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Research Cruise Summary Report

2025

Project Name:	RSA HabCam
Vessel Name:	Princess Scarlett
Leg 1 dates:	May 17-23, 2025
Leg 2 dates:	May 28-June 4, 2025
Port:	Fairhaven, MA
Chief Scientist:	Tasha O'Hara
Scientific Crew Leg 1:	Tasha O'Hara, Luisa Garcia, Emily Bruton, Kelly Alves, Cassie Tillotson
Scientific Crew Leg 2:	Tasha O'Hara, Luisa Garcia, Emily Bruton, Nathan Shivers, Liese Siemann
Report Completed by:	Tasha O'Hara

BACKGROUND

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.

The 2025 RSA HabCam survey included two legs:

- **Leg 1:** Mid-Atlantic region (May 17–23)
- **Leg 2:** Georges Bank region (May 28–June 4)

LEG 1 SUMMARY

Leg 1 covered approximately 700 nautical miles of transects from Block Island (BI) to the former New York Bight (NYB) closure area. Surveyed regions included Long Island (LI), NYB, and the northern portion of Hudson Canyon South (HCS) (**Figure 1**). The cruise followed directly after the Orsted HabCam benthic survey.

Operations were largely successful. However, the HabCam system experienced a major equipment failure during normal operations, likely due to a socket resin issue. Approximately 60 nautical miles of the final southern transect remained incomplete. All damage was assessed, and wire terminations were repaired before the vessel returned to port on May 23, causing only a one-day delay to Leg 2.

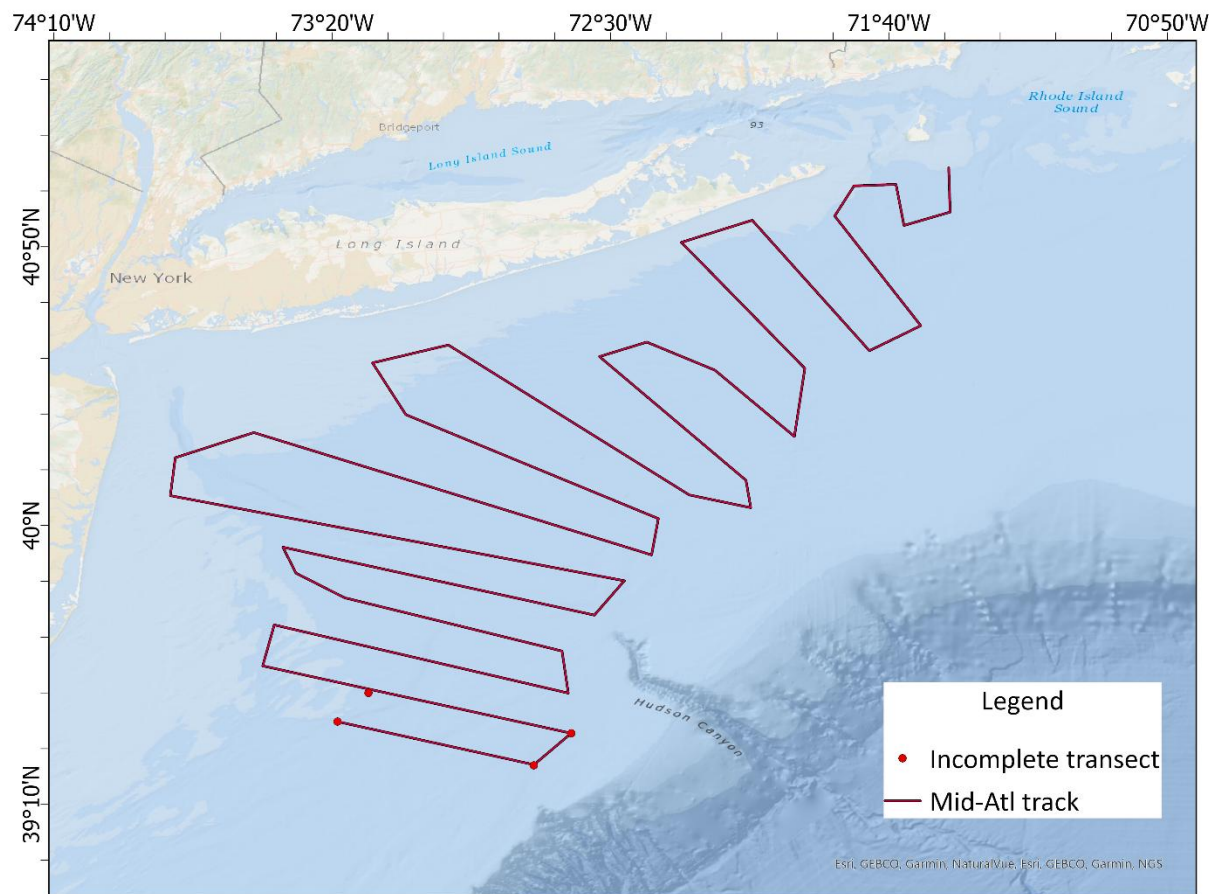


Figure 1: *Intended 2025 HabCam v3 survey track in the Mid-Atlantic region. The dark red line indicates completed transects; red dots mark the ~60 nm of track left incomplete due to equipment failure.*

LEG 2 SUMMARY

Leg 2 took place from May 28th-June 4th, 2025 and covered ~670 nm of continuous track in the Nantucket Lightship South (NLS-S), the Southern Flank (SF), and Closed Area II south (CAIIS) (**Figure 2**). Operations were temporarily halted for 14 hours due to high winds and waves, but the trip was successful and encountered no major issues.

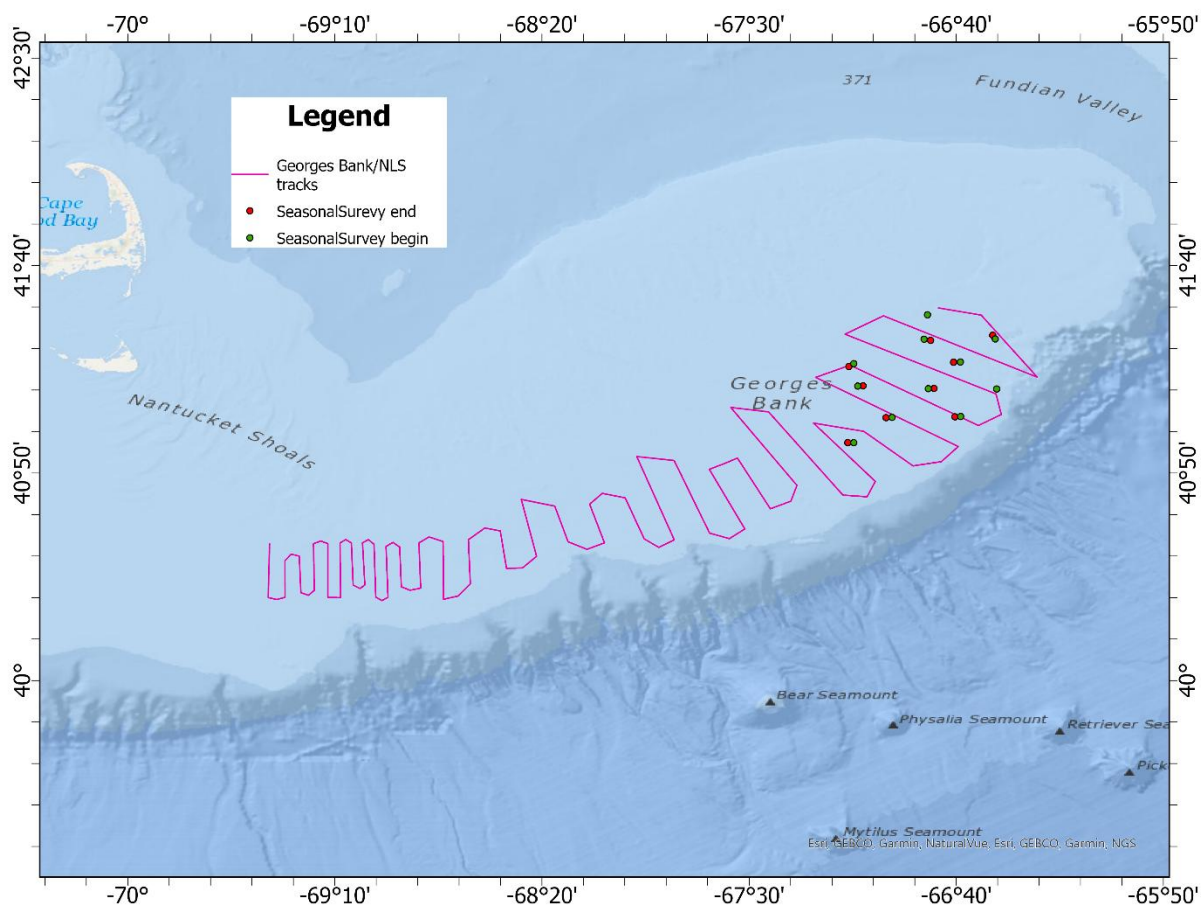


Figure 2: The purple line denotes the intended 2025 CFF HabCam v3 track through the NLS-S, SF, and CAIIS. The green and red dots denote the start and end hauls, respectively, from several CFF Seasonal Survey stations to provide optical monitoring in areas of interest.

CRUISE OBJECTIVES

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

In the Mid-Atlantic region (Leg 1), large numbers of seastars, primarily *Astropecten* spp., were observed along many transects, consistent with patterns noted in previous surveys. Small patches

of juvenile scallops, likely 1–3 years old, were also identified, particularly in the vicinity of the Texas Tower area.

During Leg 2, the eastern transects (see **Figure 2**) passed through several key hotspots that CFF has been monitoring since 2020, most notably in the northern section of CAII. Some survey tracks overlapped with Seasonal Survey hauls (indicated by green and red dots marking start and end points, respectively), allowing for targeted optical imaging in priority areas identified during the April cruise. In the western portion of the survey area, dense aggregations of 2–3-year-old scallops were observed, corresponding with the spatial footprint of the 2023 recruitment event.

RESULTS

Annotations are still underway, and more specific information on this survey will be available at the Sea Scallop Planning and Development Survey meetings in the end of August.