Coonamessett Farm Foundation

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Research Cruise Summary Report
2025

Project Name:	*Seasonal Survey of Scallop Fishery on the Eastern Part of Georges Bank*
Vessel Name:	Vigilance
Departure Date:	11/6/2025
Land Date:	11/11/2025
Port:	New Bedford, MA
Chief Scientist:	Luisa Garcia
Scientific Crew:	Farrell Davis, Natalie Jennings, Cassandra Tillotson
Report Completed by:	Luisa Garcia

BACKGROUND

The Seasonal Survey Project has been ongoing since 2012, with its spatial coverage modified over time to meet changing Atlantic sea scallop (*Placopecten magellanicus*) management priorities. Over the last nine years, sampling has focused on the eastern portion of Georges Bank (GB; **Figure 1**). For the last six years, each survey has employed paired dredge tows using CFF's 15-foot (4.57 m) Turtle Deflector Dredges, one rigged with a cover net and one without. When deployed together, the two dredges are towed simultaneously for 15 minutes at a target speed of 4.8 knots. Vessel position, heading, and speed are logged every 15 seconds using a GPS-enabled tablet, while the uncovered dredge is instrumented with a Lotek logger recording depth and temperature at 30-second intervals.

Catch is processed separately for each gear type (uncovered dredge, covered dredge, and cover net). All organisms are sorted by species, weighed using a Marel 1100-series motion-compensated scale, and, for selected bycatch species, measured to the nearest centimeter. All fish are enumerated, and up to ten individuals of windowpane flounder (*Scophthalmus aquosus*), winter flounder (*Pseudopleuronectes americanus*), or yellowtail flounder (*Limanda ferruginea*) are randomly selected from uncovered dredge catches for gonadosomatic index determination, with both whole-body and gonad weights recorded.

Scallop catch per tow is quantified in bushels. A one-bushel subsample from each gear type is processed to measure shell height in 5-mm increments. From the uncovered dredge basket, all scallops are shucked and weighed, with up to 30 individuals randomly sampled for detailed biological data including shell height (nearest mm), meat and gonad weight, sex, reproductive stage, and meat quality. Meat condition is qualitatively scored, and any nematodes, orange pustules, or internal blisters are noted.

This report presents some key findings from the second research cruise of the 2025 RSA Seasonal Survey, during which 44 stations were successfully sampled. Sampling at the remaining five stations were not possible due to the presence of lobster buoys in the area.

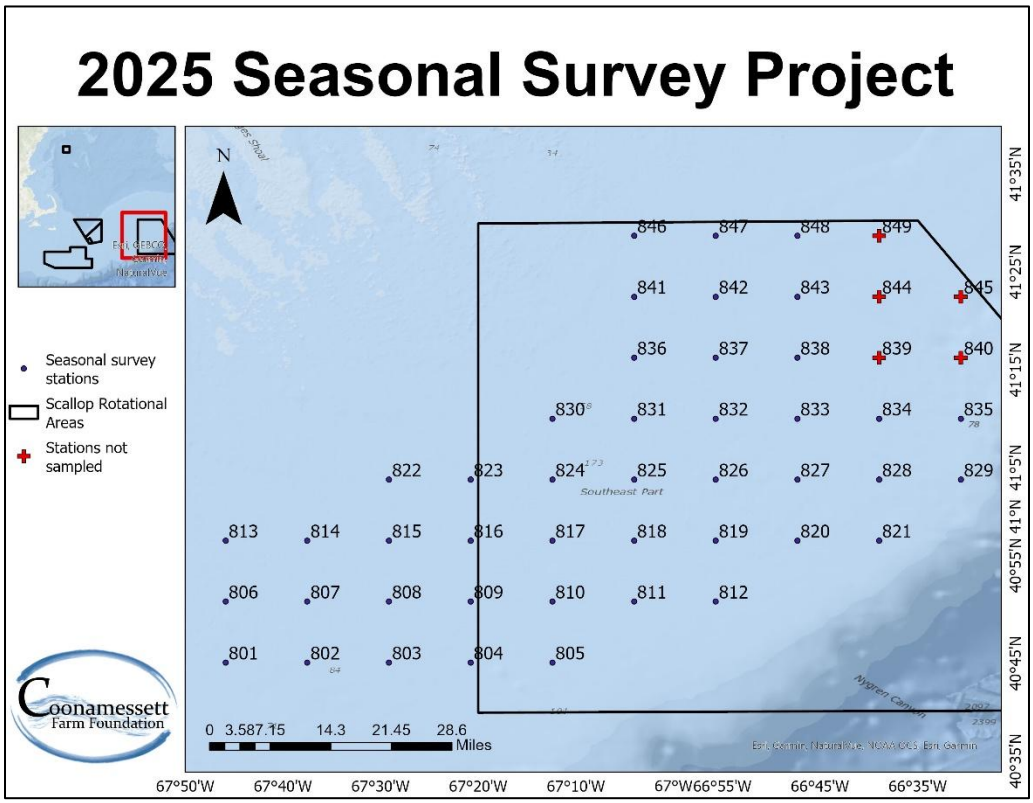

Figure 1. Location of the survey stations for the 2025 seasonal survey on the eastern portion of GB, with stations spaced ~7 nm apart. Crosses indicate stations that were not sampled during the November trip.

CRUISE OBJECTIVES

The main goal of each survey trip is to collect detailed biological and ecological information from all designated stations across the eastern GB study area (**Figure 1**). 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. This comprehensive dataset 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

An increase in juvenile haddock (*Melanogrammus aeglefinus*) has been observed over the past three trips. During processing of the catch from the June and August 2025 trips, a small number of juvenile haddock were unexpectedly encountered, ranging from 11.1 to 28.5 cm in length. However, during this trip we observed a substantially higher number of juvenile haddock (n = 76), with individuals ranging from 14.7 to 24.1 cm (**Figure 2**). This unusual aggregation was documented in a public press release disseminated through *Saving Seafood* and the CFF website to ensure broad outreach to industry and management stakeholders. In addition, scallop seed settlement on live scallops was observed, consistent with patterns documented during the previous two trips (**Figure 3**). Finally, a torpedo ray (*Torpedo nobiliana*) was captured; this species has been encountered only a few times over the entire duration of the project. The specimen measured 72 cm in total length (**Figure 4**).

Figure 2. Juvenile haddock captured with the cover net during the November 2025 seasonal survey trip.

Figure 3. Scallops exhibiting seed settlement on the upper valves, observed during the November 2025 seasonal survey trip.

Figure 4. Torpedo rays captured during the November 2025 seasonal survey trip.

PRELIMINARY RESULTS

A total of 44 of the 49 planned stations were surveyed during this trip, as lobster gear restricted sampling in the northern portion of the study area. Despite this limitation, 30 different species were captured (**Table 1)**. The highest scallops weights were recorded in the uncovered dredge (939.7 lbs), followed by the cover net (557.5 lbs) and covered dredge (551.5 lbs). Several non-target species were also prominent, particularly unclassified skates, which contributed substantial biomass in both the uncovered (1220.7 lbs) and covered dredges (852.0 lbs; **Table 1**). A total of six flatfish species were captured across all gears. Summer flounder were represented by 42 individuals ranging from 34 to 86 cm in total length, while fourspot flounder were the most abundant flatfish species, with 222 individuals measuring between 14 and 39 cm. Winter flounder were rarely encountered, with only two individuals recorded (47 and 50 cm), and a single gray sole measuring 25 cm was captured. Yellowtail flounder catches were low, with 11 individuals ranging from 24.8 to 42.8 cm in length. Windowpane flounder were more frequently observed, with 41 individuals captured, ranging from 8.8 to 35.6 cm, including several juvenile individuals. In addition to flatfish, 90 monkfish were collected during the trip, ranging from 10.5 to 72.8 cm in length, indicating the presence of multiple size classes. Lobster bycatch was minimal, with 12 individuals recorded, and carapace lengths ranging from 11.9 to 16.7 cm.

The overall scallop catch remains low relative to prior years' surveys. During this trip we observed a greater number of individuals retained by the uncovered dredge compared to both the covered dredge and the cover net (**Figure 5**). The size frequency distributions of scallops varied across gear types, reflecting differences in catch efficiency and selectivity. The uncovered dredge captured a broad range of sizes, with a peak around 120 mm. The covered dredge showed a similar distribution but with fewer individuals. In contrast, the cover net retained more smaller scallops, with a slightly left-shifted distribution and a peak around 95 mm (**Figure 5**), confirming its efficiency at capturing individuals that are more likely to escape standard scallop dredges.

Table 1. Weights (lbs.) of species captured during the November 2025 seasonal survey trip.

Species caught	Uncovered dredge	Covered dredge	Cover net
Spiny Dogfish	0.0	0.0	4.5
Unclassified Skates	1220.7	852.0	269.4
Torpedo Ray	17.7	0.0	0.0
Barndoor Skate	214.1	100.5	4.7
Silver Hake	0.0	0.9	19.4
Atlantic cod	0.0	0.0	0.3
Haddock	0.0	0.0	11.5
Red Hake	6.1	3.4	336.6
Summer Flounder	118.1	33.1	9.1
Fourspot Flounder	1.2	3.4	97.2
Yellowtail Flounder	2.0	5.0	2.7
Winter Flounder	5.1	3.3	0.0
Grey Sole	0.1	0.0	0.0
Windowpane Flounder	15.8	6.2	8.1
Gulfstream Flounder	0.2	0.0	7.0
Butterfish	0.0	0.0	0.8
Longhorn Sculpin	0.0	0.2	11.7
Sea Raven	0.0	0.0	0.2
Northern Searobin	10.6	7.2	33.1
Ocean Pout	0.0	0.8	4.3
Monkfish	295.9	89.2	3.4
Jonah Crab	21.3	12.2	7.0
Rock Crab	0.0	0.0	0.1
Lady Crab	0.0	0.0	0.2
Scallop	939.7	551.5	557.5
Illex Squid	0.0	0.0	1.6
Loligo Squid	0.0	0.0	0.3
Northern Moon Snail	1.3	2.0	44.2
Waved Whelk	0.5	0.0	13.8

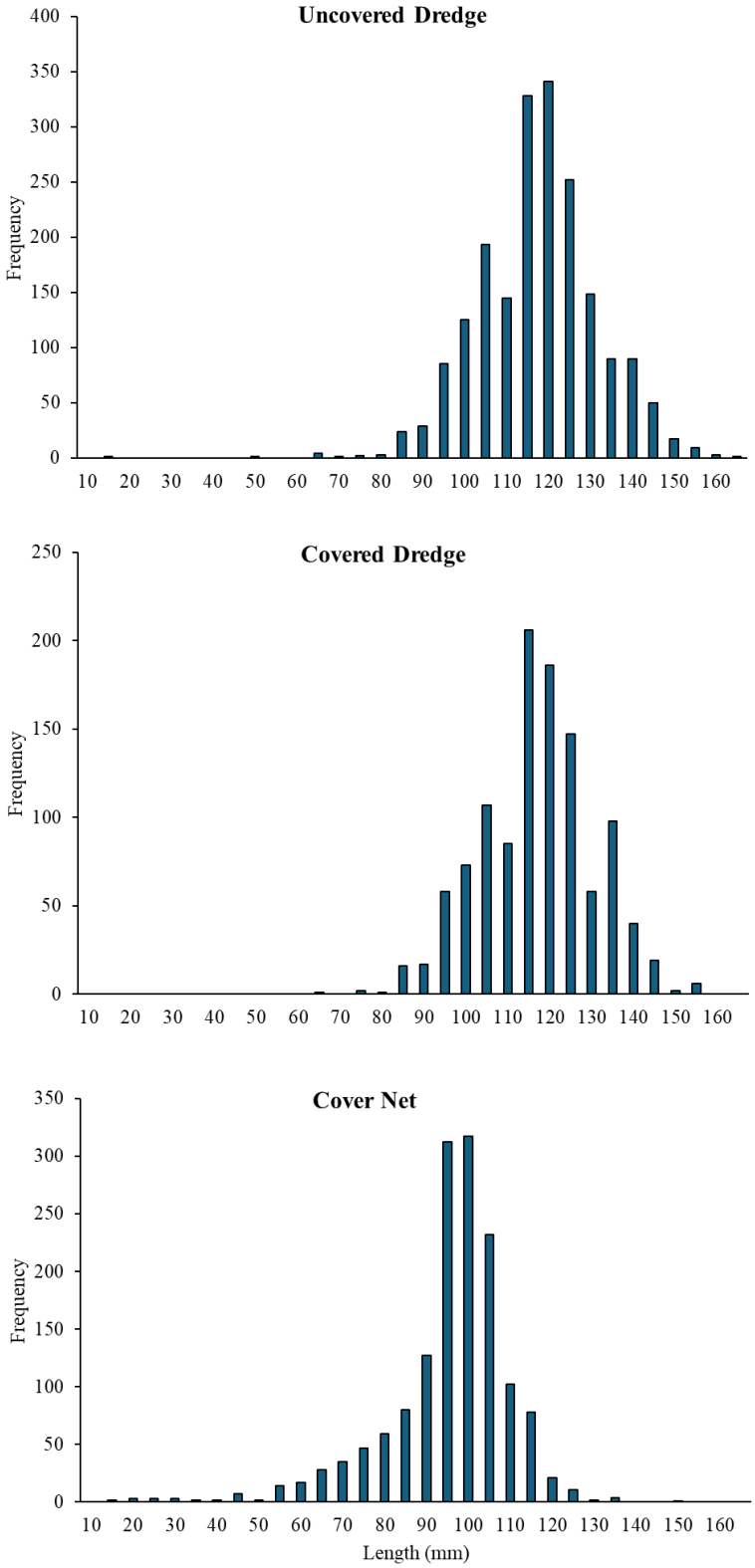

Figure 5. Length-frequency distributions of scallops collected during the November 2025 seasonal survey trip, by gear type (uncovered dredge, covered dredge, and cover net).