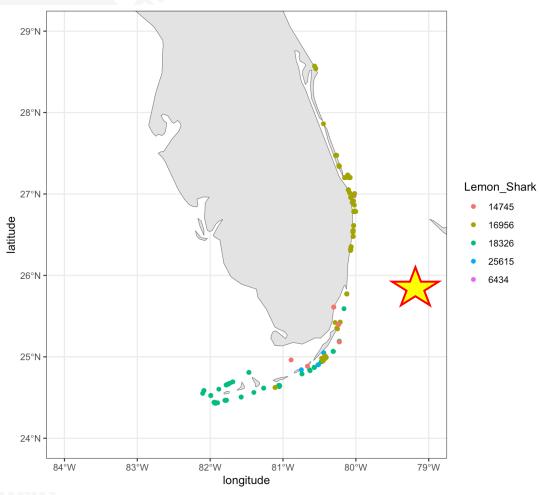




RESEARCH – BIMINI



## Lemon Shark Regional Movements



### RESEARCH – GREAT HAMMERHEAD





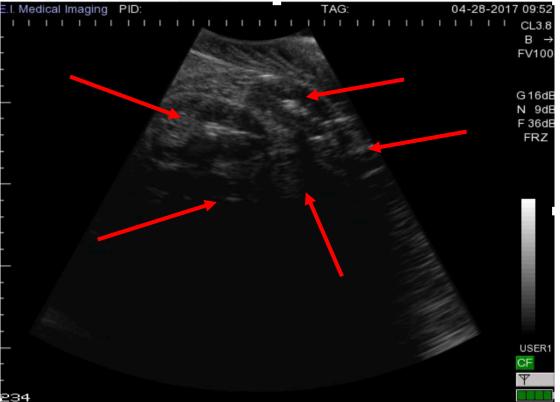




#### RESEARCH – GREAT HAMMERHEAD

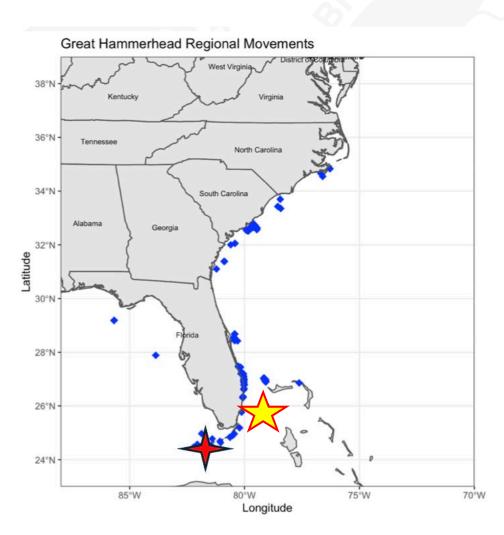






#### RESEARCH – GREAT HAMMERHEAD







#### RESEARCH – FLORIDA KEYS



ARTICLE



## Predator-prey landscapes of large sharks and game fishes in the Florida Keys

Lucas P. Griffin<sup>1</sup> | Grace A. Casselberry<sup>1</sup> | Susan K. Lowerre-Barbieri<sup>2</sup> | Alejandro Acosta<sup>3</sup> | Aaron J. Adams<sup>4,5</sup> | Steven J. Cooke<sup>6</sup> | Alex Filous<sup>1</sup> | Claudia Friess<sup>2</sup> | Tristan L. Guttridge<sup>7</sup> | Neil Hammerschlag<sup>8</sup> | Vital Heim<sup>9,10</sup> | Danielle Morley<sup>1,3</sup> | Mitchell J. Rider<sup>8</sup> | Gregory B. Skomal<sup>11</sup> | Matthew J. Smukall<sup>9</sup> | Andy J. Danylchuk<sup>1</sup> | Jacob W. Brownscombe<sup>6</sup>

ORIGINAL ARTICLE



## Movescapes and eco-evolutionary movement strategies in marine fish: Assessing a connectivity hotspot

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Susan K. Lowerre-Barbieri<sup>1,2</sup>  | Claudia Friess<sup>2</sup> | Lucas P. Griffin<sup>3</sup>  |

Danielle Morley<sup>3,4</sup>  | Gregory B. Skomal<sup>5</sup> | Joel W. Bickford<sup>2</sup> | Neil Hammerschlag<sup>6</sup>  |

Mitchell J. Rider<sup>6</sup>  | Matthew J. Smukall<sup>7</sup>  | Maurits P. M. van Zinnicq Bergmann<sup>7,8</sup>  |

Tristan L. Guttridge<sup>9</sup> | Andrea M. Kroetz<sup>10</sup>  | R. Dean Grubbs<sup>11</sup> |

Carissa L. Gervasi<sup>12</sup>  | Jennifer S. Rehage<sup>12</sup>  | Gregg R. Poulakis<sup>13</sup>  |

Kim Bassos-Hull<sup>14</sup> | Jayne M. Gardiner<sup>15</sup>  | Grace A. Casselberry<sup>3</sup> | Joy Young<sup>16</sup>  |

Matt Perkinson<sup>17</sup> | Debra L. Abercrombie<sup>18</sup>  | Dustin T. Addis<sup>2</sup>  |

Barbara A. Block<sup>19</sup> | Alejandro Acosta<sup>4</sup> | Aaron J. Adams<sup>20,21</sup> | Andy J. Danylchuk<sup>3</sup>  |

Steven J. Cooke<sup>22</sup>  | Frederick G. Whoriskey<sup>23</sup> | Jacob W. Brownscombe<sup>24</sup>
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Vol. 663: 157-177, 2021 https://doi.org/10.3354/meps13637

MARINE ECOLOGY PROGRESS SERIES Mar Ecol Prog Ser

Published March 31



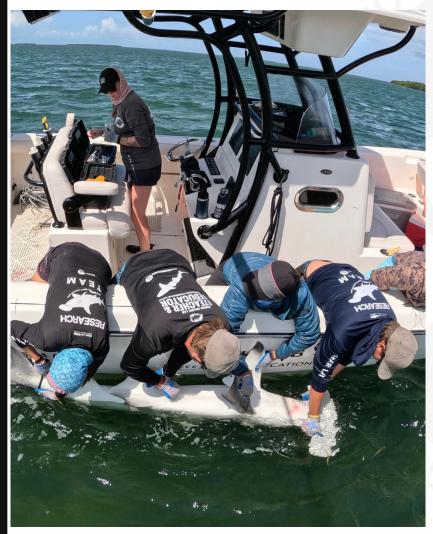
# Regional-scale variability in the movement ecology of marine fishes revealed by an integrative acoustic tracking network

Claudia Friess<sup>1,\*,#</sup>, Susan K. Lowerre-Barbieri<sup>1,2,#</sup>, Gregg R. Poulakis<sup>3</sup>, Neil Hammerschlag<sup>4</sup>, Jayne M. Gardiner<sup>5</sup>, Andrea M. Kroetz<sup>6</sup>, Kim Bassos-Hull<sup>7</sup>, Joel Bickford<sup>1</sup>, Erin C. Bohaboy<sup>8</sup>, Robert D. Ellis<sup>1</sup>, Hayden Menendez<sup>1</sup>, William F. Patterson III<sup>2</sup>, Melissa E. Price<sup>9</sup>, Jennifer S. Rehage<sup>10</sup>, Colin P. Shea<sup>1</sup>, Matthew J. Smukall<sup>11</sup>, Sarah Walters Burnsed<sup>1</sup>, Krystan A. Wilkinson<sup>7,12</sup>, Joy Young<sup>13</sup>, Angela B. Collins<sup>1,14</sup>, Breanna C. DeGroot<sup>15</sup>, Cheston T. Peterson<sup>16</sup>, Caleb Purtlebaugh<sup>17</sup>, Michael Randall<sup>9</sup>, Rachel M. Scharer<sup>3</sup>, Ryan W. Schloesser<sup>7</sup>, Tonya R. Wiley<sup>18</sup>, Gina A. Alvarez<sup>19</sup>, Andy J. Danylchuk<sup>20</sup>, Adam G. Fox<sup>19</sup>, R. Dean Grubbs<sup>21</sup>, Ashley Hill<sup>22</sup>, James V. Locascio<sup>7</sup>, Patrick M. O'Donnell<sup>23</sup>, Gregory B. Skomal<sup>24</sup>, Fred G. Whoriskey<sup>25</sup>, Lucas P. Griffin<sup>20</sup>

<sup>1</sup>Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL 33701, USA
Full author addresses are given in the Appendix

RESEARCH – FLORIDA KEYS









#### RESEARCH – FLORIDA KEYS







RESEARCH – SHARK HEALTH

















The Dance of Death Returns: Keys Spinning Fish Event, Historical Context and Overview from FWC

#### Micah Bakenhaster

Florida Fish & Wildlife Conservation Commission, St. Petersburg, Florida

Benthic Dinoflagellates, Spinning Fish, and Sawfish Mortalities: Is There a Connection?

#### Dr. Michael Parsons

Florida Gulf Coast University, Fort Myers, Florida

Pioneering a First-in-Kind, Fishing Guide-Led Model for Rapid Scientific and Ecological Response

#### Allison Delashmit

Key West and Lower Keys Fishing Guides Association, Summerland Key, Florida

Spinning Sawfish in the Florida Keys: Weather Conditions, Movements, and Mortality

#### Dr. Gregg Poulakis

Florida Fish and Wildlife Conservation Commission, Port Charlotte, Florida

Seascape and Food Web Impacts of the Fish Spinning Phenomenon in the Florida Keys

#### Dr. W. Ryan James

Florida International University, Miami, Florida

#### RESEARCH – SHARK HEALTH







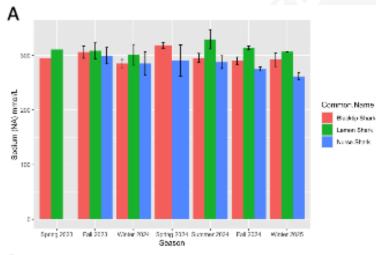


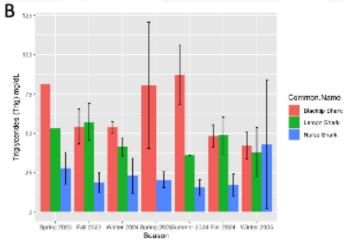


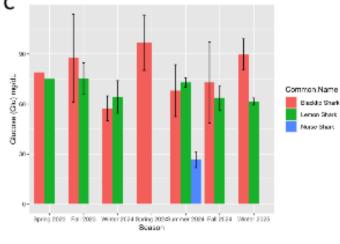
#### RESEARCH - SHARK HEALTH

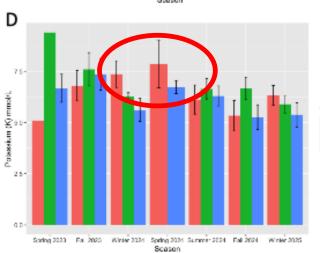






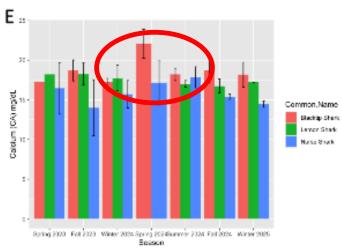


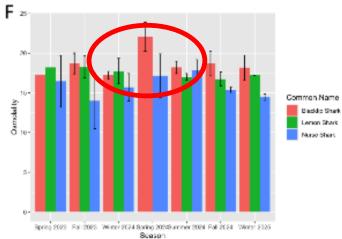




Blacktip Shark

Lemon Shark

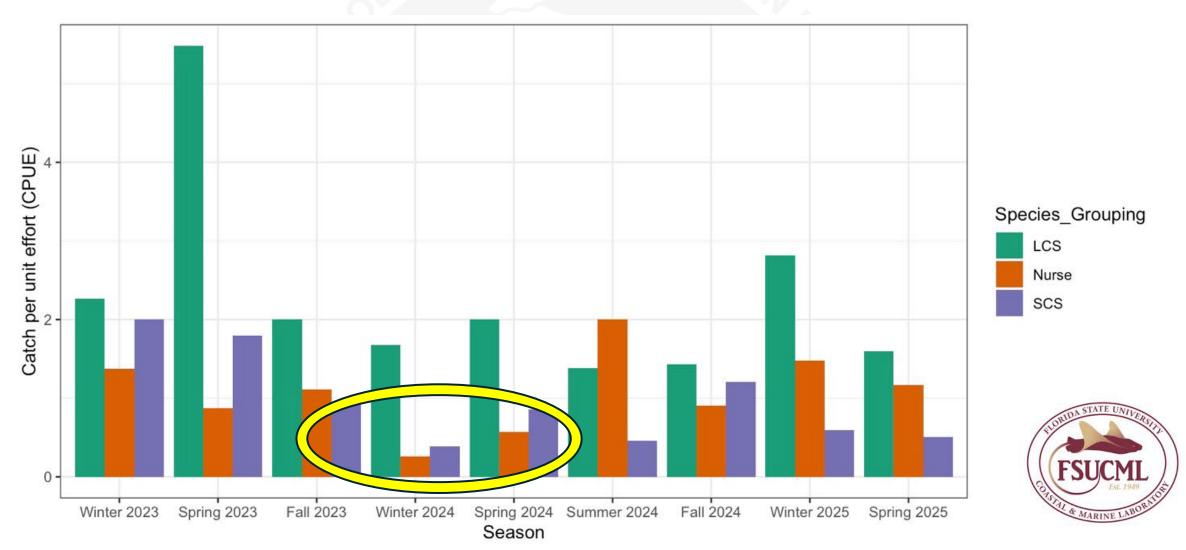








#### RESEARCH – RELATIVE ABUNDANCE ON LONGLINES



#### RESEARCH – NEXT STEPS



#### **Currently Tracking**

Lemons

**Great Hammerheads** 

Bulls

Blacktips

Tigers

\*Nurses



#### LOWER KEYS ACOUSTIC ARRAY



## **EDUCATION**

### INTERNSHIPS AND STUDENT SUPPORT







