

# Examining the Movement Ecology and Habitat Utilization of Black Sea Bass (*Centropristis striata*) in Chesapeake Bay Using Telemetry Techniques

Samir Patel and Ricky Alexander - CFF

Nicole Trenholm – Ocean Research Project

William Pappas – F/V Playin Hookey II



Jan 2019 – Dec 2020  
2018 Chesapeake Bay Fisheries Research Program

# **Movement and Habitat Utilization of Black Sea Bass:**

## ***Goals***

- 1) Conduct seasonal rod and reel surveys inshore and offshore.
- 2) Deploy conventional spaghetti tags, acoustic telemetry tags, and pop-up satellite tags on caught BSB.
- 3) Compare environmental data and movement patterns, using CBIBS oceanographic buoy data, ancillary data from satellite tags, and temp/depth data loggers.
- 4) Utilize a network of citizen science volunteers from FishFinder\* to deploy additional mobile receivers within the Bay and along the east coast.

\*<http://www.oceanresearchproject.org/programs/science/citizen-science/>

# Movement and Habitat Utilization of Black Sea Bass:

## *Methods*

- Deploy a variety of electronic tags.
- Deploy passive tags.
- Deploy receivers in Chesapeake Bay
- Document environment through videography.



# Movement and Habitat Utilization of Black Sea Bass:

## *Methods*



Receiver deployment locations.

**Vemco VR2W 69 kHz**

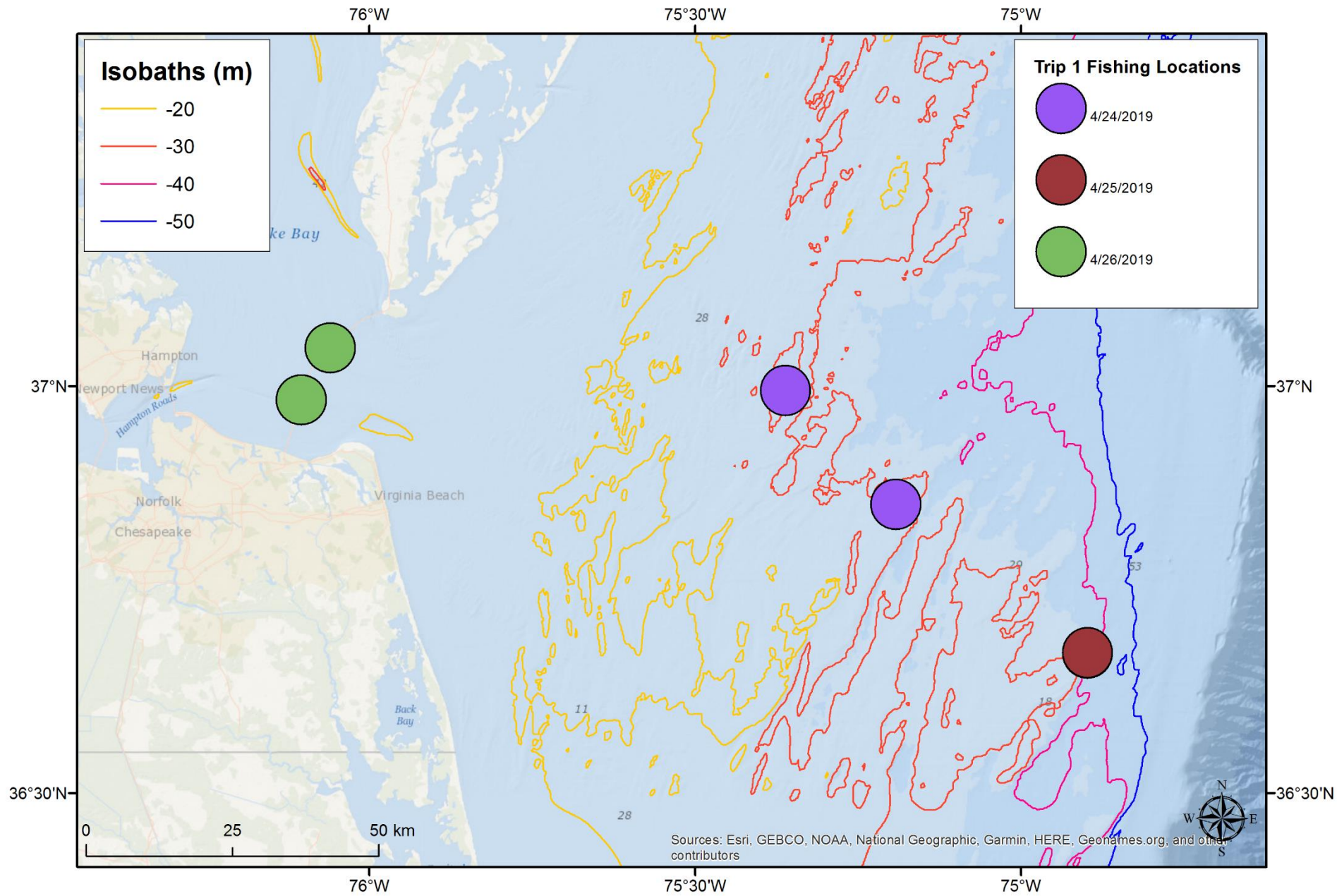
Receivers deployed and maintained by Nicole Trenholm.



# Movement and Habitat Utilization of Black Sea Bass: *Results*

- One trip (out of 4) was completed in April 2019 aboard F/V Playin Hookey II.
- Caught a total of 48 fish from three sites.
- Deployed:
  - 6 Vemco V9 tags (internal)
  - 6 Star Oddi CTD Tags (external)
  - 1 Wildlife Computers MiniPAT





# Movement and Habitat Utilization of Black Sea Bass:

## *Results*

Site	Date	Sample Size	Length (Mean $\pm$ SD)
1	4/24/2019	21	34.7 $\pm$ 6.1 cm
2	4/24/2019	7	37.7 $\pm$ 8.4 cm
3	4/25/2019	20	39.0 $\pm$ 6.6 cm
TOTAL		48	36.9 $\pm$ 6.8 cm

Tag Type	Sample Size	Length (Mean $\pm$ SD)
Vemco	6	36.8 $\pm$ 8.3 cm
Star Oddi	6	40.2 $\pm$ 3.2 cm
MiniPAT	1	46 cm
TOTAL	13	39.0 $\pm$ 6.3 cm

# Movement and Habitat Utilization of Black Sea Bass:

## *Results*

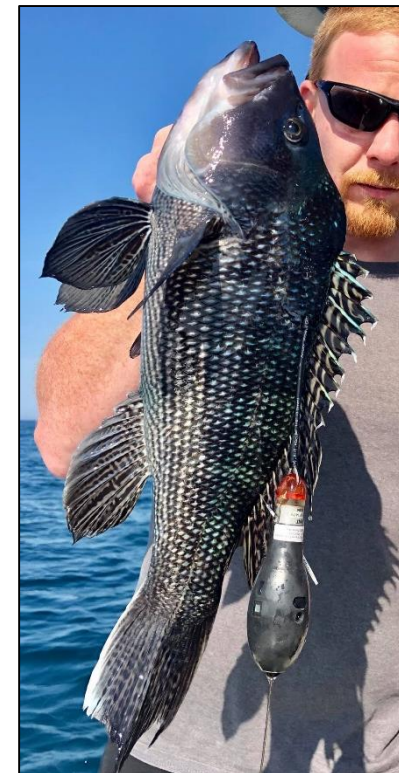
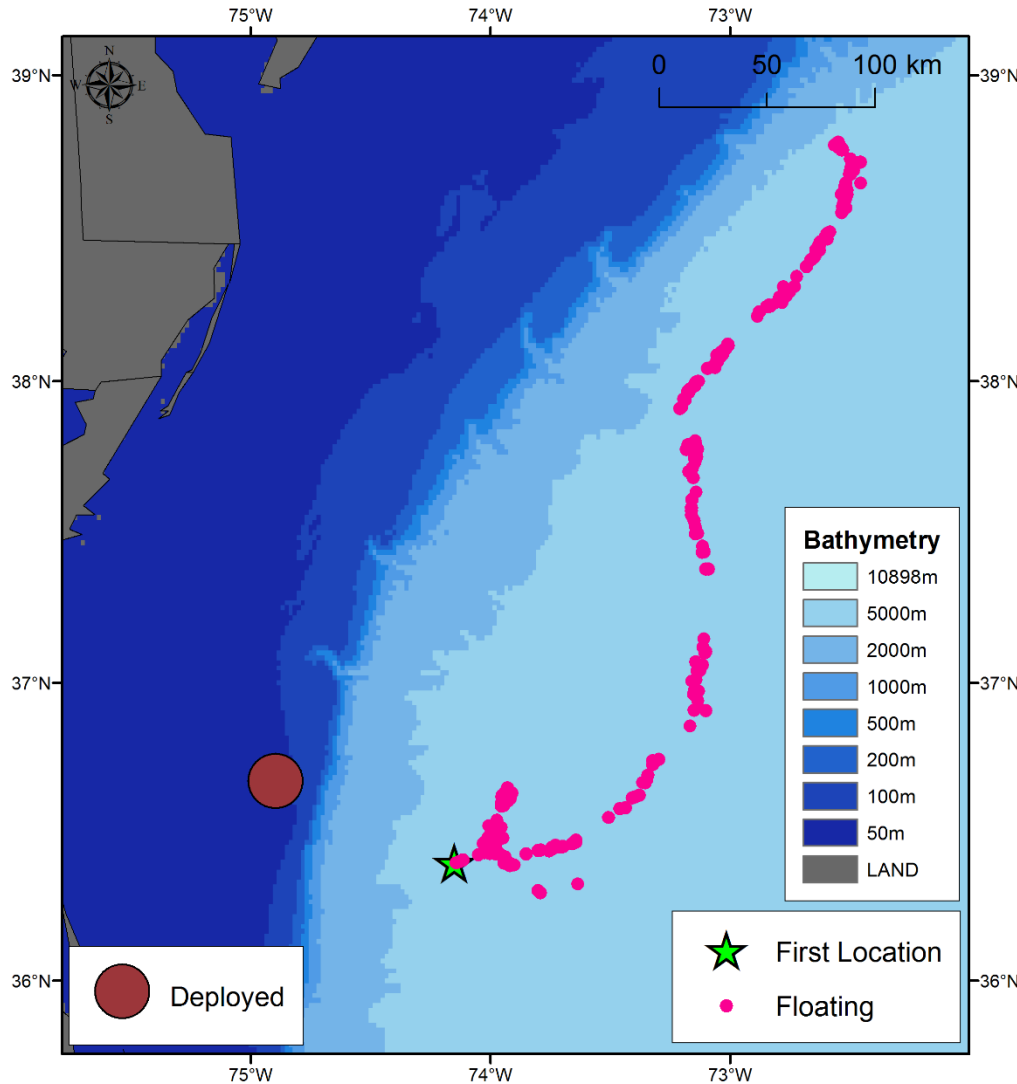
### MINIPAT

Deployed: April 25, 2019

Released: May 31, 2019

Temperature: 9.0°C

Depth: 35 m





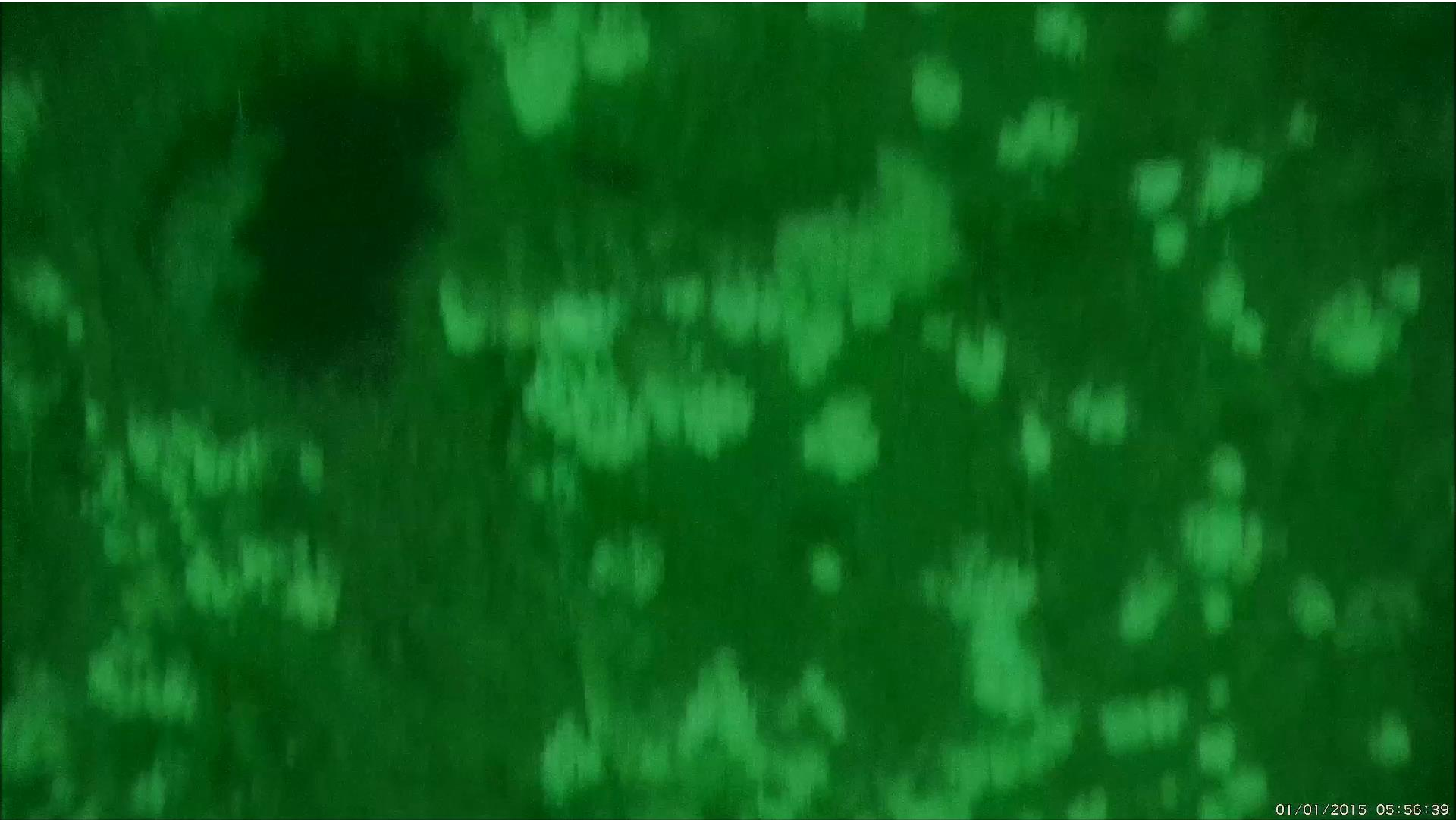
# **Movement and Habitat Utilization of Black Sea Bass:**

## ***Results***



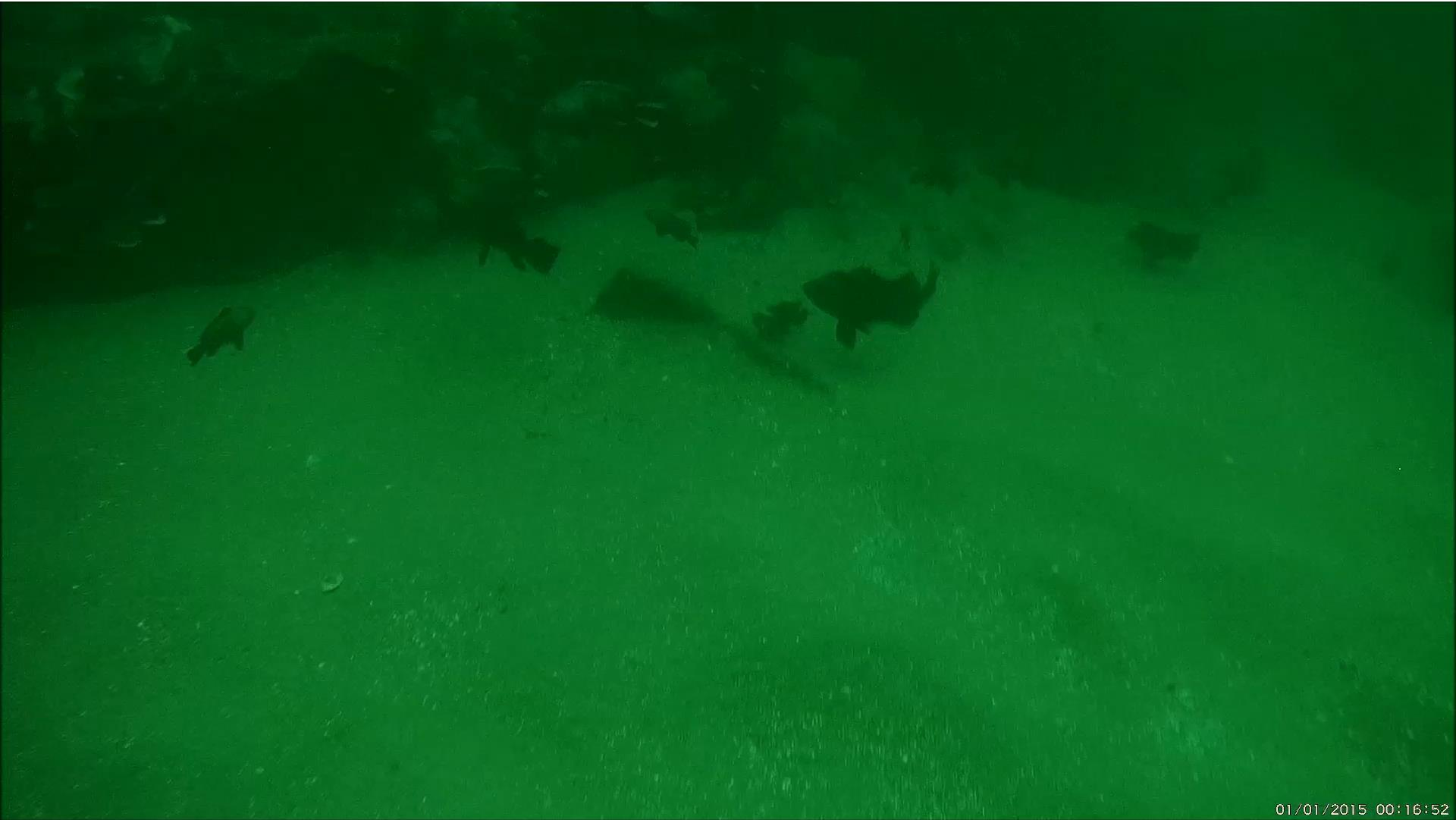
# Movement and Habitat Utilization of Black Sea Bass:

## *Results*



01/01/2015 05:56:39

# Movement and Habitat Utilization of Black Sea Bass: *Results*



01/01/2015 00:16:52

# Movement and Habitat Utilization of Black Sea Bass:

## *Future Plans*

- Next trip scheduled for August 12 – 14.
- Plan to sample primarily from within the Chesapeake Bay.
- Plan to deploy:
  - 14 Vemco V9s
  - 8 Star Oddi CTDs
  - 1 MiniPAT

