

Experiences from other fisheries

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The questions:

- a. What questions can be posed in designing and implementing a fluke management program for RI?
- b. What lessons can RI learn from other fisheries experience?


My Answers:

- 1. What is the abundance of fluke, where are they located, and does their life history allow them to persist in that location?
- 2. What species will be collected as by-catch during fishing for fluke?
- 3. Can the management system respond quickly to new information?

Experience: Alternative measures of absolute abundance and bycatch avoidance programs.

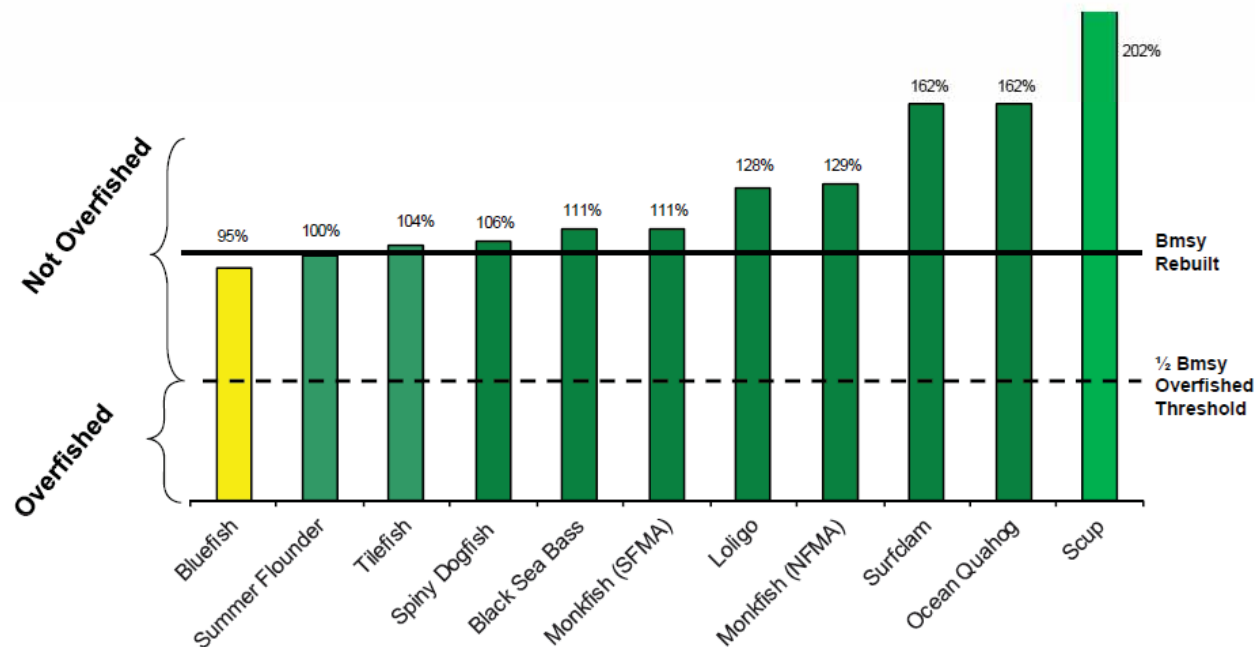
Summer Flounder (Fluke) *Paralichthys dentatus*

MID-ATLANTIC FISHERY COUNCIL - SPECIES STOCK STATUS (AS OF NOVEMBER 30, 2011)

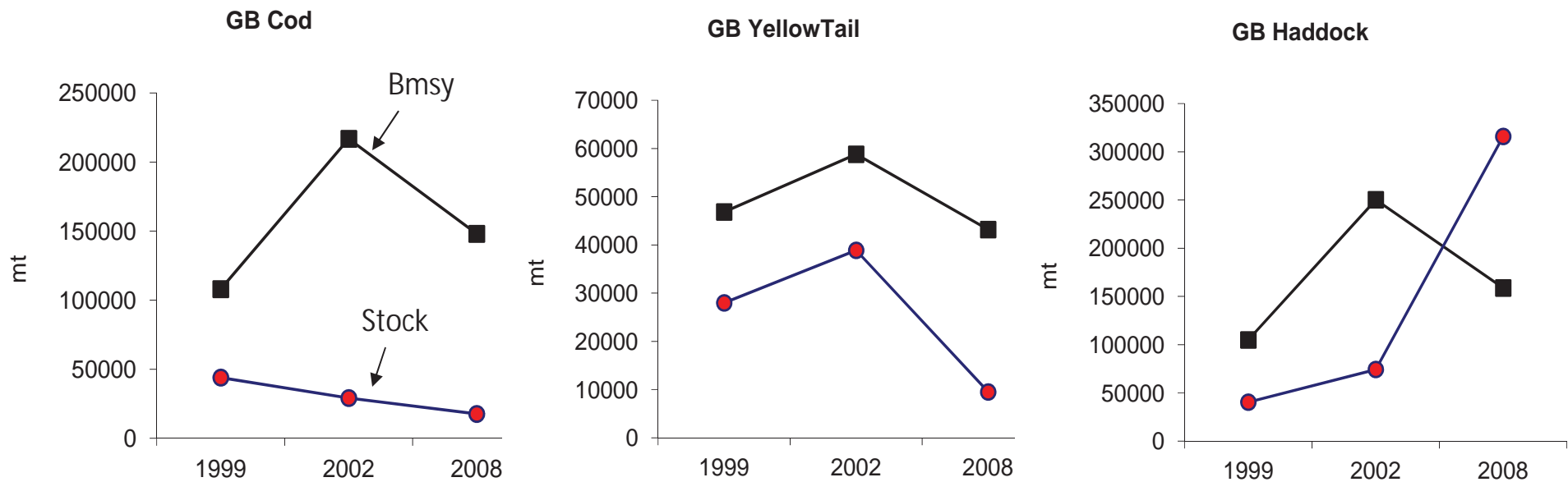
SPECIES		STATUS DETERMINATION CRITERIA		OVERFISHING	OVERFISHED	REBUILDING PROGRAM / STOCK STATUS
		Overfishing $F_{threshold}$	Overfished $\frac{1}{2} B_{MSY}$			
Summer Flounder		$F_{35\%MSP}=0.31$	66 million lbs	No	No	Most recent peer reviewed stock assessment was June 2008. Exceeding rebuilding target. Pending NMFS rebuilt declaration.

Stock Size Relative to Biological Reference Points

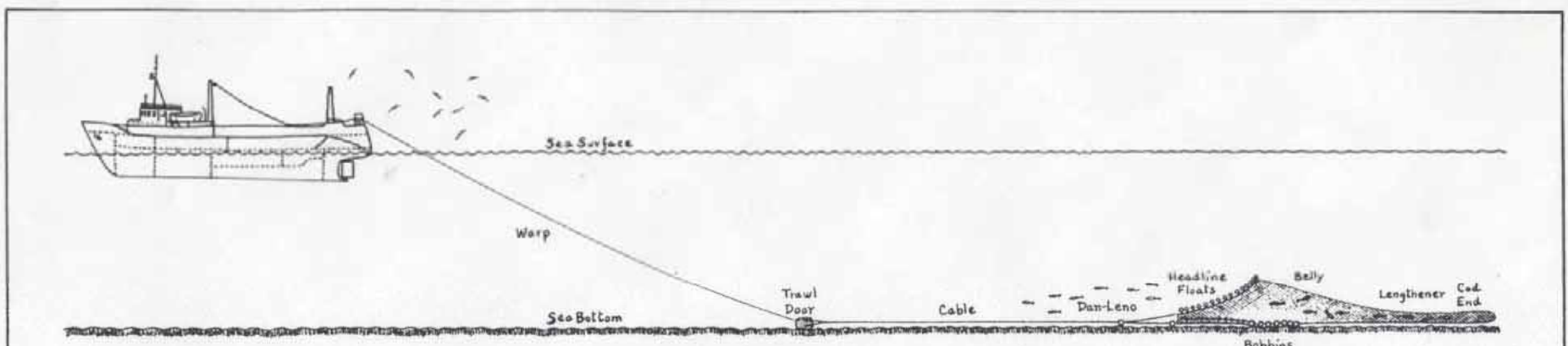
(as of November 30, 2011)



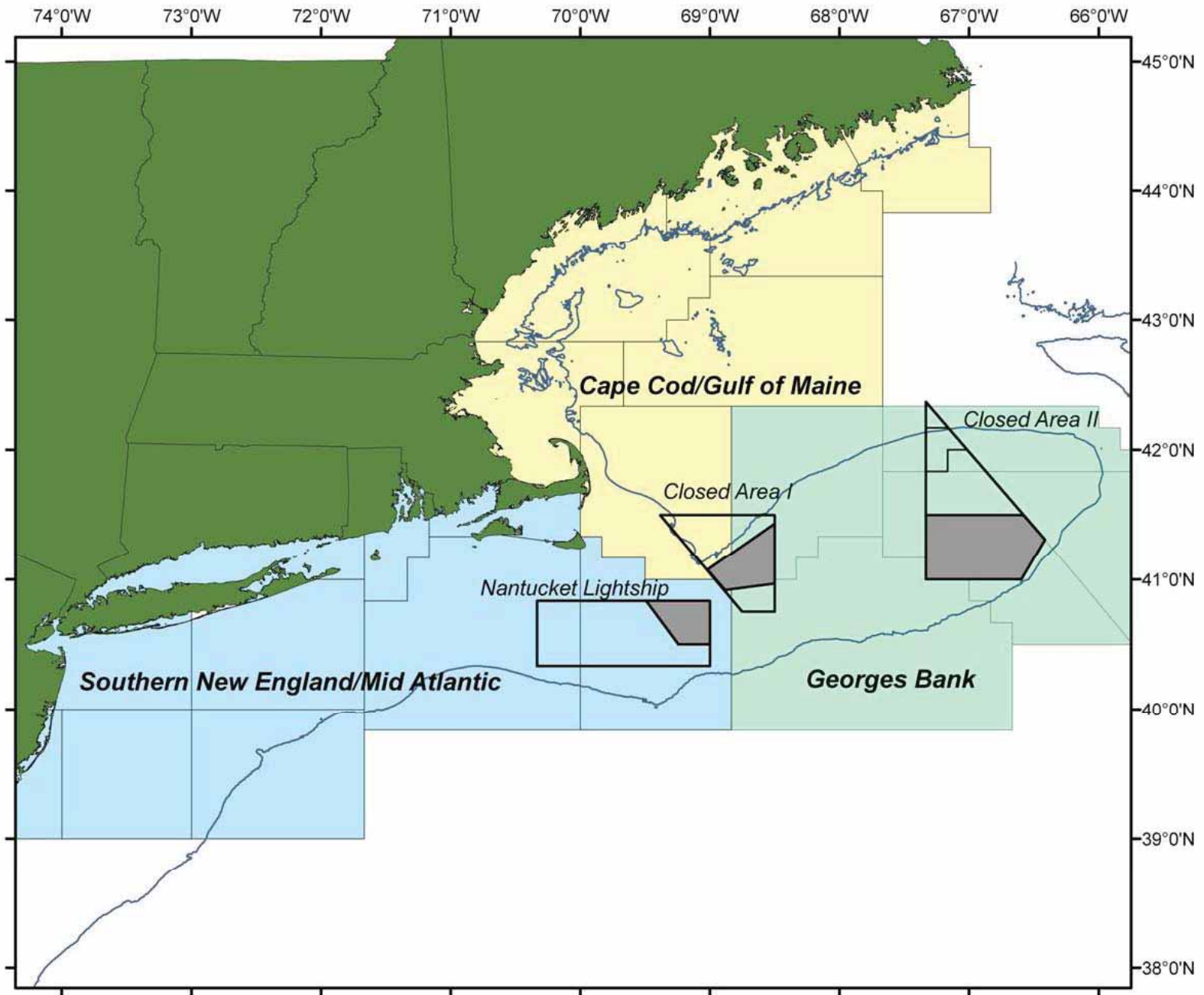
Summer flounder
100% rebuild



Large variations in estimated New England Groundfish stocks over the past 3 scientific reviews.



Yellowtail Flounder Stocks





Fisheries and Oceans
Canada

Pêches et Océans
Canada

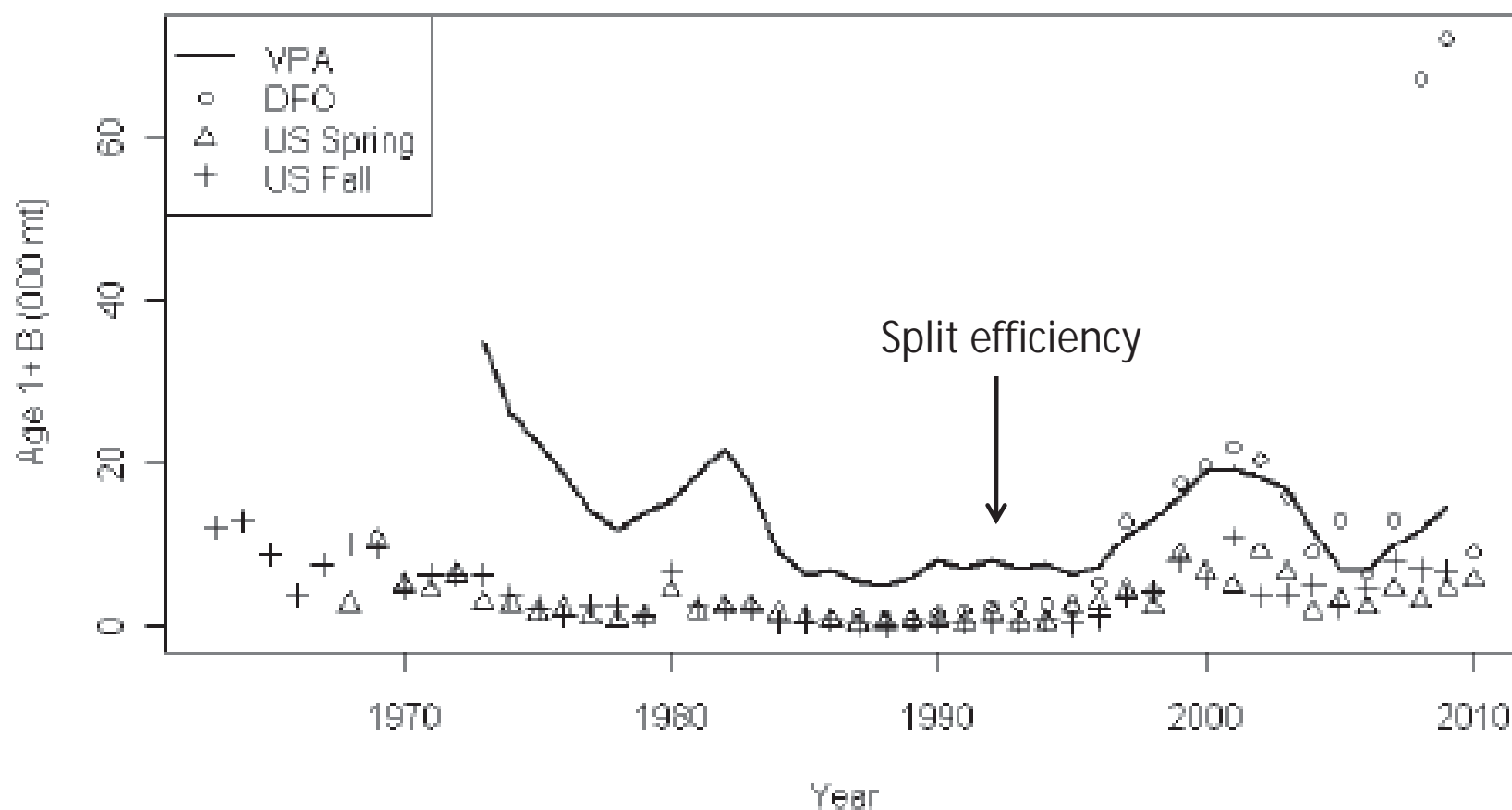
NOAA FISHERIES
NATIONAL MARINE FISHERIES SERVICE



Transboundary Resources Assessment Committee

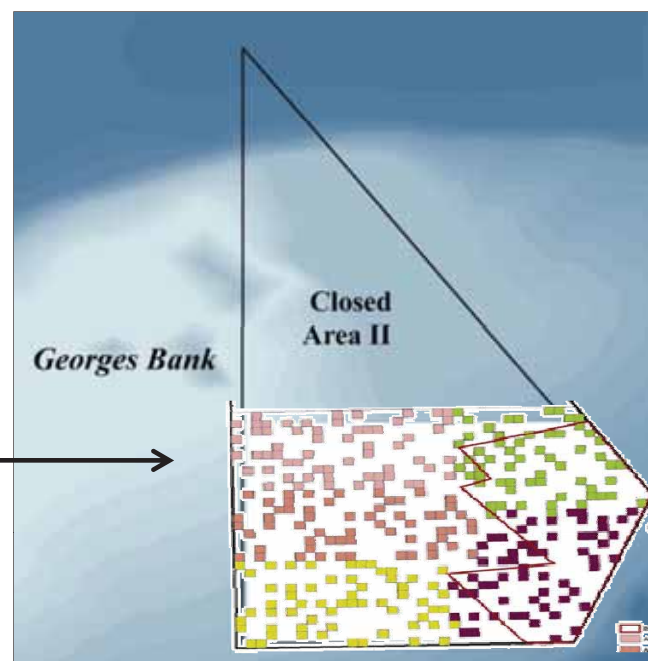
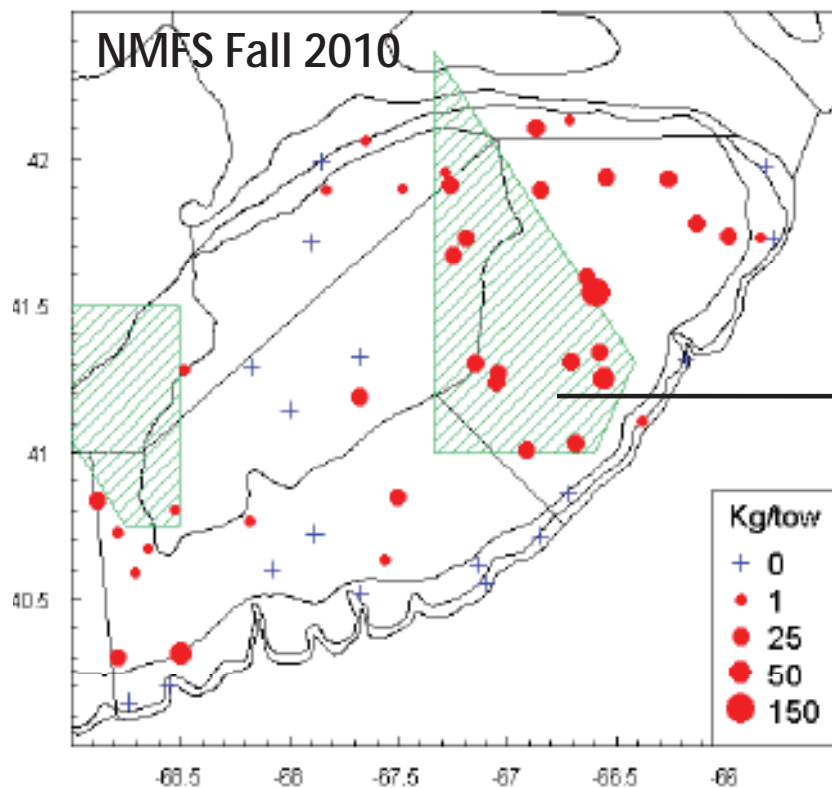
Status Report 2010/05

Georges Bank Yellowtail Flounder





SMAST Yellowtail Flounder Experiment and estimates



72,938 YTF tagged,
43,588 YTF collected
177 tagged YTF recaptured

9.1% of Catch per tow in CAII (39/702)

18 million YTF (16 and 21 95% CL)

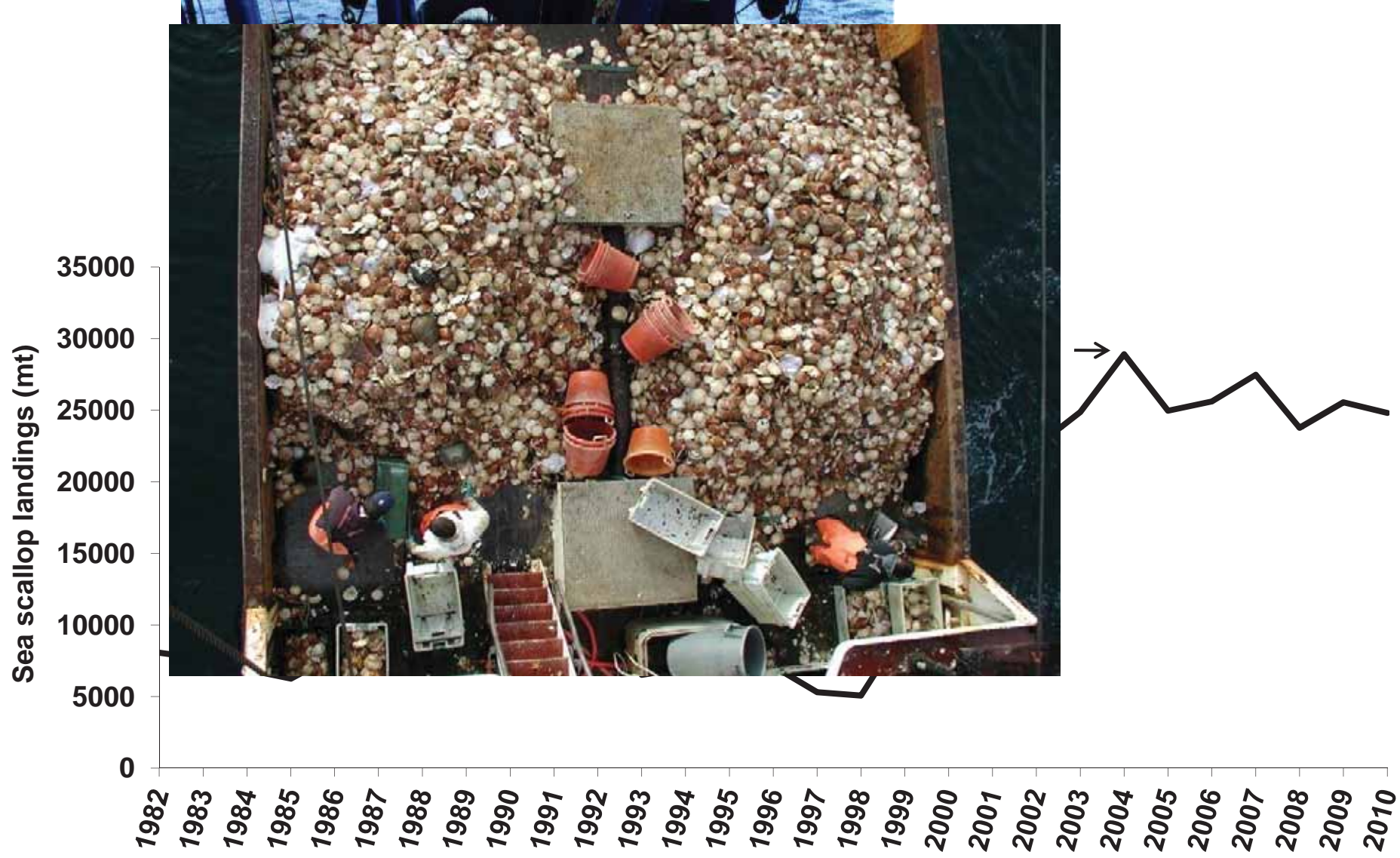
NMFS = **48 million** fish for 2008

18/9.1% = **198 million** fish

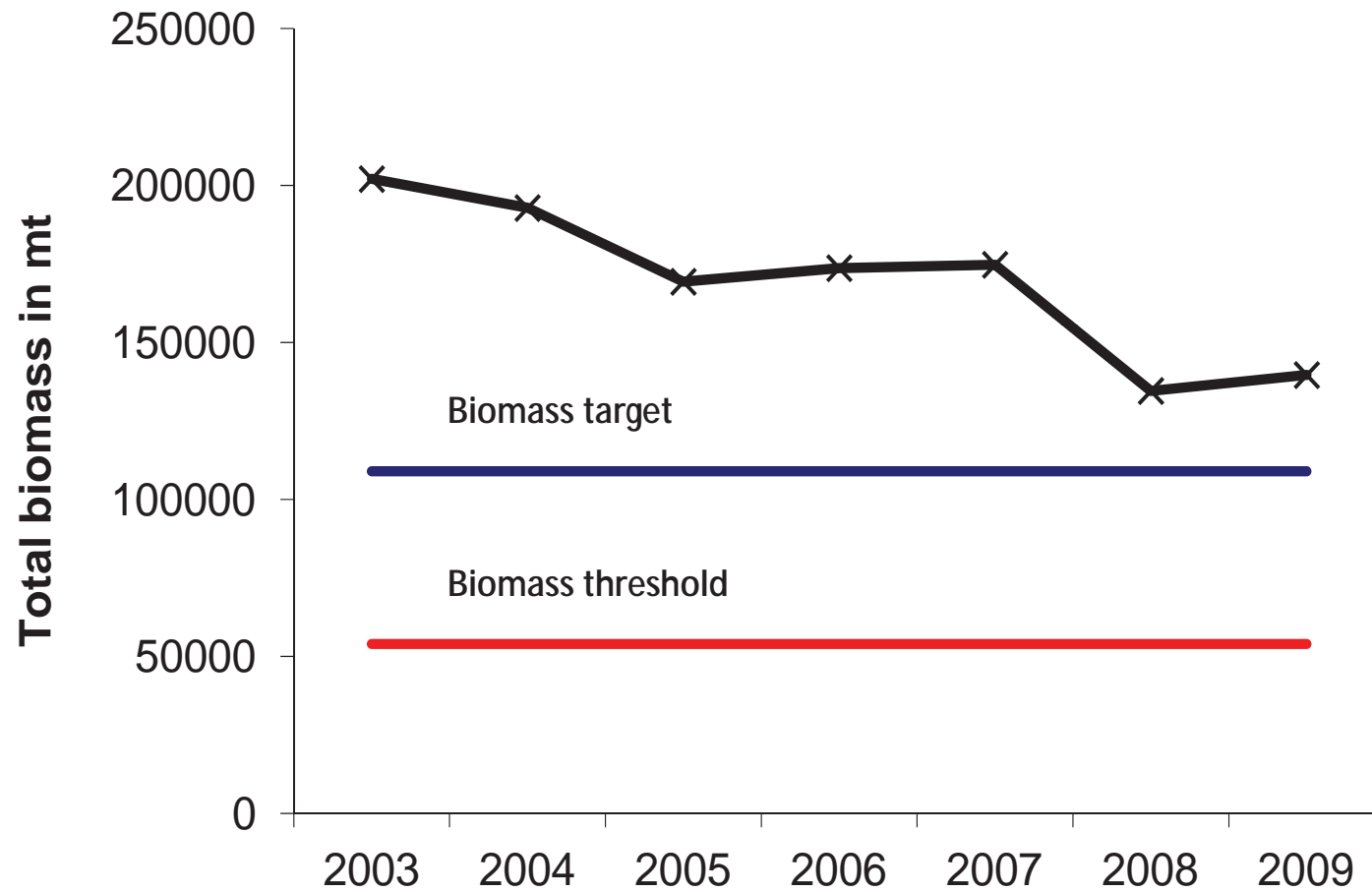
NMFS estimated **9,527 mt** of Georges Bank Yellowtail Flounder in 2008.

18 million fish (average size 35 cm or 14")
= **7608 mt** in CAII south in 2008.





Total biomass from SMAST Video Survey

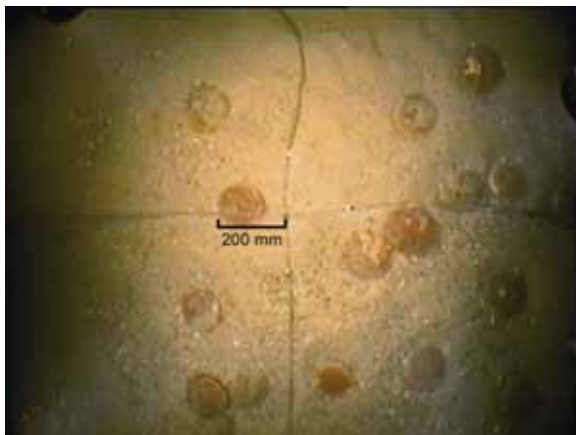


Video survey

Digital Still Camera = 1.13 m²



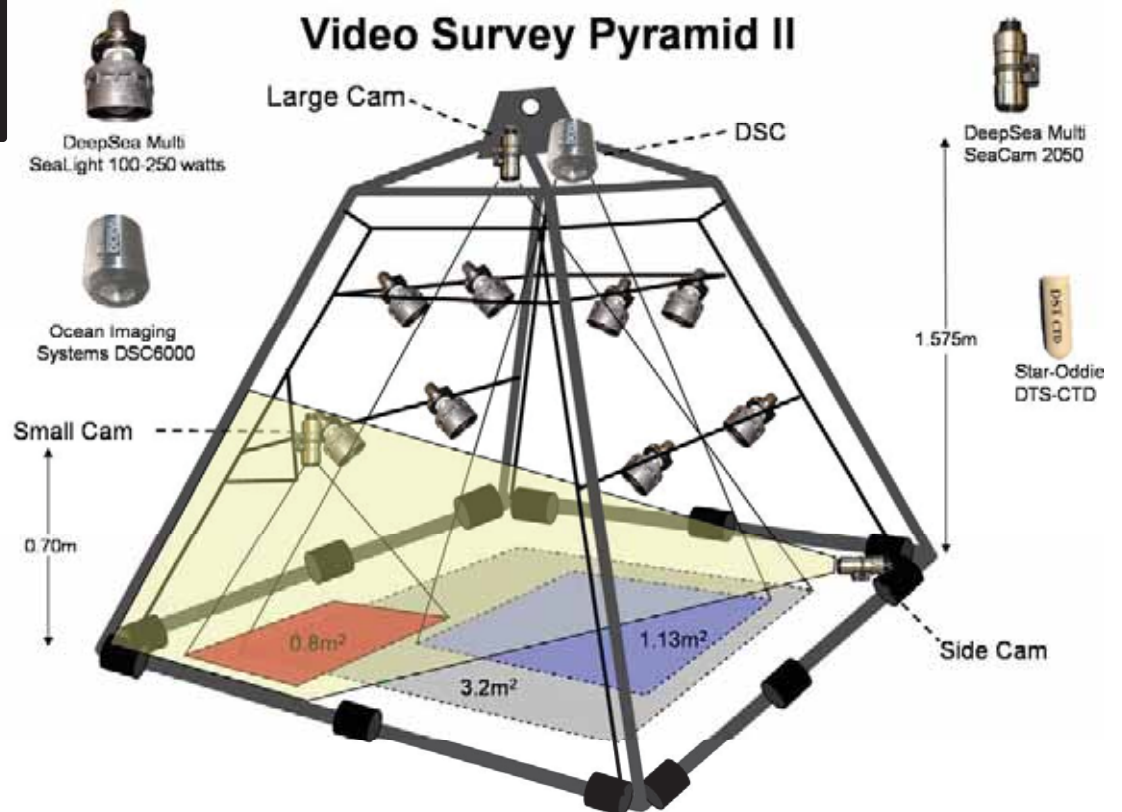
Large Camera = 3.2 m²

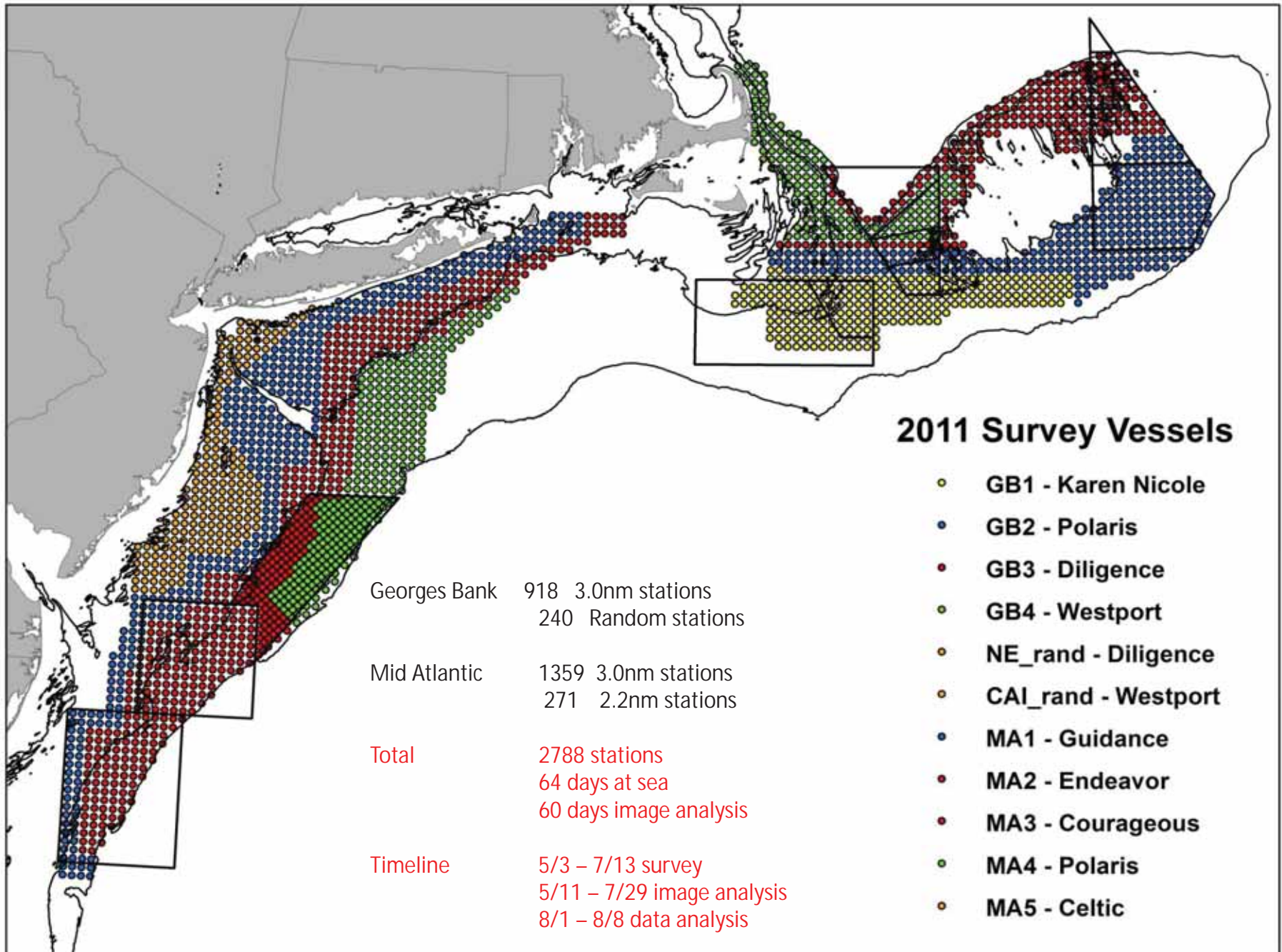


Small Camera = 0.8 m²

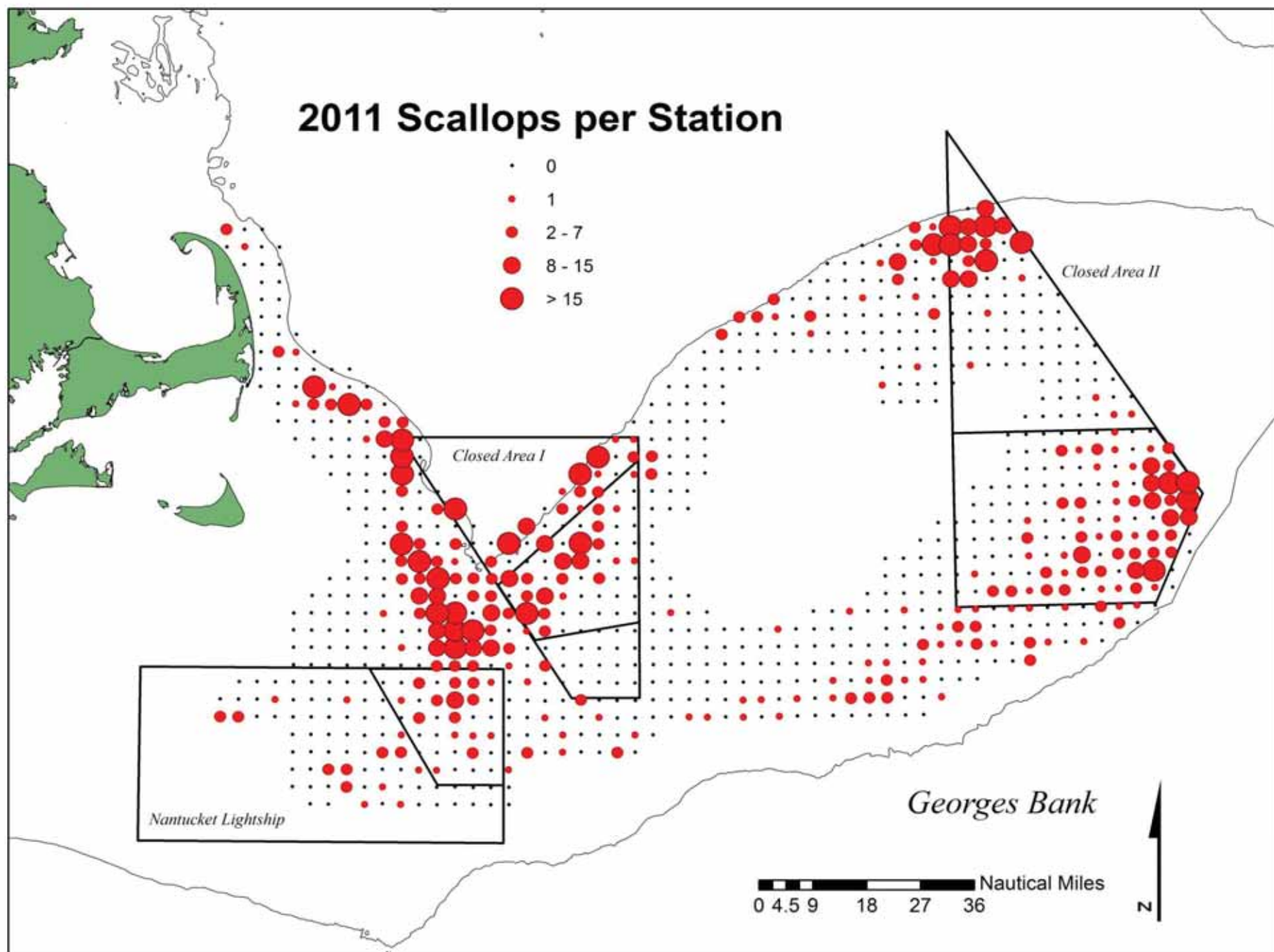
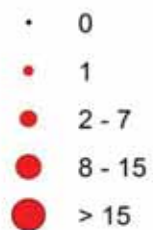


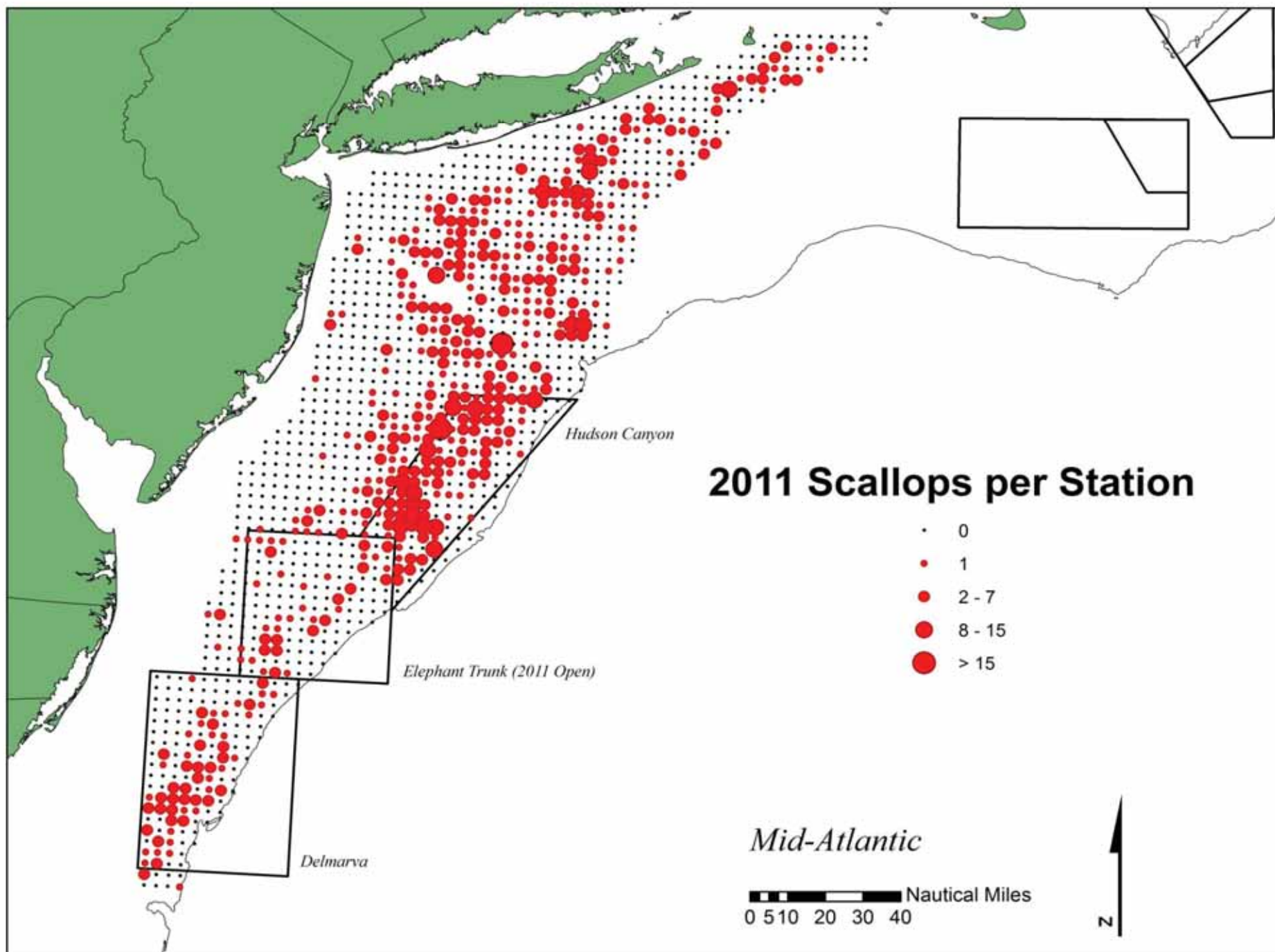
Side Camera





2011 Scallops per Station





Total Sea Scallop Meat Weight by Area

(million lbs)

Year	Georges Bank	Mid Atlantic	Total
2010	189.6	132.3	321.9
2011	192.0	130.5	322.5
2011 (new)		157.0	349.0

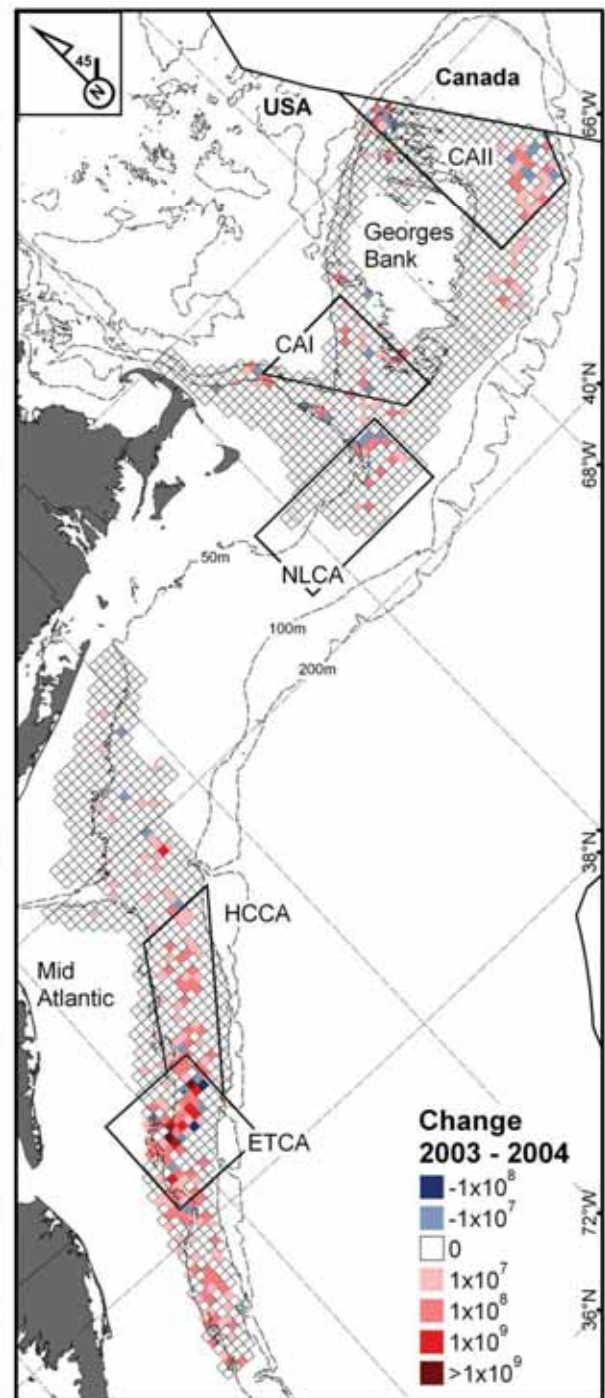
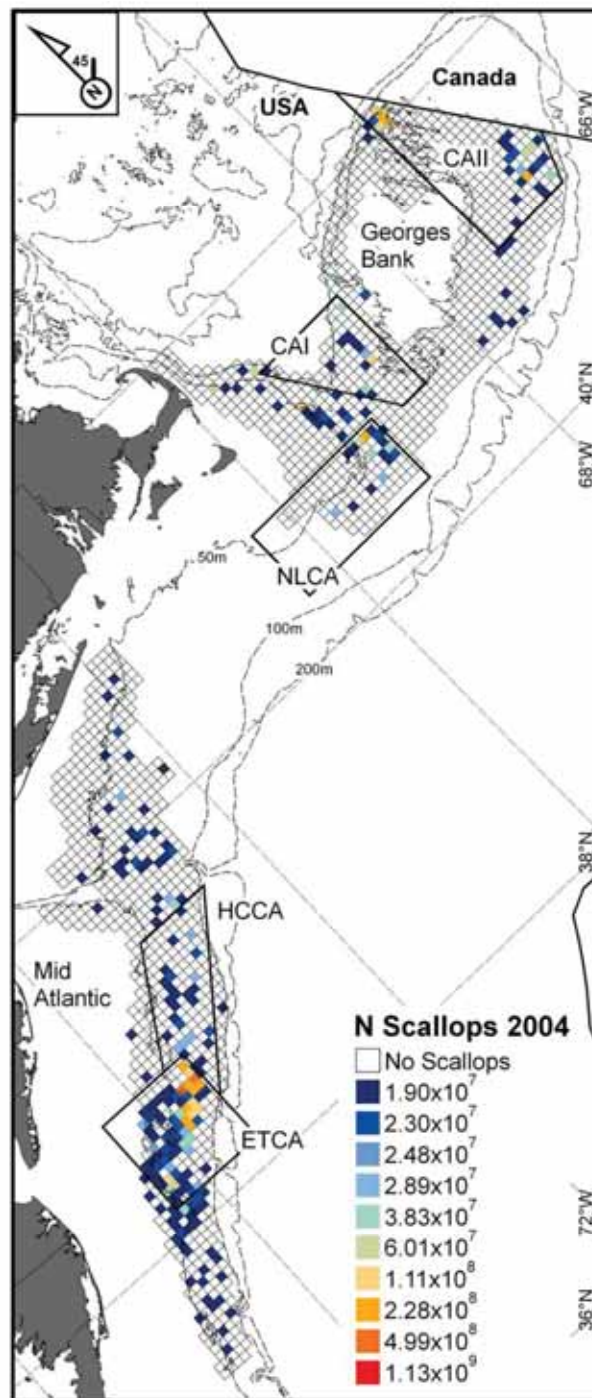
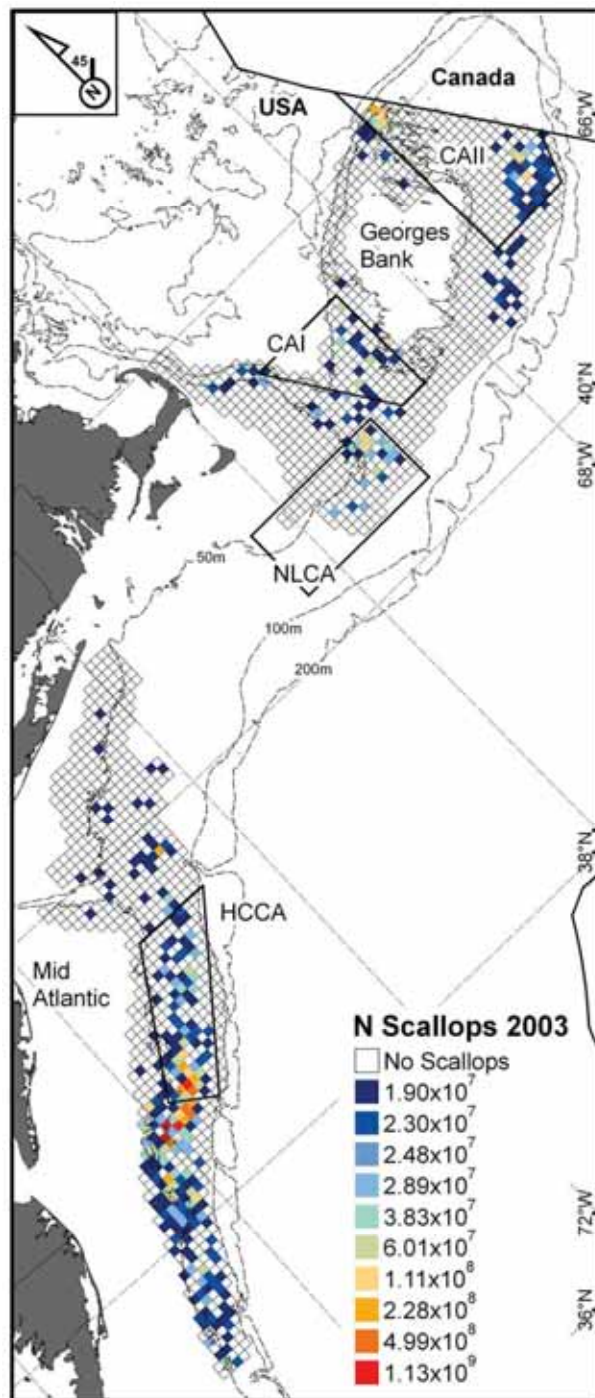
** 26.5 million lbs outside of original survey footprint

** 23.2 million lbs outside NMFS survey strata

** 7% of entire resource distributed in this area

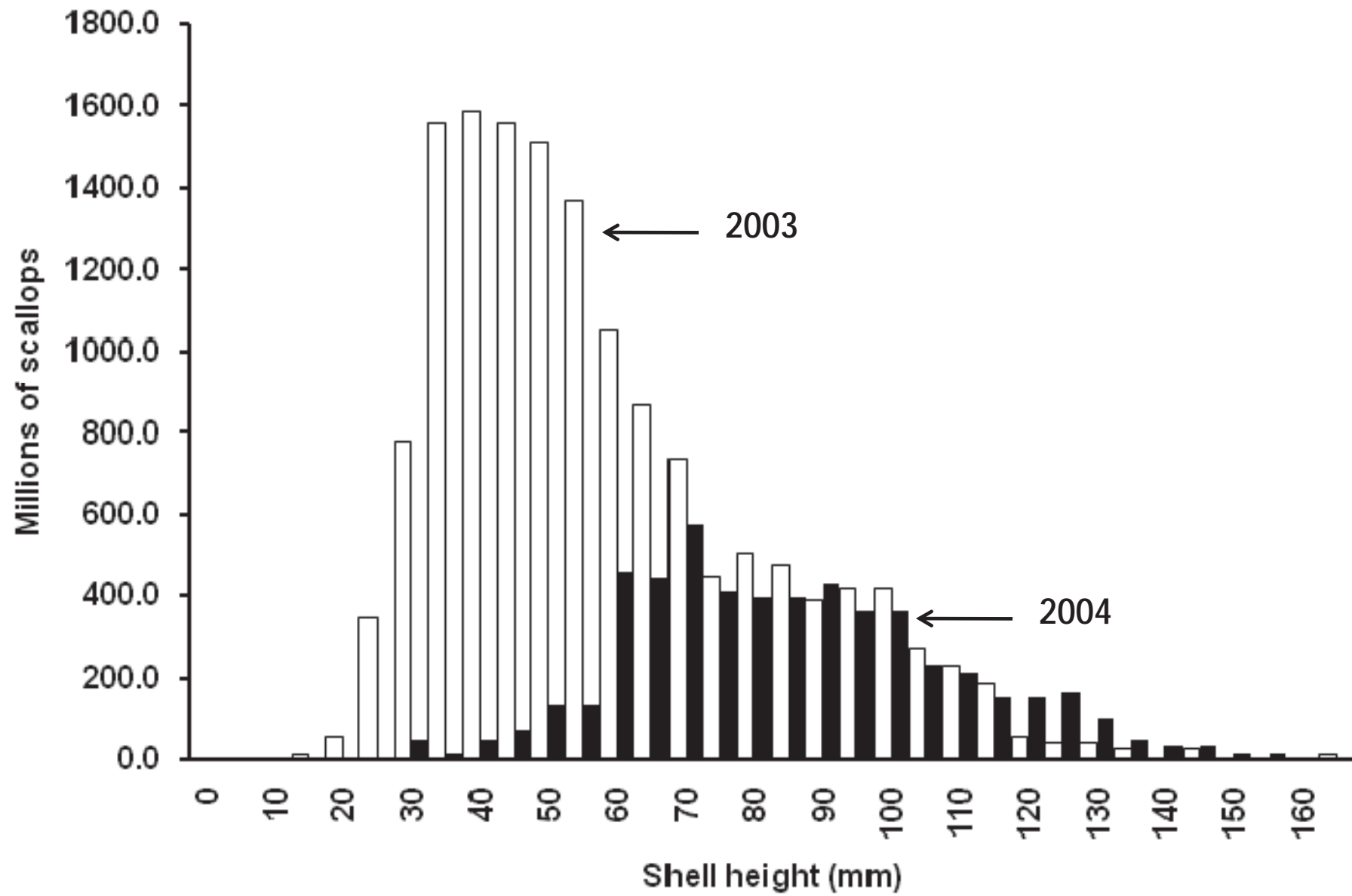
Scallop Abundance (small camera)

Year	Stations	Scallops m ⁻²	SE	Mean SH (mm)	Mean MW (g)	Scallops x 10 ⁹	95% CL
Mid-Atlantic							
2003	799	0.71	0.14	59	4.67	17.42	6.90
2004	829	0.23	0.03	85	11.67	5.94	1.32
2005	860	0.22	0.03	87	14.12	5.79	1.39
2006	872	0.20	0.02	93	16.01	5.52	1.14
2007	931	0.22	0.02	90	14.04	6.33	1.20
2008	913	0.22	0.02	91	16.95	6.09	1.15
2009	928	0.13	0.01	98	19.93	3.61	0.51
Georges Bank							
2003	904	0.17	0.02	88	14.07	4.74	0.95
2004	921	0.13	0.01	101	20.85	3.57	0.79
2005	902	0.10	0.01	111	27.95	2.79	0.70
2006	916	0.14	0.01	109	27.24	3.99	0.79
2007	901	0.20	0.02	80	14.16	5.49	1.20
2008	882	0.15	0.02	99	24.75	4.15	1.01
2009	942	0.16	0.02	96	20.78	4.53	1.06



NAD 1983 - UTM Zone 19N

0 km 200



28931 t of scallop meat landed - Mar 2003 Feb 2004,
81% (23533 t) from the Mid-Atlantic
7 person crew, average water temp. 22 to 23 C°, air temp. >30 C°



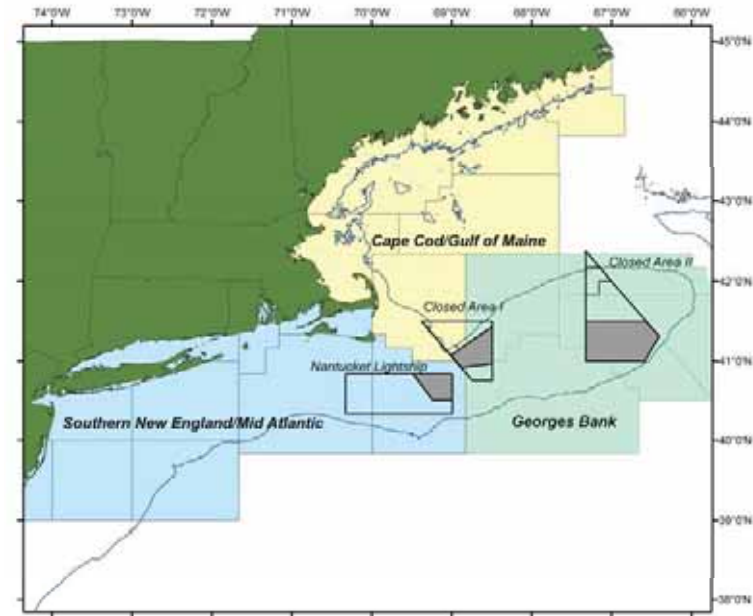


Timing of Management Action

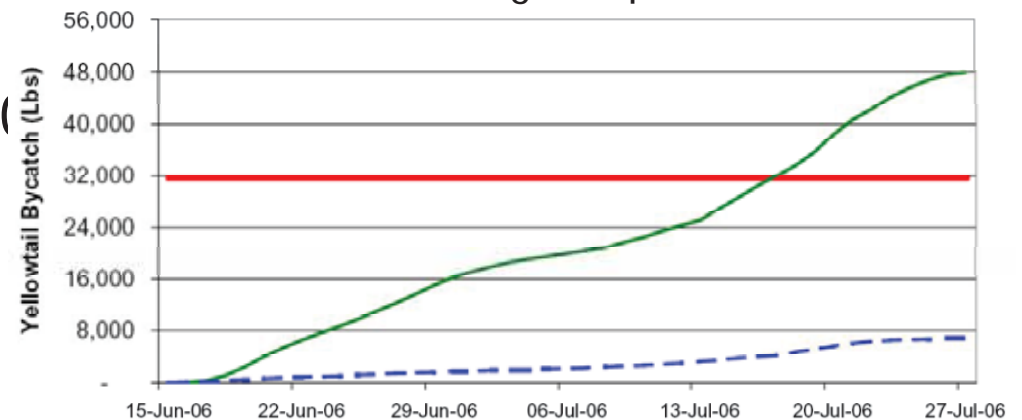
- 2 July 2003 to the New England Fisheries Management Council (NEFMC) Scallop Plan Development Team.
- 13 months
- 23 July 2004, - Amendment 10, implementing Rotational management, 102 mm ring, 7 crew; created the ETCA

Problem: Scallop - Yellowtail Flounder Interactions

- Scallop harvest can be constrained by bycatch
- Bycatch has cost over \$60 million in foregone scallop yield
- Real-time, spatial information could reduce bycatch



Nantucket Lightship 2006



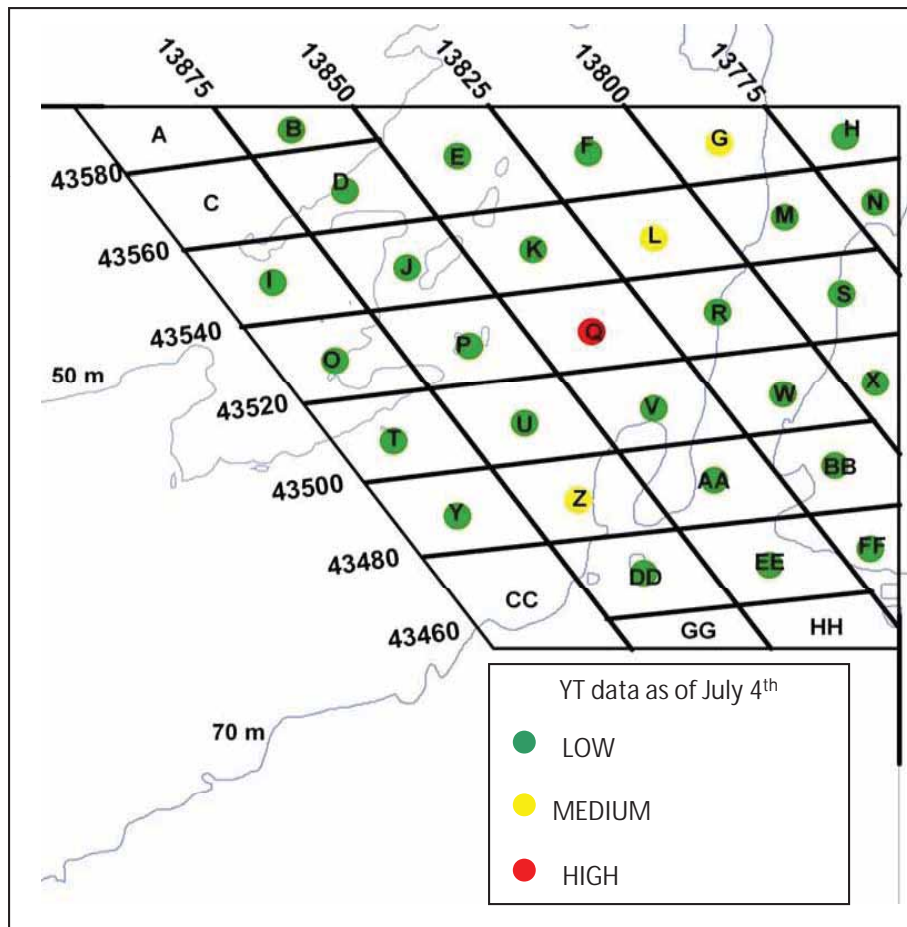
2010: Real-time Yellowtail Bycatch Avoidance



SMAST – SCALLOP INDUSTRY



NANTUCKET LIGHTSHIP
YELLOWTAIL BYCATCH ADVISORY



SUNDAY 7/4/2010:

YT Update for 7/4:

18 boats reported 213 tows
from 7/3 thru 7/4

YT catch was:

HIGH: Q

MEDIUM: G L Z

NO DATA: A,C,CC,GG,HH

LOW: All other cells

Cell Q remains a YT hotspot.

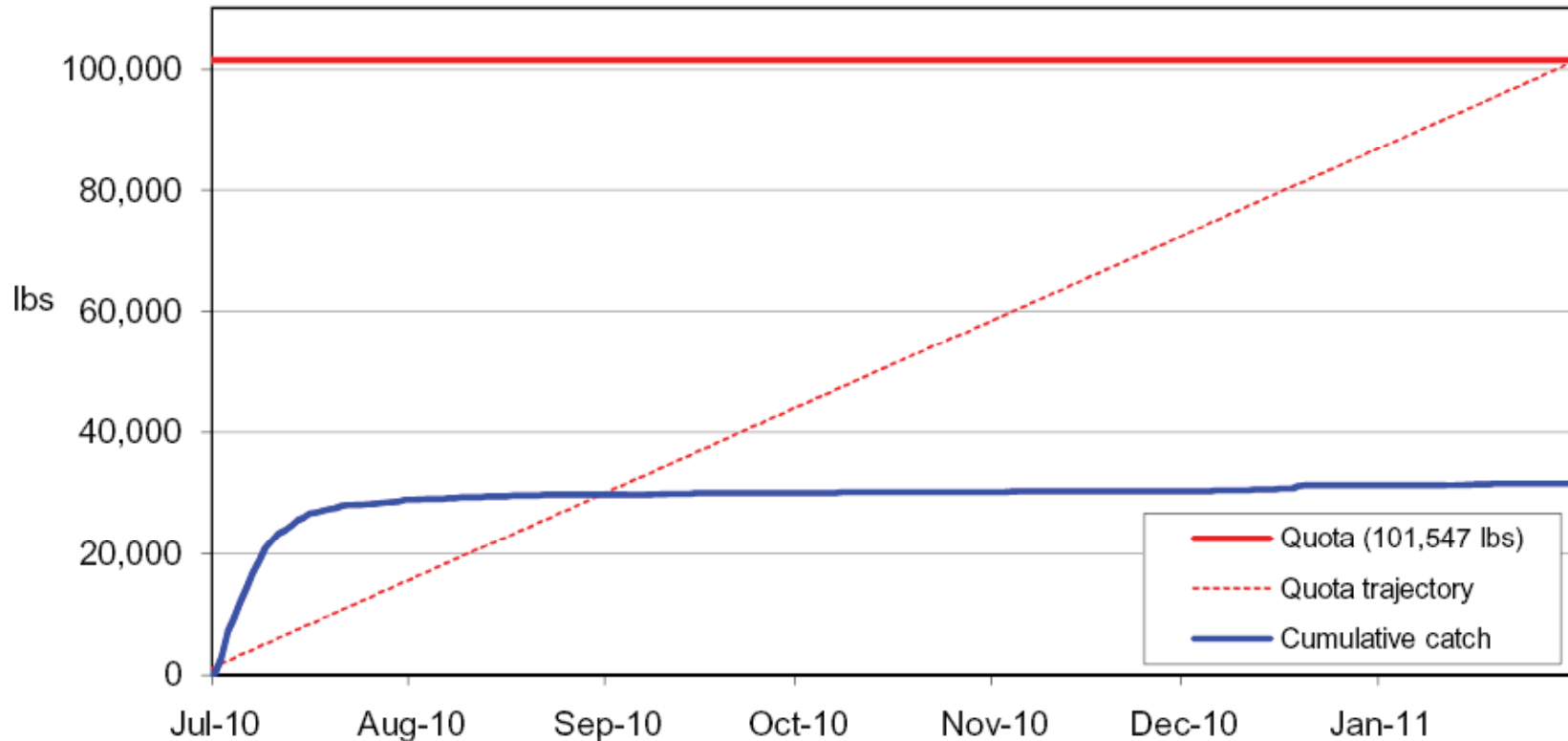
Cells L G Z had high YT catch.

Next report 7/5.

Thank you and Happy 4th of July!

Results: Cumulative Bycatch

Yellowtail Bycatch, Nantucket Lightship Access Area, FY2010
NMFS NERO 2/27/2010



Full scallop allocation = \$40 million

Only 32% of yellowtail flounder allocation caught

Economic and conservation success

Outreach

