Florida Atlantic Coast Telemetry (FACT) Array: A Working Partnership

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Background

Purpose:
Use passive acoustic telemetry to document site fidelity, habitat preferences, seasonal migration patterns, and reproductive strategies of valuable sportfish, sharks, and marine turtles.

The Florida Atlantic Coast Telemetry (FACT) Array is a collaborative partnership of researchers that have found that by bundling resources, they can leverage a smaller investment to track highly mobile animals beyond a study area typically restrained in scale by funds and manpower.

FACT is guided by several simple rules:
• Contribute and use the same type of equipment
• When feasible locate receivers in areas that are beneficial to all researchers
• Maintain strong scientific ethics
• By recognizing that tag detection data on any receiver belongs to the tag owner
• Do not use other members detection data without permission

ACKNOWLEDGE FACT in publications

List of species ranked by number of tags deployed since 2008:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Species</th>
<th>Number of Tags</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blacktip Reef Shark</td>
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<tr>
<td>2</td>
<td>Blacktip Goliath Group Shark</td>
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<tr>
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<td>6</td>
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<tr>
<td>10</td>
<td>Blacktip Goliath Group Shark</td>
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</tr>
</tbody>
</table>

Project Overview

Overview of receivers within the FACT array. Partners have access to a network of over 480 receivers deployed along a continuum of habitats from freshwater rivers to offshore reefs and covers ~1100 km of coastline from the Florida Keys and Bahamas north to South Carolina.

Project Goals:
- To establish and operate a long-term passive acoustic telemetry array to detect and track highly mobile marine species
- To use the resulting data to inform management and conservation efforts

FACT Partners

• Bimini Biological Field Station Foundation
• Bureau of Ocean Energy Management
• Cape Eleuthera Institute
• CSA Ocean Sciences Inc
• Delaware State University
• East Coast Biologists
• Florida Atlantic University
• Florida Fish and Wildlife Conservation Comm (St. Petersburg, Marathon and Tequesta)
• Florida Institute of Technology
• Florida State University
• Georgia Department of Natural Resources
• Kennedy Space Center Ecological Program/InoMed Health Applications
• Loxahatchee River District, Florida
• Mote Marine Lab - Summerland Key TRL
• Naval Undersea Warfare Center
• NOAA, Gray’s Reef
• Ocean Tracking Network
• Riverhead Foundation
• Rosenstiel School of Marine and Atmospheric Sciences, University of Miami
• Savannah State University
• Shedd Aquarium
• South Carolina Department of Natural Resources
• Southeast Coast Ocean Observing Regional Association (SECOORA)
• Stony Brook University
• University of Georgia
• University of North Florida
• University of Florida/Program for Shark Research
• USGS Gainesville and Miami

Ecology of Young Bull Sharks in the Loxahatchee River, Florida.

Data Support:
- Data was collected by the John G. Shedd Aquarium, Florida State University, Georgia Department of Natural Resources, Savannah State University, Stony Brook University, University of North Florida, and University of Florida/Program for Shark Research.

Summary

• Partners have access to over 480 receivers and have deployed over 2916 tags in over 60 species
• Large-scale movement patterns of highly mobile species have been expanded and better defined as result of the FACT partnership
• Small scale, localized movement and site fidelity patterns have been refined as a result of the FACT partnership
• FACT tagged species have been detected within other arrays and conversely animals from other arrays have been detected within FACT

Other species with less than 10 tags per species include Roughtail Stingray (Dasyatis centroura), Yellowfin/Florida Goliath Grouper (Epinephelus striatus), White Grunt (Haemulon unicolor), Green Goliath Grouper (Epinephelus itajara), Red Snapper (Lutjanus campechanus), Red Hind (Epinephelus guttatus), Goliath Goliath Grouper (Epinephelus itajara), White Grunt (Haemulon unicolor), Cobia (Rachycentron canadum), Dog Sphyrna tiburo, Lemon Shark (Negaprion brevirostris), Reef Shark (Carcharhinus perezi), Roughhead Stingray (Dasyatis centroura), Blacktip Goliath Grouper (Epinephelus itajara), Blacktip Goliath Grouper (Epinephelus itajara), Green Goliath Grouper (Epinephelus itajara), and Brownbanded Bamboo Shark (Chiloscyllium punctatum)