Anglers Count: A Technology-based Approach to Aid Fisheries Management: Canaveral National Seashore and Beyond

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Rick Roberts, Snook and Gamefish Foundation
Linda Roberts, Snook and Gamefish Foundation
Imagine a Map of Florida Here...

- 24 miles of undeveloped beach on east coast of FL
- ~1/4 million acres of federally- and state-protected lands and waters
- Canaveral National Seashore, Merritt Island National Wildlife Refuge, Kennedy Space Center
- An extensive inshore network of estuaries protected by a barrier island system
- Indian River Lagoon and Mosquito Lagoon
- Shallow flats, a transition zone between subtropics and temperate climates
- Over 1 million visitors annually
- Known as Florida’s “Space Coast.”
About the Canaveral Fishery....

- World renowned for its unique red drum fishery ("bull reds"), spotted seatrout and assortment of other game and commercially important species
- Reds remain in Lagoon throughout their entire life cycle
- Reach sizes >40 lbs!
- A fly fishing Mecca attracting tens of thousands of anglers annually
- The State of Florida regulates red drum and spotted seatrout with a “slot limit” of 17”-27”
So, what’s the problem?

• State sets size and bag limits based on regional stock assessments
• Different geographic scale, unique fishery characteristics not accounted for
• NPS will develop a Fisheries Management Plan which will considered location specific bag/size limits, poll-troll zones, and other measures to manage a healthy fishery
• NPS requires Professional Guides to turn in monthly “catch logs”
• Highly inaccurate. Widely known as “liar’s logs”
• WE NEED MORE AND BETTER DATA!
“The future of GAMEFISH is in the hands of informed anglers....”  William Mote
Founder, Snook & Gamefish Foundation
NPS Mission:

...preserved unimpaired for the enjoyment of this and future generations...
Need for Recreational Angler data

- Dramatic increase in recreational fishing requires changes in fishery management strategies (40 million + anglers will fish this year). Science and governance can benefit from local data collection.

- A data record is needed that will assess whole catch (throwback rate as well as harvest) in stock assessment.


- Targeted populations within CANA are unique in the biology compared to other populations of the same species.
Angler Action is a service project of SGF undertaken in partnership with many

Special Thanks to the fishery research staff at FWC for their commitment, partnership and professionalism.
The Angler Action Program provides greater collaboration between the recreational fishing community and fisheries managers to improve respect and trust.
Recreational Anglers Can Supply Critical information

- Trip Characteristics
- Target Species
- Time targeting each species (lines in the water, CPUE)
- Geospatial information (protected)
- Fish lengths and slot ranges for both discarded and harvested fish
- Condition upon release
- Harvested numbers
- Angler Contact info
How’s it work?

- Education/buy-in essential
  - Report all sizes
  - Report locations
  - Report ‘0’ Catch Trips
- Record on the water for accuracy; Log online soon after your trip
  - Include comments
- Use cell phone app if you can
- Ask if you have a question
# On the Water Catch Record

**WHERE ANGLERS COUNT!**

It takes less than 3 minutes to log your trip at [www.angleraction.org](http://www.angleraction.org) or at www.snookfoundation.org/data

## ON THE WATER TRIP RECORD RESEARCH PROJECT

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>TIME FISHING PER SPECIES (Lines in the water)</th>
<th>TOTAL FISH CAUGHT (include '0' catch)</th>
<th>HOW MANY FISH KEPT OR RELEASED</th>
<th>HOW MANY FISH CAUGHT WERE UNDER SLOT</th>
<th>IN SLOT</th>
<th>OVER SLOT</th>
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<td>MEASURED LENGTHS / OPTIONAL (to nearest 1/4&quot;)</td>
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</tbody>
</table>

Measure your fish while in the water, or estimate the length.

**NUMBER OF ANGLERS:**

**COMMENTS / LOCATIONS:**

Anglers building a data-rich environment for the future of fishing!  
[ANGLERACTION.ORG](http://ANGLERACTION.ORG)
Smart Phone apps!!!
Spot information is important
it is protected

Use "Next" and "Back" buttons on form, not those in your browser. The form must be completed in one session, and takes 5-10 minutes to complete.

HELPFUL TIPS
• Enter any fishing trip where you targeted one or more of the tracked species
• Report your trip even if you get skunked!
• Complete one catch log form per trip
• Enter data soon after trip (so you don't forget anything!)
• Questions? Enter on form Comments.

FISHING SPOT 1
FISHING SPOT 2
FISHING SPOT 3

SPOT #1: use this map to pinpoint your first or primary fishing spot.

Scroll to bottom of page, to skip this step.

Spot #1: Use zoom tool to zero in. Click and drag the pin to your fishing spot. Coordinates will appear on screen.

Please insert comment

spot 1
• By angler request, data are generalized in reports to prevent disclosure of information about individual production and fishing spots.
• 95% of all fish reported were released.
Anglers are proud to take part and are encouraged to post photos of their catch on line.
“These data were very important in 2010 and 2011 because of the information on proportion of fish that are released alive.

I was pleased that your survey covers both coasts, both trip information, and fish data which consisted of lengths.

Thanks for the use of the data.”

**Dr. Robert Muller,**
FWC’s Fish and Wildlife Research Institute
October, 2011
AAP Catch Record targeting Brook, Rainbow and Brown Trout

### Add Catch Record

Select the fish name and quantities below. Once you create this catch record, you can add lengths and other info for this species, or add more catch records.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Trip Id</td>
<td>590</td>
</tr>
<tr>
<td>Trip Name</td>
<td>RMS Field Trip</td>
</tr>
<tr>
<td>State</td>
<td>North Carolina</td>
</tr>
<tr>
<td>Location</td>
<td>Cataloochee Creek – Top Stop</td>
</tr>
<tr>
<td>Date</td>
<td>04/25/2012</td>
</tr>
</tbody>
</table>

#### Fish Family & Species

- **Freshwater**
- **Brook Trout**

#### Time Fishing

- **Hours**: 2
- **Minutes**: 0

#### Quantity Caught

- **Quantity Caught**: 29

#### Quantity Under Slot

- **Quantity Under Slot**: 29

#### Quantity In Slot

- **Quantity In Slot**: 0

#### Quantity OverSlot

- **Quantity OverSlot**: 0

#### Quantity Kept

- **Quantity Kept**: 0

#### Quantity Released

- **Quantity Released**: 29

* Indicates Mandatory
RMS Field Trip

Given below are your Fishing Location(s). You can add multiple catch Records for each Location. For adding pictures, click on picture icon in each catch record row. For adding Length/Weight click on the "view" icon on catch record.

<table>
<thead>
<tr>
<th>Location # 1</th>
<th>Cataloochee Creek - Sugar Creek Branch</th>
<th>Lat: 35.707, Long: -83.047</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Sub Species</td>
<td>Under Slot</td>
</tr>
<tr>
<td>Freshwater</td>
<td>Brook Trout</td>
<td>29</td>
</tr>
<tr>
<td><img src="image" alt="Add Catch Data" /></td>
<td><img src="image" alt="View Fishing Location" /></td>
<td><img src="image" alt="Edit Fishing Location" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Location # 2</th>
<th>Cataloochee Creek - Sugar Creek Branch-lower</th>
<th>Lat: 35.704, Long: -83.044</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Sub Species</td>
<td>Under Slot</td>
</tr>
<tr>
<td>Freshwater</td>
<td>Brook Trout</td>
<td>7</td>
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<tr>
<td><img src="image" alt="Add Catch Data" /></td>
<td><img src="image" alt="View Fishing Location" /></td>
<td><img src="image" alt="Edit Fishing Location" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location # 3</th>
<th>Cataloochee Creek - Top Stop</th>
<th>Lat: 35.707, Long: -83.042</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Sub Species</td>
<td>Under Slot</td>
</tr>
<tr>
<td>Freshwater</td>
<td>Brook Trout</td>
<td>1</td>
</tr>
<tr>
<td>Freshwater</td>
<td>Rainbow Trout</td>
<td>1</td>
</tr>
<tr>
<td><img src="image" alt="Add Catch Data" /></td>
<td><img src="image" alt="View Fishing Location" /></td>
<td><img src="image" alt="Edit Fishing Location" /></td>
</tr>
</tbody>
</table>
Real time knowledge of fish populations is a barometer of River health
Angler Action Partners

Angler Action Partners:

Collect Data

Collaborate in tool development

Contribute to wise governance

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