



Conducting scientific research projects that support sustainable fisheries, aquaculture, and agriculture

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## Research Cruise Summary Report 2025

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|------------------------|---------------------------------------------------------------------------|
| Project Name:          | RSA HabCam                                                                |
| Vessel Name:           | Princess Scarlett                                                         |
| Leg 3 dates:           | July 16-22, 2025                                                          |
| Port:                  | Fairhaven, MA                                                             |
| Chief Scientist:       | Tasha O'Hara                                                              |
| Scientific Crew Leg 3: | Tasha O'Hara, Luisa Garcia, Natalie Jennings, Kelly Alves, Devin Steiblin |
| Report Completed by:   | Tasha O'Hara                                                              |

### BACKGROUND

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Since 2017, the Coonamessett Farm Foundation (CFF) has conducted an optical stock assessment survey of Atlantic sea scallops (*Placopecten magellanicus*) using the HabCam v3 system. Funded through NOAA Fisheries' Sea Scallop Research Set-Aside (RSA) Program, this project collects data that contribute to the regional stock assessment and directly inform management decisions.

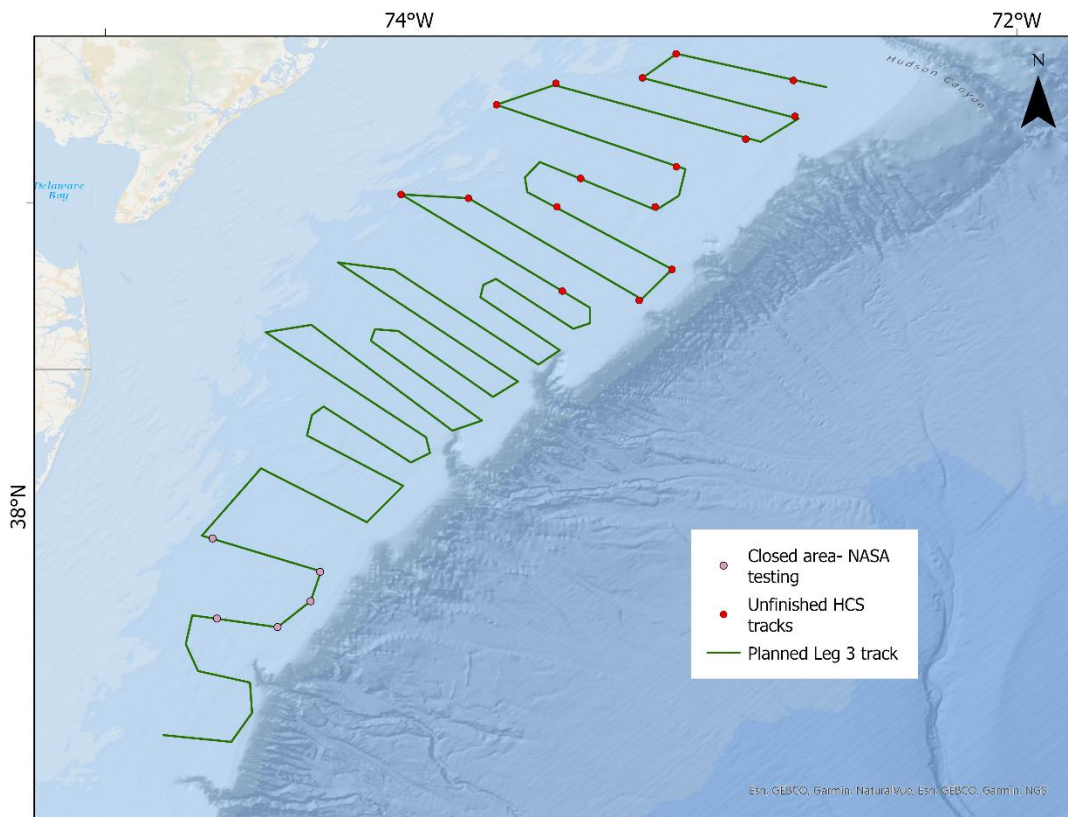
In June, NOAA Fisheries lost their optical survey tool, the HabCam v4, near Closed Area 1 after completing less than 300nm of its total track. Despite attempts to recover the vehicle, NOAA Fisheries was unable to complete the remainder of their survey for the 2025 season, which included thousands of nautical miles in Georges Bank and the southern Mid-Atlantic. In early July, CFF was contacted by the Greater Atlantic Regional Fisheries Office (GARFO) at the behest of the New England Fisheries Management Council (NEFMC) with a request to redeploy the CFF HabCam v3 to cover areas uncompleted by NOAA Fisheries. As a result, in addition to the two original trips funded by the 2024 RSA grant, completed in June 2025, CFF was tasked with conducting a third supplemental survey leg (in bold below):

- Leg 1: Northern Mid-Atlantic region (May 17–23)
- Leg 2: Georges Bank region (May 28–June 4)
- **Leg 3: Southern Mid-Atlantic Region (July 16-22)**

### LEG 3 SUMMARY

CFF successfully completed approximately 412 nautical miles of transects from Delmarva (DMV) through the Elephant Trunk (ET) management areas during Leg 3. The ET was an area of high priority this year due to a notable number of recruits reported during the 2024 survey season. The trip was originally planned to cover just over 700 nm encompassing DMV, ET, and Hudson Canyon South (HCS) management areas (**Figure 1**); however, the trip experienced

multiple issues from both internal and external forces that impacted the completion of the full track.



**Figure 1:** The green track denotes the intended track to be completed during Leg 3. The pink circles indicate the area of the track that was missed due to government explosive testing in the area. The red circles indicate the area missed due to vehicle system issues that caused Leg 3 to conclude prematurely.

The survey trip commenced on the southern extent of the track on the morning of July 18, 2025. Early in the day, CFF staff observed delays in the pilot and copilot graphical user interfaces (GUIs), likely caused by slower-than-normal network speeds. To reduce system load, image decimation rates were adjusted from 4 frames per second to 2 frames per second, and annotation rates were updated to maintain consistent spatial spacing between “stations” across all 2025 surveys. Within the first 24 hours, the system experienced several issues likely related to strumming, each of which was quickly resolved.

On the evening of July 18, the vessel was directed to vacate the area immediately due to NASA explosives testing and instructed to steam 15 nm north before resuming operations. As a result, the survey advanced from waypoint 7 to waypoint 11, bypassing more than 40 nm in the DMV region (**Figure 1**). Operations continued without incident until the morning of July 21, when the topside GUI lost connection with the vehicle after completion of the DMV and ET regions. The vehicle was recovered and inspected, but after 14 hours of troubleshooting on deck, the Chief

Scientist determined that the trip should be terminated, with further diagnostics to be conducted in port with engineering support.

The vessel returned to port late in the evening of July 22, and dockside troubleshooting commenced the following day. The system was successfully brought back online; however, several hardware and software issues were identified that will be addressed during the winter off-season. On July 24, the decision was made to conclude the season, as delayed redeployment would not have allowed sufficient time to complete data collection and processing within the required timeframe. Prior to Leg 3, survey priorities had already been adjusted to focus on only live scallops and clappers to ensure timely data delivery by the August 15 deadline. Further annotations of important species and habitat will be completed in the offseason by CFF personnel.

## **CRUISE OBJECTIVES**

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The primary objectives of this survey are to:

- Collect photographic imagery from proposed optical transects in the survey areas
- Develop GIS-based plots of scallop distribution and density by size and length-frequency distributions of scallops within survey areas
- Derive overall biomass (total and exploitable) within each management area

## **OBSERVATIONS & KEY TAKE AWAYS**

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Scallops of various size classes were noted following the depth contour in ET. The area appeared to be comprised of primarily recruit (35-75 mm) and large adult (> 75 mm) scallops. In Delmarva, scallops were noted intermittently throughout the track, but total scallop numbers were low, in line with previous year's survey results.

## **RESULTS**

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Despite setbacks, CFF collected ~ 1 million paired images from this trip and annotated ~14,500 images. All primary objectives for the project were met, and data were shared with NEFMC and NOAA Fisheries and presented at the annual sea scallop stock assessment meeting held on August 27-28, 2025. A short report and presentation was sent to the NEFMC prior to the meeting and can be found at the [NEFMC website](#).