

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

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## Research Cruise Summary Report

Project Name:	<i>Seasonal Survey of Scallop Fishery on the Eastern Part of Georges Bank</i>
Vessel Name:	Regulus
Departure Date:	4/21/2026
Land Date:	4/26/2026
Port:	Fairhaven, MA
Chief Scientist:	Luisa Garcia
Scientific Crew:	Farrell Davis, Kelly Alves
Report Completed by:	Luisa Garcia

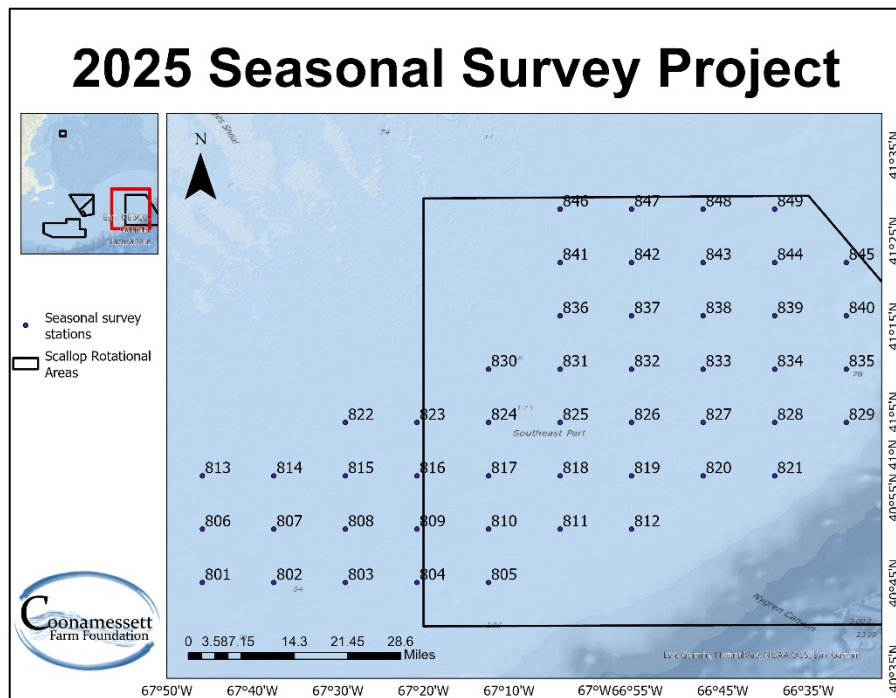
### **BACKGROUND**

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The Seasonal Survey Project has been ongoing since 2012, with sampling over the last nine years focused on the eastern portion of Georges Bank (GB; **Figure 1**). Since 2020, each survey has consisted of paired 15-minute tows using two 15-foot Turtle Deflector Dredges, one fitted with a cover net and one without, at a target speed of 4.8 knots. Catch is processed separately by gear type: all organisms are sorted, weighed, and measured, with scallops subsampled for detailed biological data including shell height, meat and gonad weight, sex, reproductive stage, and meat condition. Selected flatfish species are sampled for gonadosomatic index determination.

This cruise report presents key findings from the fifth research cruise of the 2025 RSA Seasonal Survey, during which 49 stations were successfully sampled in April 2026.

For more information about the project, including previous survey reports and data, please visit: <https://www.coonamessettfarmfoundation.org/seasonal-survey#dataItem-m2qfz3zb>



**Figure 1.** Location of the survey stations for the 2025 seasonal survey on the eastern portion of GB, with stations spaced ~7 nm apart.

## CRUISE OBJECTIVES

The main goal of this trip was to collect biological and ecological information from all stations across the eastern GB study area (**Figure 1**) and subsequently, to compare findings across seasons and years. Sampling activities include species identification and counts, measurements of individual shell height or body length, total catch weights, scallop meat weights, gonad weights for scallops and flatfish, as well as sex determination and assessments of reproductive condition. The dataset from this survey directly supports the overarching objectives of the project, which are:

1. Quantify seasonal biomass of pre-recruit, recruit, and adult Atlantic sea scallops using catch data from a standard dredge equipped with a 40-mm mesh cover net.
2. Collect gonadal tissue samples from scallops to examine seasonal and spatial trends in reproductive activity and spawning dynamics across eastern GB.
3. Assess seasonal variation in scallop health indicators through macroscopic evaluation of meat color, presence of nematodes, orange pustules, and shell blisters.
4. Analyze predator-prey interactions by evaluating the spatial distribution and relative abundance of key predators and their relationship to scallop and clapper distributions.

5. Determine spawning periods of yellowtail flounder (*Limanda ferruginea*) and windowpane flounder (*Scophthalmus aquosus*) in eastern GB through gonadal examinations.
6. Conduct biological assessments of American lobster (*Homarus americanus*) incidentally caught in dredges, recording metrics such as size, sex, shell hardness, egg presence, shell disease symptoms, and signs of mechanical damage.

## OBSERVATIONS & KEY TAKE AWAYS

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Across all stations, this survey captured 100 haddock (*Melanogrammus aeglefinus*; **Figure 2**), ranging from 19 to 57 cm total length. Atlantic cod (*Gadus morhua*; **Figure 3**) were notably less abundant than in the previous survey, with only 5 individuals recorded (20–27 cm total length). These contrasting patterns may reflect localized distributional shifts for these species.

In addition to changes in finfish composition, one scallop exhibited an unusually pigmented gonad, appearing orange rather than the typical reddish coloration (**Figure 4**). A scallop seed was also observed attached to the shell of a recruit-sized individual (**Figure 5**), an example of secondary substrate use that, while not uncommon, provides a useful reminder of the importance of cover net gear in retaining small size classes that standard dredges would otherwise miss.

A torpedo ray (*Torpedo* sp.) was recorded during the survey, which is a species rarely documented in this area in past years, though notably this is not the first encounter during the current survey year, suggesting a possible increase in local occurrence worth tracking. Ocean pout (*Macrozoarces americanus*) were captured across multiple tows in numbers exceeding those typically observed for this time of year, which may reflect seasonal or interannual variability in distribution.

Overall, catch composition remained broadly consistent with prior surveys, with no major unexpected shifts in dominant species or size structure beyond those discussed in the results section.



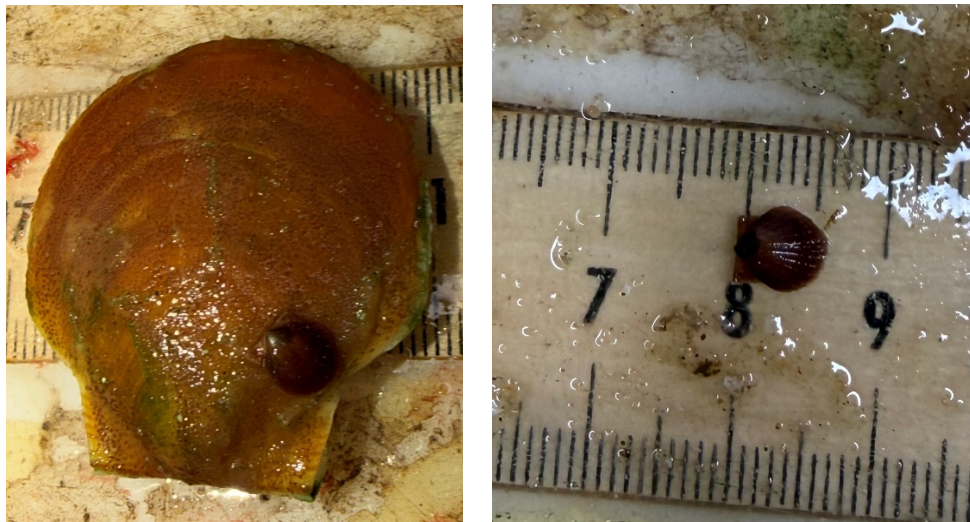
**Figure 2.** Some haddock individuals captured during the April 2026 seasonal survey trip.



**Figure 3.** Two Atlantic cod captured during the April 2026 seasonal survey trip.



**Figure 4.** Picture of an atypical pigmented gonad observed in a female scallop during the Seasonal Survey April trip.



**Figure 5.** Seed scallop attached to a recruit scallop (left). Close-up view of the seed individual (~6 mm shell height; right).

## PRELIMINARY RESULTS

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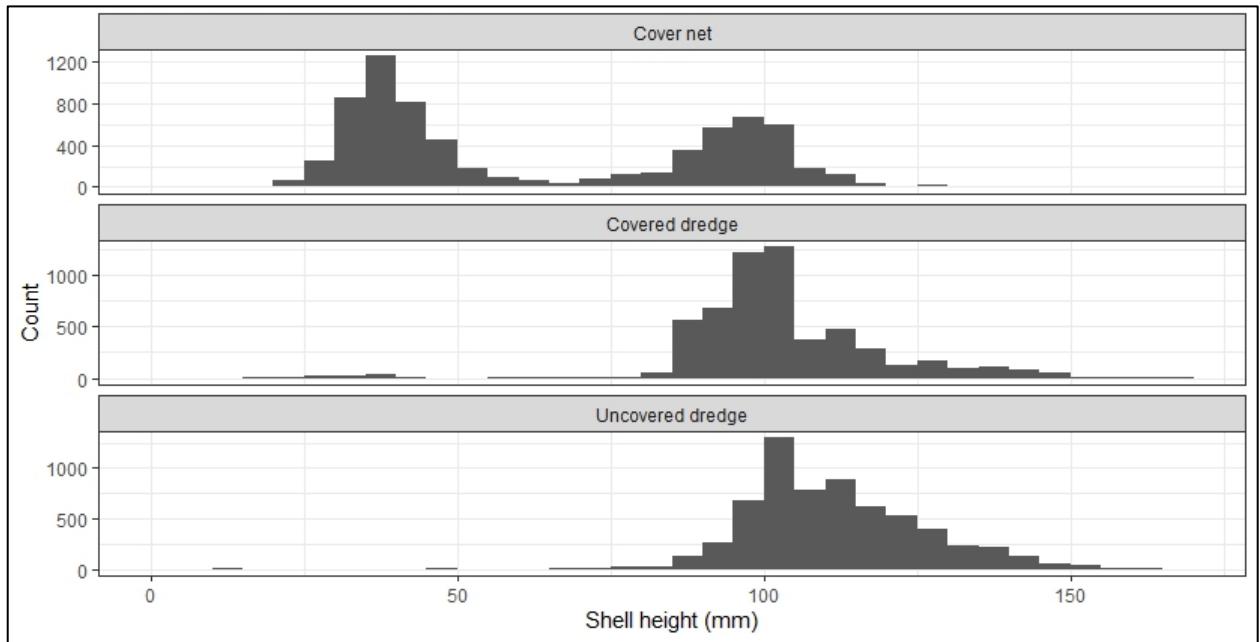
All stations were sampled during this trip. The uncovered and covered dredges has similar scallop catch (2713.5 lbs. and 2080.6 lbs., respectively), and the cover net caught 1302.6 lbs. (**Table 1**). Several non-target species were also prominent, particularly unclassified skates, which contributed substantial biomass in both the uncovered (3529.2 lbs.) and covered dredges (1305.8 lbs.; **Table 1**). Eight flatfish species were captured across all gears. Windowpane flounder was the most abundant, with 167 individuals ranging from 11 to 33 cm total length. Yellowtail flounder ( $n = 19$ , 22–45 cm), summer flounder ( $n = 25$ , 33–64 cm), fourspot flounder ( $n = 20$ , 25–39 cm), and grey sole ( $n = 35$ , 29–48 cm) were caught in comparable numbers.

Single individuals of American plaice (39 cm) and winter flounder (50 cm) were also recorded. Other commercially important species were caught, including 61 monkfish (16–87 cm total length) and 9 lobsters (8.2–17.6 cm carapace length).

Length frequency distributions varied among gear types (Figure 4). The cover net captured a broader size range than the standard dredges, with a notably bimodal distribution featuring a distinct peak of smaller individuals (~40–50 mm) alongside a second peak of larger scallops (~90–110 mm), likely representing two cohorts, early recruits and fully recruited adults. In contrast, both the covered and uncovered dredges were dominated by larger scallops peaking between approximately 90 and 120 mm, with near-zero catches below 50 mm. These patterns suggest that standard dredge gear substantially under-samples smaller scallops, while the cover net provides a more complete representation of population size structure, particularly for pre-recruit and early recruit size classes.

**Table 1.** Weights (lbs.) of species captured during the April 2026 seasonal survey trip.

<b>Species caught</b>	<b>Uncovered dredge</b>	<b>Covered dredge</b>	<b>Cover Net</b>
American plaice	0.0	0.0	1.1
Atlantic cod	0.0	0.0	1.2
Barndoor skate	72.1	64.9	2.2
Fourspot flounder	1.4	2.5	8.6
Gulfstream flounder	0.0	0.0	1.8
Haddock	2.7	0.0	35.5
Illex squid	0.0	0.0	0.3
Jonah crab	8.5	2.5	2.7
Lady crab	0.0	0.0	0.2
Longhorn sculpin	0.0	0.0	22.4
Monkfish	261.1	176.5	3.1
Northern moon snail	6.3	0.7	145.4
Northern searobin	10.3	17.4	70.7
Ocean pout	0.0	0.0	54.4
Red hake	9.5	5.0	400.0
Rock crab	0.0	0.0	1.6
Sea raven	6.4	0.8	1.2
Sea scallop	2713.5	2080.6	1302.6
Silver hake	0.5	1.2	18.2
Summer flounder	34.8	36.2	0.9
Torpedo ray	0.0	26.0	0.0
Unclassified skates	3529.2	1305.8	346.7
Waved whelk	3.6	0.3	9.1
Windowpane flounder	62.9	18.9	9.7
Winter flounder	5.5	0.0	0.0
Witch flounder	14.3	4.0	9.5
Yellowtail flounder	13.1	3.7	0.2



**Figure 4.** Length-frequency distributions of scallops collected during the April 2026 seasonal survey trip, by gear type (uncovered dredge, covered dredge, and cover net).