

# 2021 Scallop Survey Short Report

## Gulf of Maine

Prepared by:

Kyle Cassidy and Kevin D.E. Stokesbury



School for Marine Science and Technology (SMAST)  
University of Massachusetts Dartmouth

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## 1.0 2021 SURVEY BIOMASS ESTIMATES

Table 1. Total biomass estimates from the 2021 S Mast Drop Camera survey by bank and management area. Stations were 1 km apart for all areas assessed using the Hart 2020 Shell Height – Meat Weight equations provided. Estimates were made utilizing a 40 mm shell height size cutoff.

<b>SMAST Drop Camera Survey</b>							
<b>Size cutoff for estimates is 40mm</b>							
<b>Use estimates from the Hart 2020 SH/MW equation for this table.</b>							
<b>GOM</b>	<b>NumMil</b>	<b>BmsMT</b>	<b>SE</b>	<b>MeanWt</b>	<b>Avg. Size (mm)</b>	<b>Scallop density (m<sup>2</sup>)</b>	<b># Stations</b>
Platts Bank	7	108	24	14.7	97.3	0.22	34
Ipswich Bank	10	143	28	14.7	89.9	0.10	93
Jeffreys Ledge	15	268	48	17.7	96.9	0.14	108
NGOM Stellwagen Bank	112	1,508	501	13.4	88.3	0.66	169
NGOM TOTAL	144	2,026					404
Non-NGOM Stellwagen Bank (Stellwagen South)	31	547	31	17.5	93.9	0.11	291
Non-NGOM WGOM Closure	106	2,308	349	21.7	103.9	1.77	60
Non-NGOM Ipswich Bay (MA State Waters)	3	41	11	12.7	88.1	0.13	25

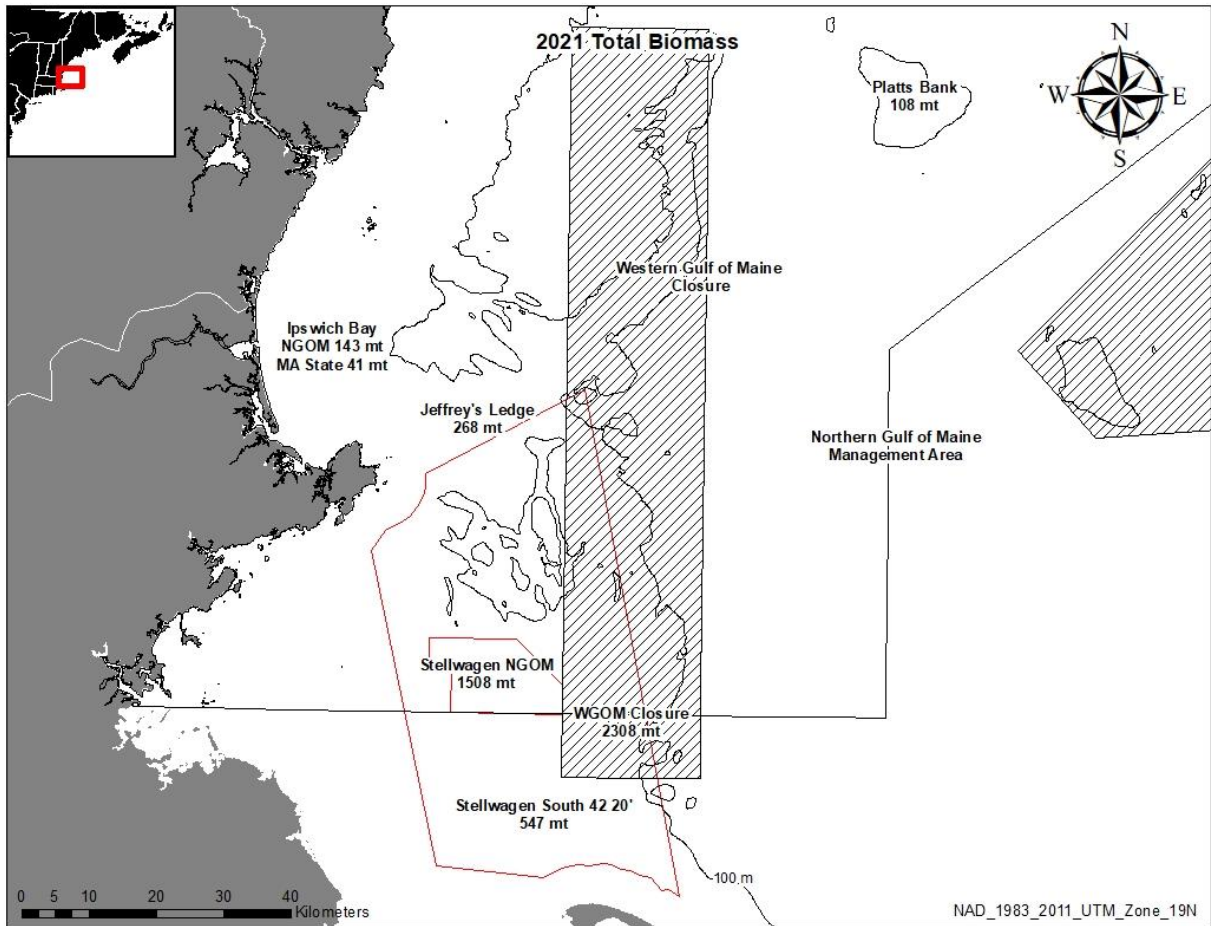


Figure 1. 2021 S Mast Drop Camera survey total biomass estimates in metric tons in the Gulf of Maine by bank and management area.

## 2.0 FIGURES OF SURVEY COVERAGE

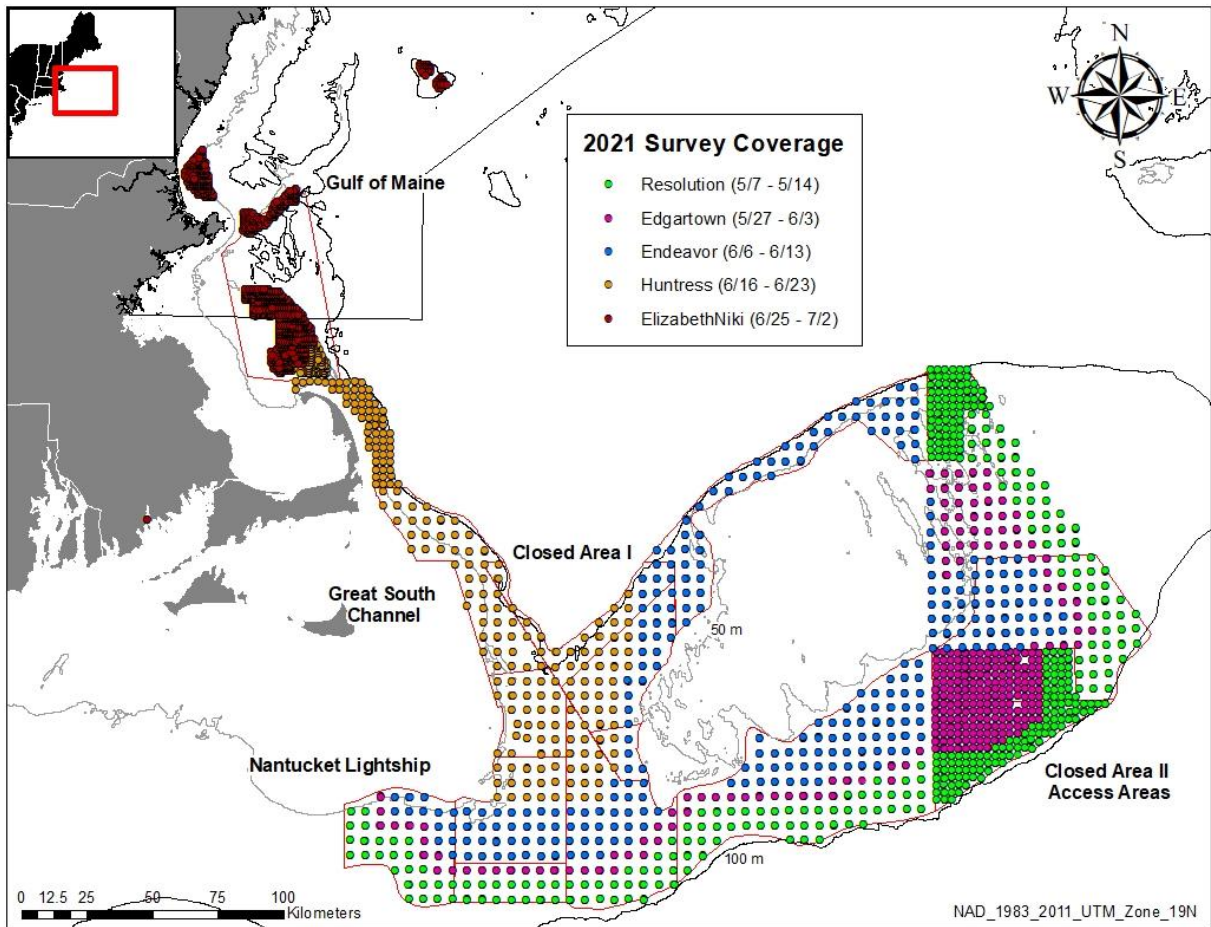


Figure 2. 2021 SMAST Drop Camera survey locations by vessel where Gulf of Maine surveys tations were 1 km apart.

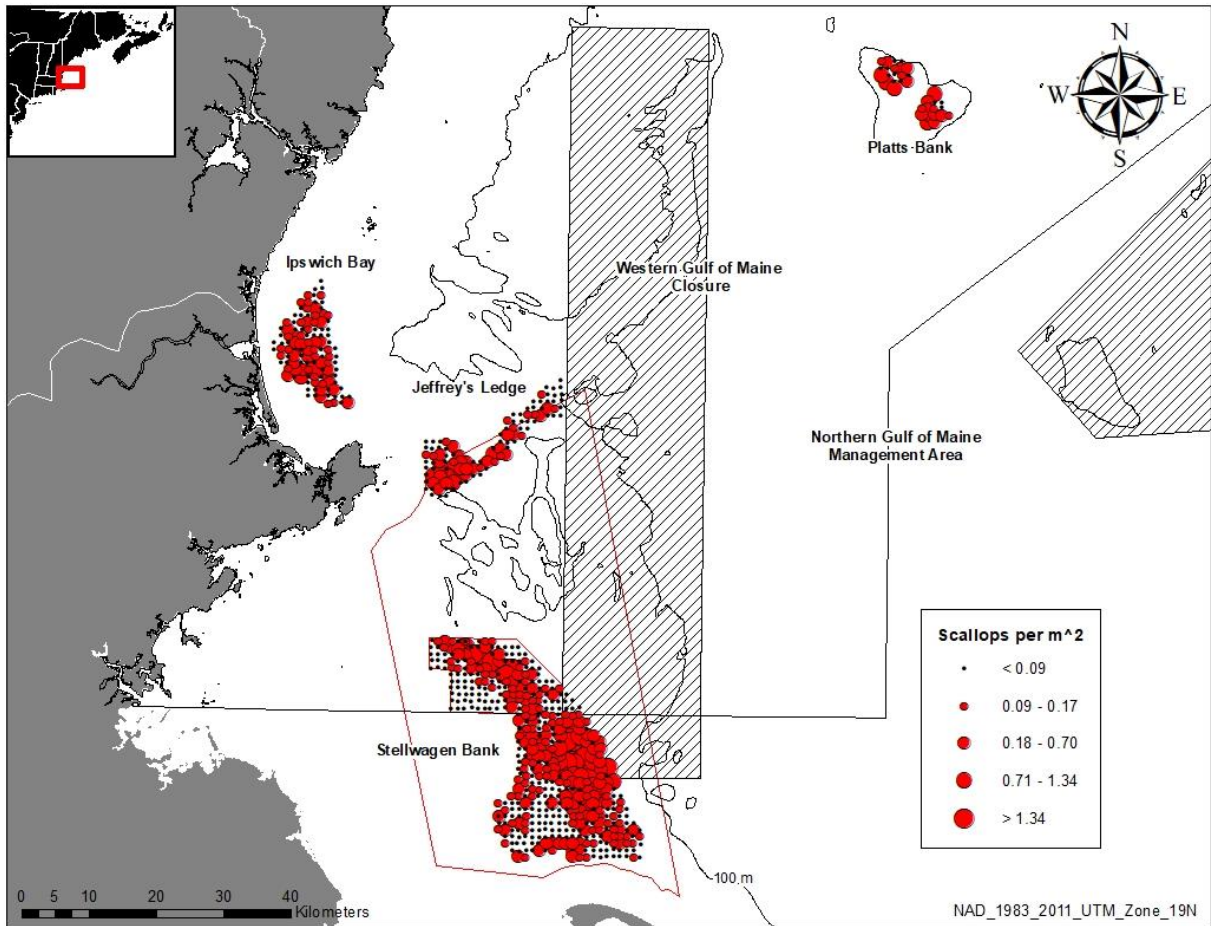


Figure 3. Overall scallop density from the 2021 Drop Camera survey

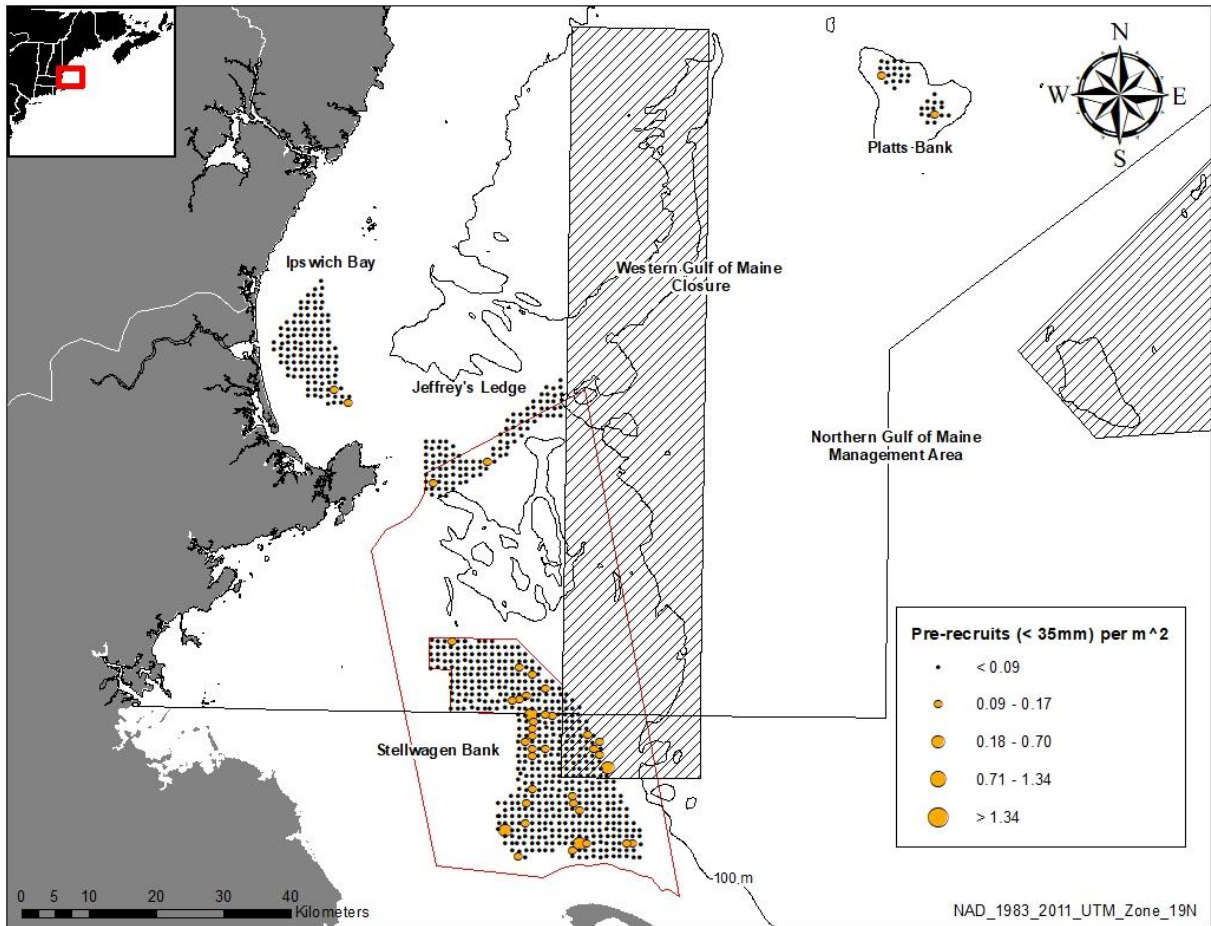


Figure 4. Pre-recruit (< 35 mm) scallop density from the 2021 SMAST Drop Camera survey.

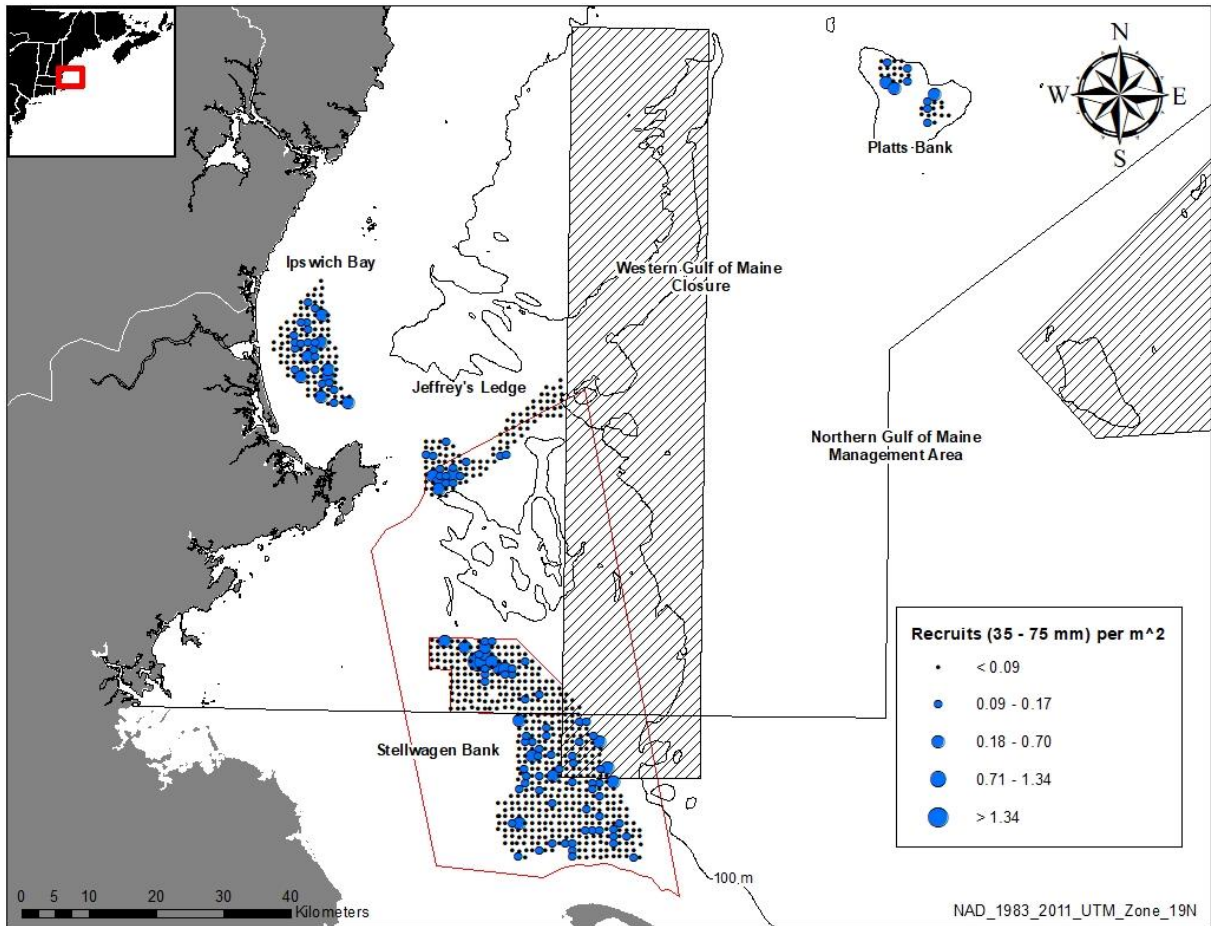


Figure 5. Recruit (35 to 75 mm) scallop density from the 2021 SMAST Drop Camera survey.



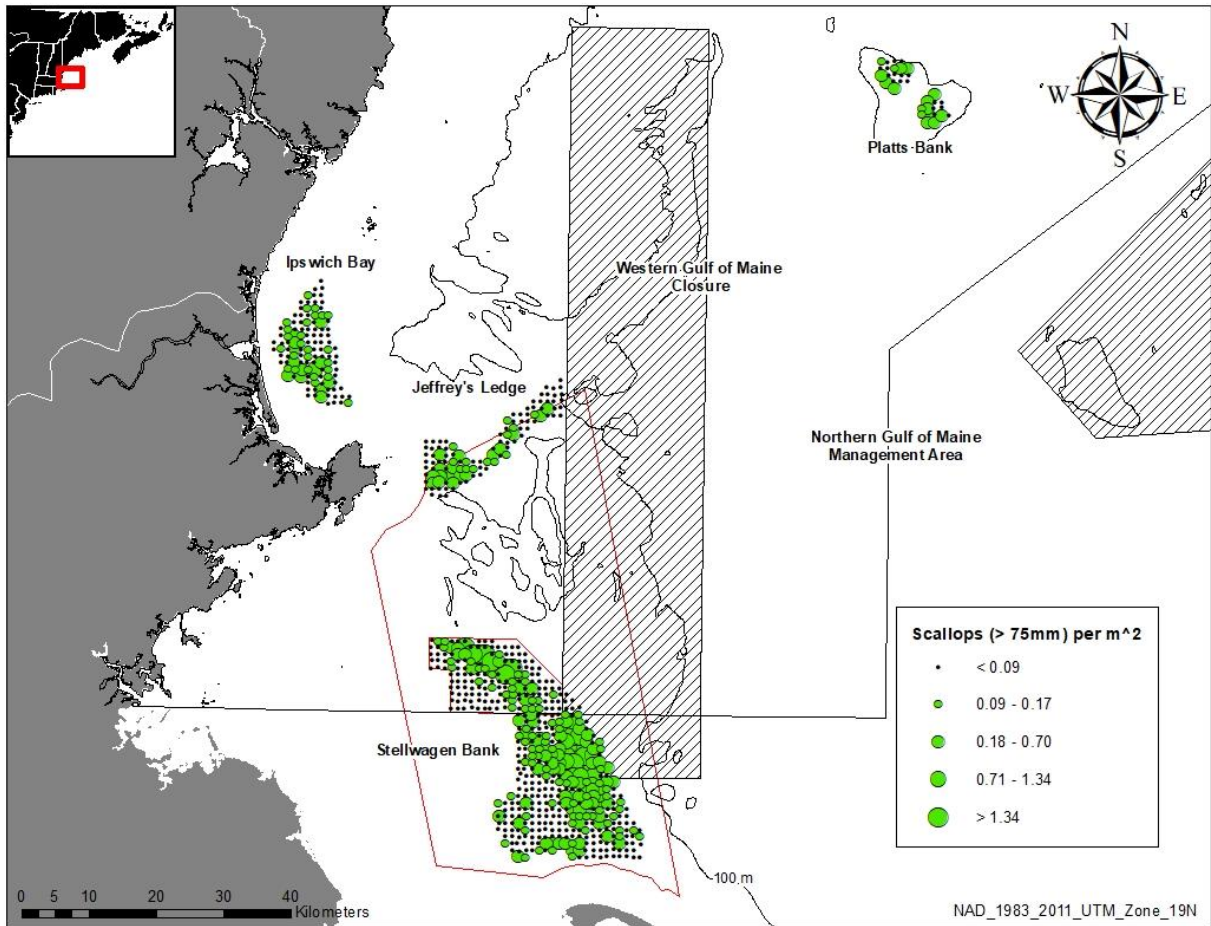


Figure 6. Scallop (> 75 mm) density from the 2021 SMAST Drop Camera survey.

### 3.0 LENGTH FREQUENCY PLOTS BY SAMS AREA

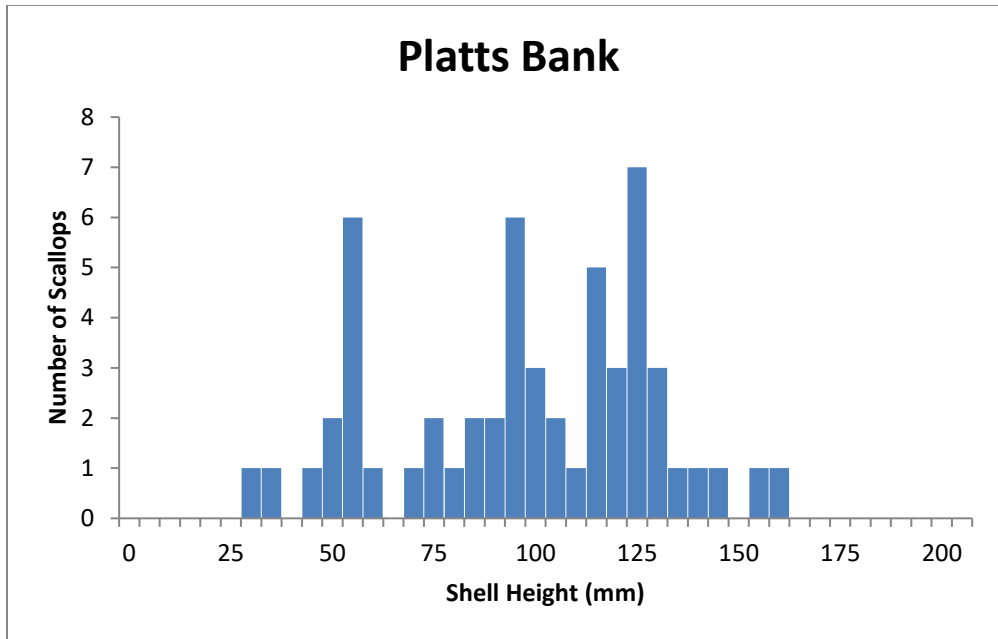


Figure 7. Shell height distribution of scallops on Platts Bank from the SMAST Drop Camera survey. The overall average shell height was 94.8 mm with 55 scallops measured.

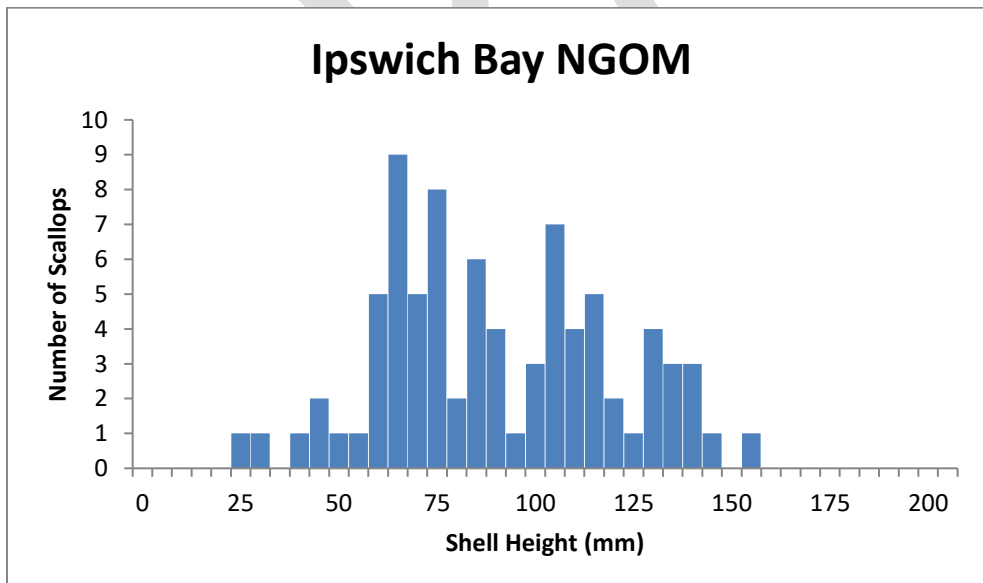


Figure 8. Shell height distribution of scallops in Ipswich Bay in the Northern Gulf of Maine Management area from the SMAST Drop Camera survey. The overall average shell height was 87.6 mm with 81 scallops measured.

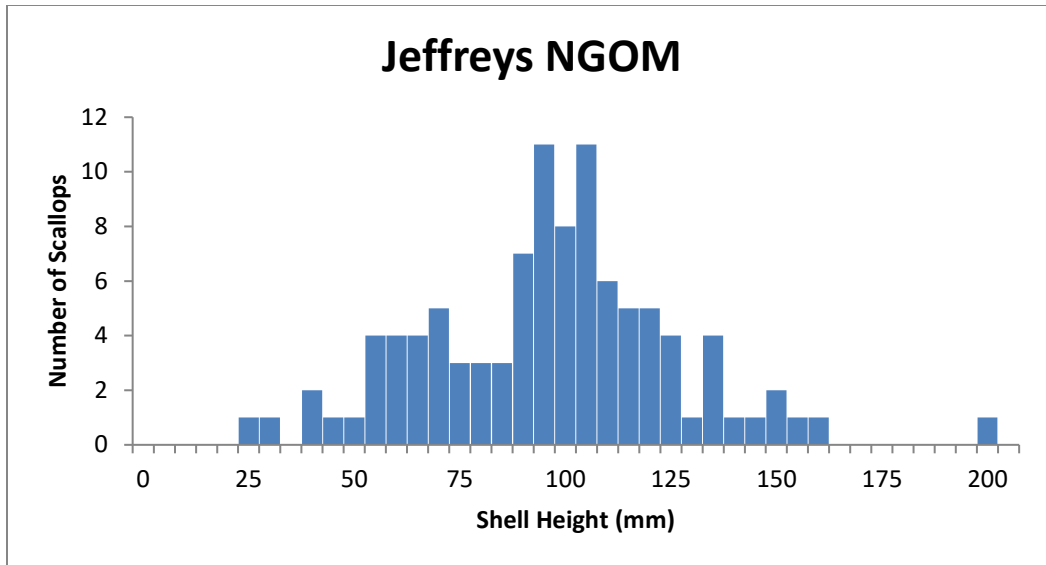


Figure 9. Shell height distribution of scallops on Jeffreys Ledge in the Northern Gulf of Maine Management area from the S Mast Drop Camera survey. The overall average shell height was 94.3 mm with 101 scallops measured.

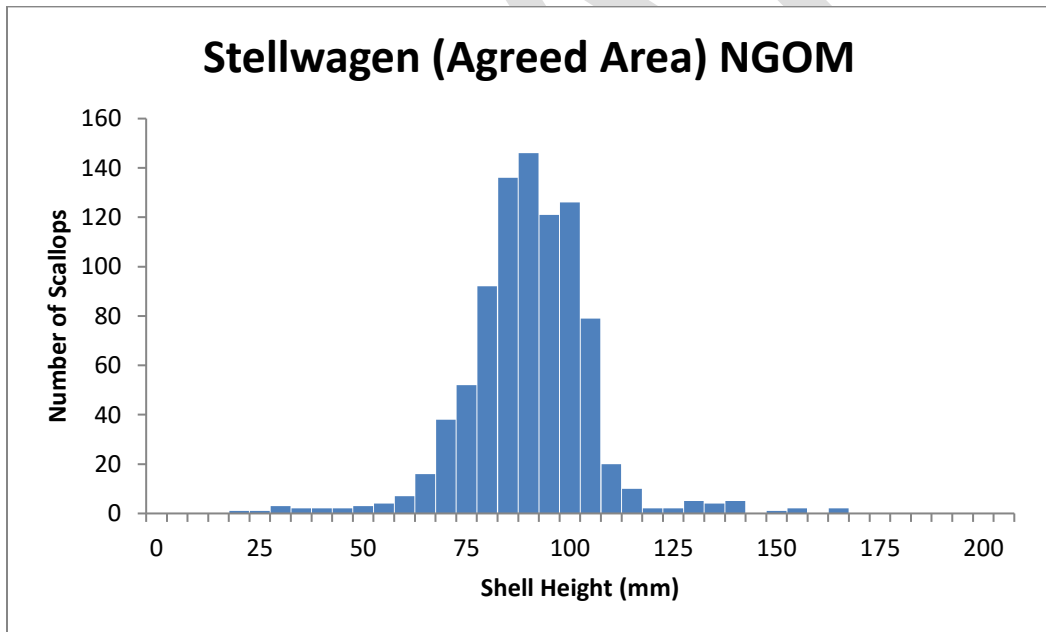


Figure 10. Shell height distribution of scallops on Stellwagen Bank in the agreed upon area within the Northern Gulf of Maine Management area from the S Mast Drop Camera survey. The overall average shell height was 87.7 mm with 884 scallops measured.

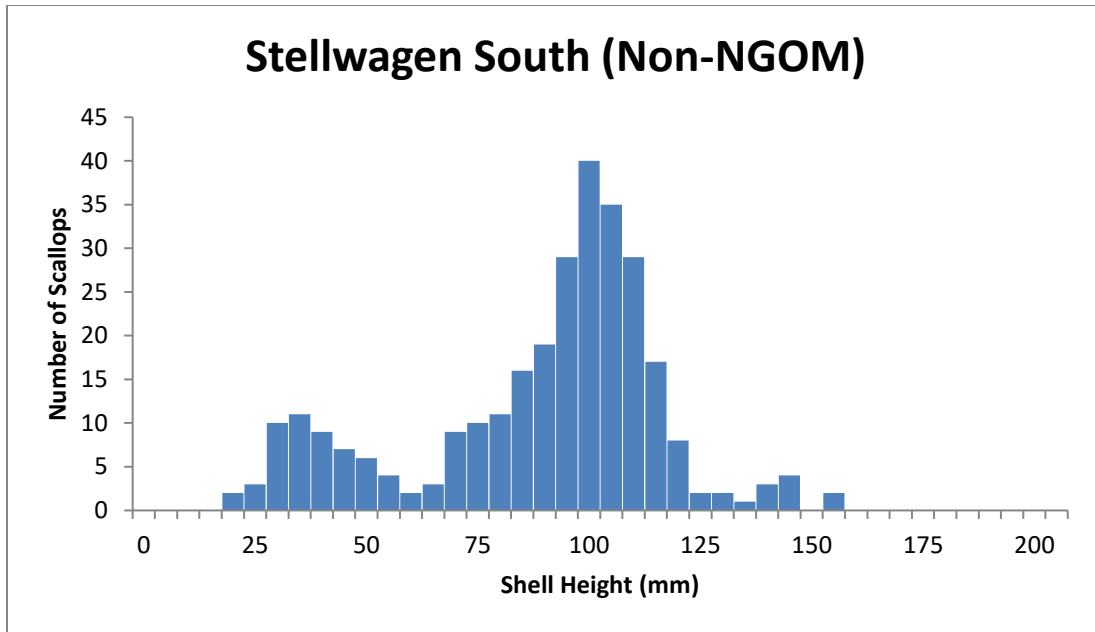


Figure 11. Shell height distribution of scallops on southern Stellwagen Bank outside the Northern Gulf of Maine Management area from the SMAST Drop Camera survey. The overall average shell height was 86.4 mm with 294 scallops measured.

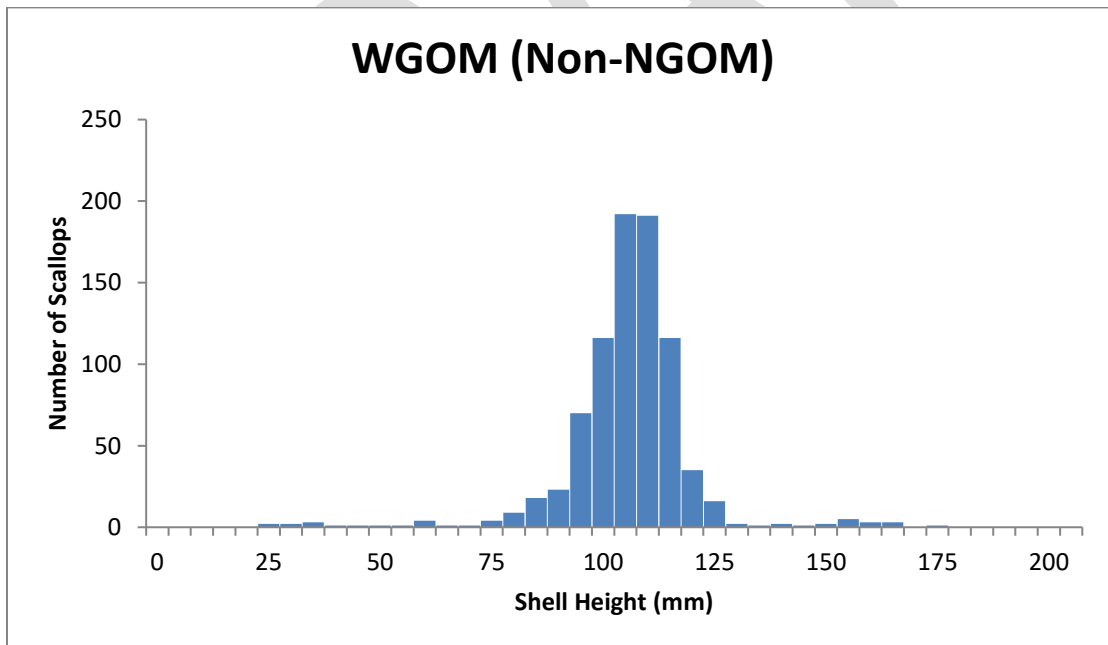


Figure 12. Shell height distribution of scallops on Stellwagen Bank within the Western Gulf of Maine Closure area from the SMAST Drop Camera survey. The overall average shell height was 103.2 mm with 827 scallops measured.

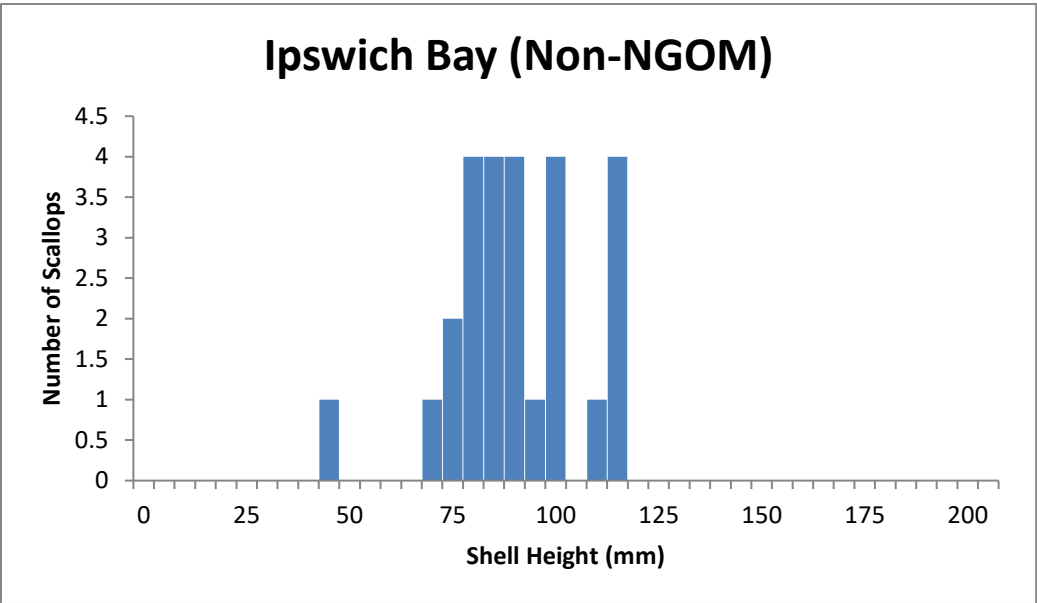


Figure 13. Shell height distribution of scallops in Ipswich Bay outside the Northern Gulf of Maine Management area from the SMAST Drop Camera survey. The overall average shell height was 88.1 mm with 26 scallops measured.

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#### 4.0 SENSITIVITY ANALYSES – STELLWAGEN BANK

Table 2. Total biomass estimates from the 2021 SMAST Drop Camera survey by area. Stations were 1 km apart for all areas assessed using the Hart 2020 and two versions of the UMaine/DMR Shell Height – Meat Weight equations provided for scallops greater than 40 mm.

	Biomass (SE) estimate using: Hart 2020 SH/MW equation	Biomass (SE) estimate using: 2021 DMR/UMaine SH/MW equation with no covariates	Biomass (SE) estimate using: 2021 DMR/UMaine SH/MW equation with covariates
NGOM Stellwagen Bank	1,580 (501)	1,602 (532)	1,539 (511)
Non-NGOM Stellwagen Bank (Stellwagen South)	547 (31)	560 (31)	590 (33)
Non-NGOM WGOM Closure	2,308 (349)	2,355 (356)	2,442 (366)

#### 5.0 SPECIAL COMMENTS

## 6.0 EXPLOITABLE BIOMASS ESTIMATES FOR 2021 (CURRENT FY)

Table 3. Exploitable biomass estimates from the 2021 SMAST Drop Camera survey by bank and management area. Stations were 1 km apart for all areas assessed using the Hart 2020 Shell Height – Meat Weight equations provided.

<b>SMAST Drop Camera Survey</b>				
<b>GOM</b>	<b>NumMill</b>	<b>Exploitable BmsMT</b>	<b>SE</b>	<b>MeanWt</b>
Platts Bank	4	78	18	21.8
Ipswich Bank	4	92	18	25.8
Jeffreys Ledge	7	181	32	27.5
NGOM Stellwagen Bank	32	579	192	18.4
NGOM TOTAL	45	931		
Non-NGOM Stellwagen Bank (Stellwagen South)	13	306	17	24.1
Non-NGOM WGOM Closure	59	1,430	216	24.3
Non-NGOM Ipswich Bay (MA State Waters)	1	17	5	17.6

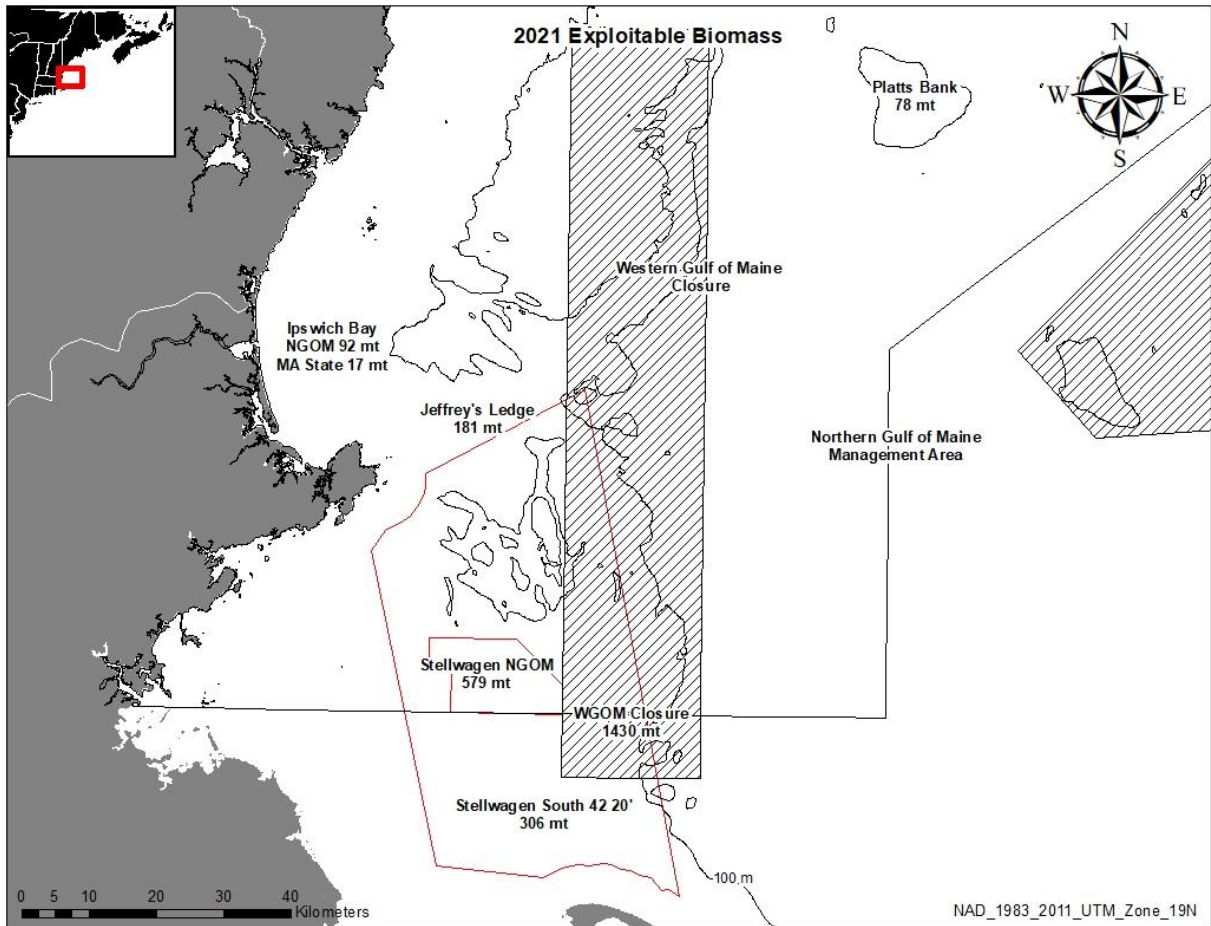


Figure 14. 2021 S Mast Drop Camera survey exploitable biomass estimates in metric tons the Gulf of Maine by bank and management area.