

CRUISE RESULTS
2022 Sea Scallop Survey

UNOLS R/V Hugh R. Sharp (S1 22-01) 14
May – 13 June 2022

NOAA National Marine Fisheries Service
Northeast Fisheries Science Center

Submitted to: NOAA, NEFSC

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Date: 2022



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Northeast Fisheries Science Center
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November 29, 2022

2022 Sea Scallop Survey Cruise Report

Survey Vessel Name (Cruise Code)

UNOLS R/V *Hugh R. Sharp* (S1 22-01)

Project Title

2022 Sea Scallop Survey

Operating Institution

NOAA National Marine Fisheries Service, Northeast Fisheries Science Center

Cruise Dates and Survey Legs

The cruise dates were 14 May – 13 June 2022 and consisted of three legs. Leg I was from 14 – 23 May; Leg II was from 25 May – 3 June; and Leg III was from 5 – 13 June, 2022.

Cruise Objectives

1) Determine the distribution and relative abundance of sea scallops (*Placopecten magellanicus*) and associated fauna utilizing two sampling devices; the 8' standardized sea scallop dredge and the stereo-optic towed camera array (HabCam V4). 2) Collect biological samples from dredge sampling. 3) Determine the most economical and valid methodology for consecutive sampling of the dredge and the HabCam.

Area of Operation and Cruise Track

Mid-Atlantic Bight to Georges Bank. Approximate dredge station locations are shown in Figures 1 and. HabCam V4 cruise tracks are shown in Figures 2 and 3.

Operations and Gear

Operational and gear details for cruise S1 22-01 are outlined in the sea scallop survey cruise instructions dated 5 April, 2022.

Data and Sample Collection Results

Overall, the NOAA Fisheries survey completed 87 percent of planned stations, 120 of 138. All of those planned dredge stations were located in the southern New England and Georges Bank areas. The Mid-Atlantic dredge survey is conducted by the Virginia Institute of Marine Science. Bottom temperatures were collected at 24 stations using the CTD system; water samples for CTD calibration were taken at 8 stations. A total of 1260 biological samples were collected to support internal investigations (Table 1). Catch and oceanographic data were analyzed at the NEFSC Laboratory in Woods Hole, MA. Resulting data were audited, edited, and archived in an Oracle database. HabCam images were further analyzed for biological data at NOAA NMFS NEFSC Woods Hole.

HabCam Image Collection Results

Leg 1 completed 1,124 nautical miles of HabCam survey transects which was 100 percent of the planned work off the Mid-Atlantic and south of Closed Area I on Georges Bank. Leg 2 covered 300 nautical miles of survey transects completing 100 percent of the planned work on the northern flank of Georges Bank and in Closed Area II. Leg 3 completed 300 nautical miles of survey track out of 341 nm scheduled, completing 88 percent of the planned work in the difficult and challenging Great South Channel and Closed Area I. Roughly 5.3 million image pairs were collected during the course of the survey.

Scientific Personnel

National Marine Fisheries Service, NEFSC, Woods Hole, MA

Robert Alexander ²
Michael Bergman, Chief Scientist ^{2,3}
Kathryn Ford ¹
Zachary Fyke ¹
Dvora Hart ¹
Chad Keith, Chief Scientist ¹
Christine Kircun ³
Nancy McHugh ³
Richard Powell ^{1,3}
Jillian Price ²
John Rosendale ³
Sandy Sutherland ²

Contractors, IBSS Corporation, Silver Spring, MD

Tom Arthur ^{2,3}
Halle Berger ³
Doug Brander ¹
Joseph Dunphy ^{2,3}
Cameron Fairclough ^{1,2,3}

Contractors, Saltwater Inc., Anchorage, AK

Jui-Han Chang ^{1,2}

NOAA Hollings Scholars, Woods Hole, MA

Brier Klossing ³
Rachel Lazzaro ²

Volunteers

Devin Steiblin ² New Bedford, MA

¹ 14 – 23 May, 2022

² 25 May – 3 June, 2022

³ 5 – 13 June, 2022

Additional Information Contact

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Table 1. Special samples obtained for investigators on UNOLS R/V *Hugh R. Sharp* Sea Scallop Survey, during 14 May – 13 June 2022.

Investigator and Affiliation	Samples Saved	Approximate Number
Hart, Dvora NMFS, NEFSC, Woods Hole, MA	sea scallop shells	315 shells
Hart, Dvora NMFS, NEFSC, Woods Hole, MA	sea scallop meat weights	315 weights
Hart, Dvora NMFS, NEFSC, Woods Hole, MA	sea scallop gonad weights	315 weights
Hart, Dvora NMFS, NEFSC, Woods Hole, MA	sea scallop shell widths	315 widths

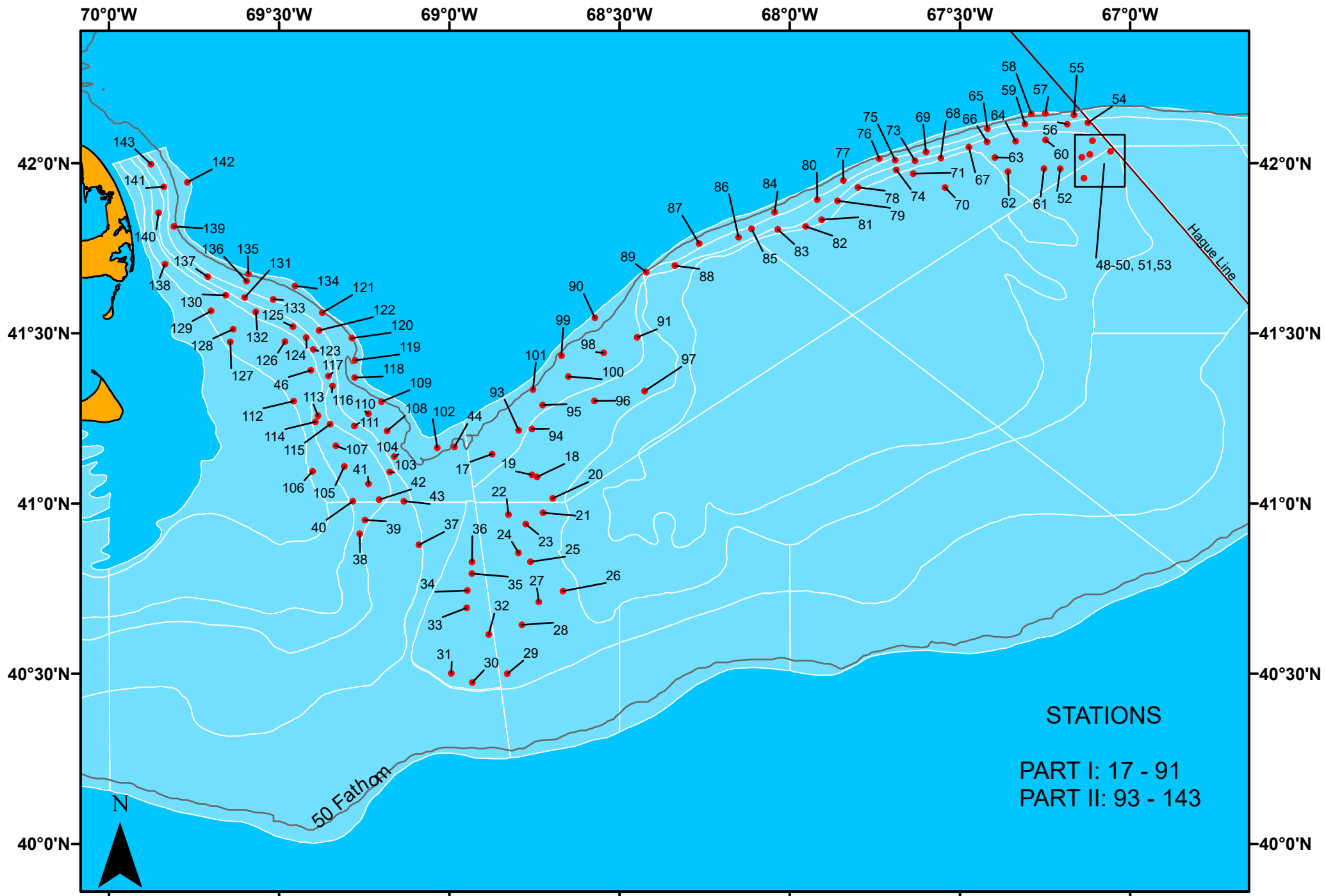


Figure 1. Dredge hauls made by UNOLS R/V *Hugh R Sharp* during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 14 May - 13 June 2022.

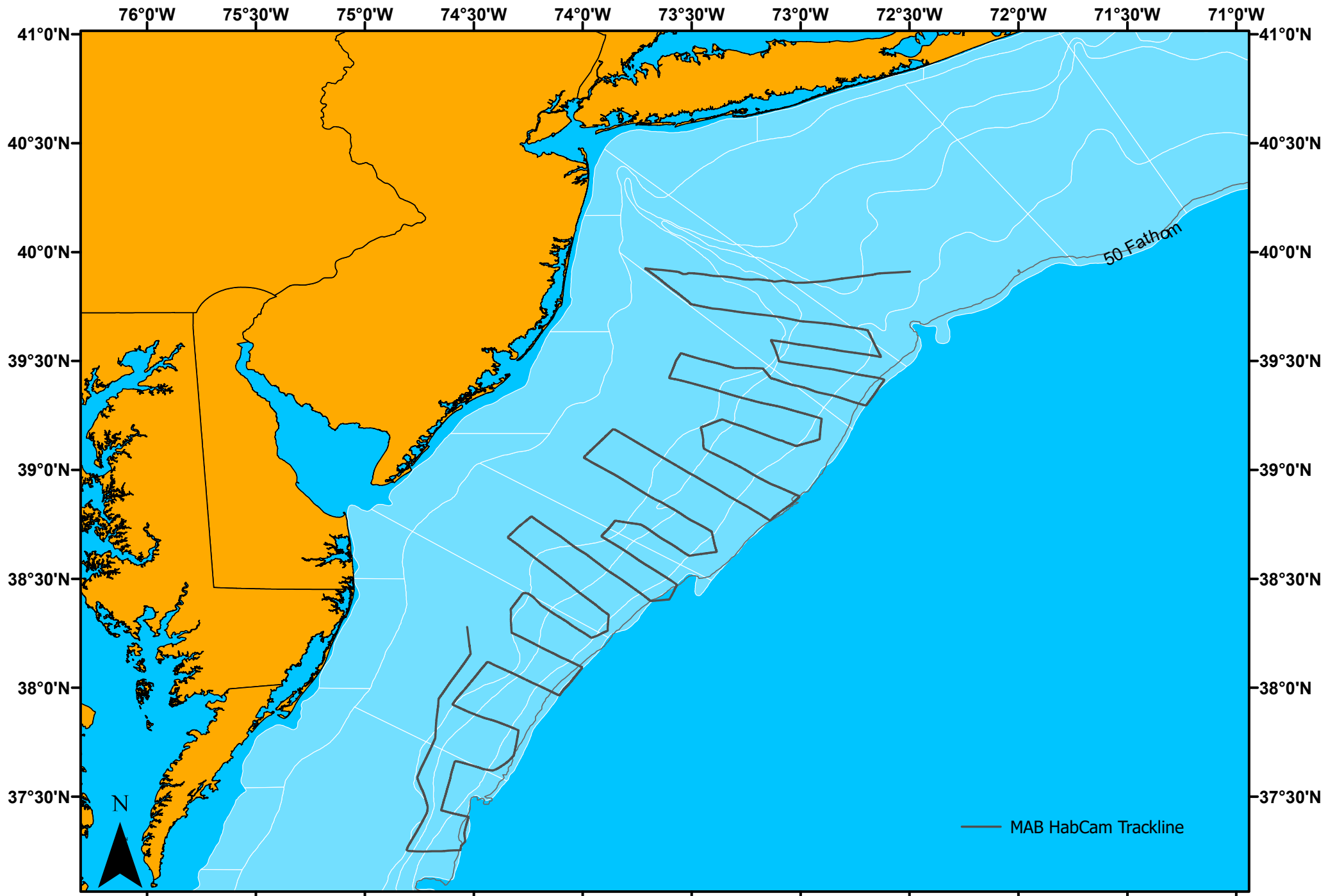


Figure 2. Approximate Mid-Atlantic Bight HabCam cruise track as followed by UNOLS R/V *Hugh R Sharp* during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 14 May - 13 June 2022.

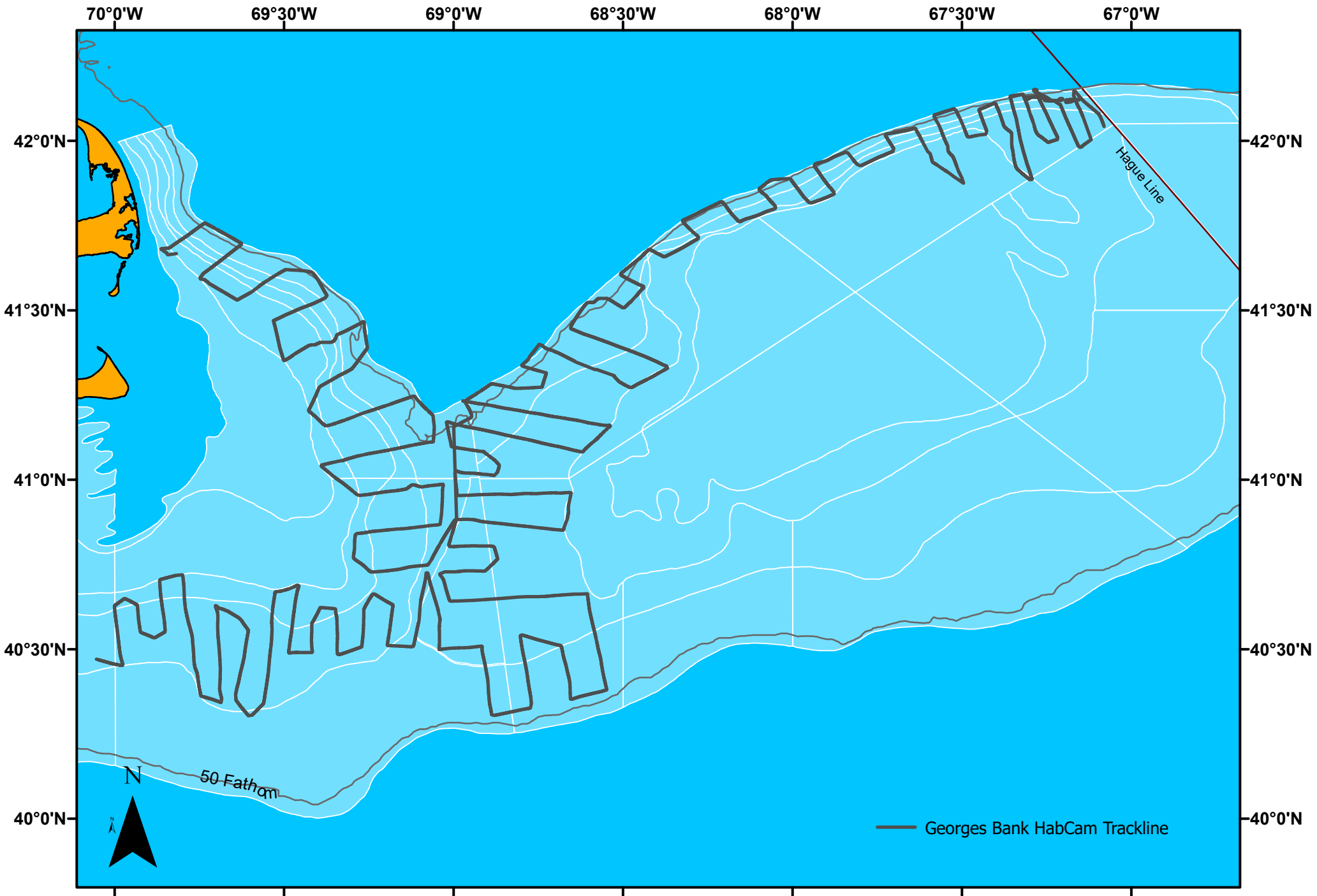


Figure 3. Approximate Georges Bank HabCam cruise track as followed by UNOLS R/V *Hugh R Sharp* during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 14 May - 13 June 2022.