

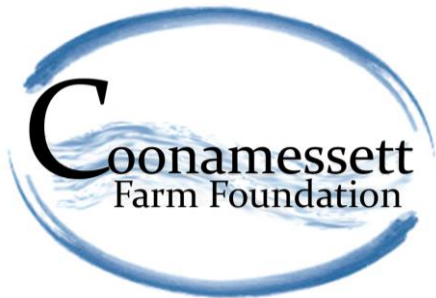
EFP #23027 Update - DBE Survey

Tuesday, January 7, 2025

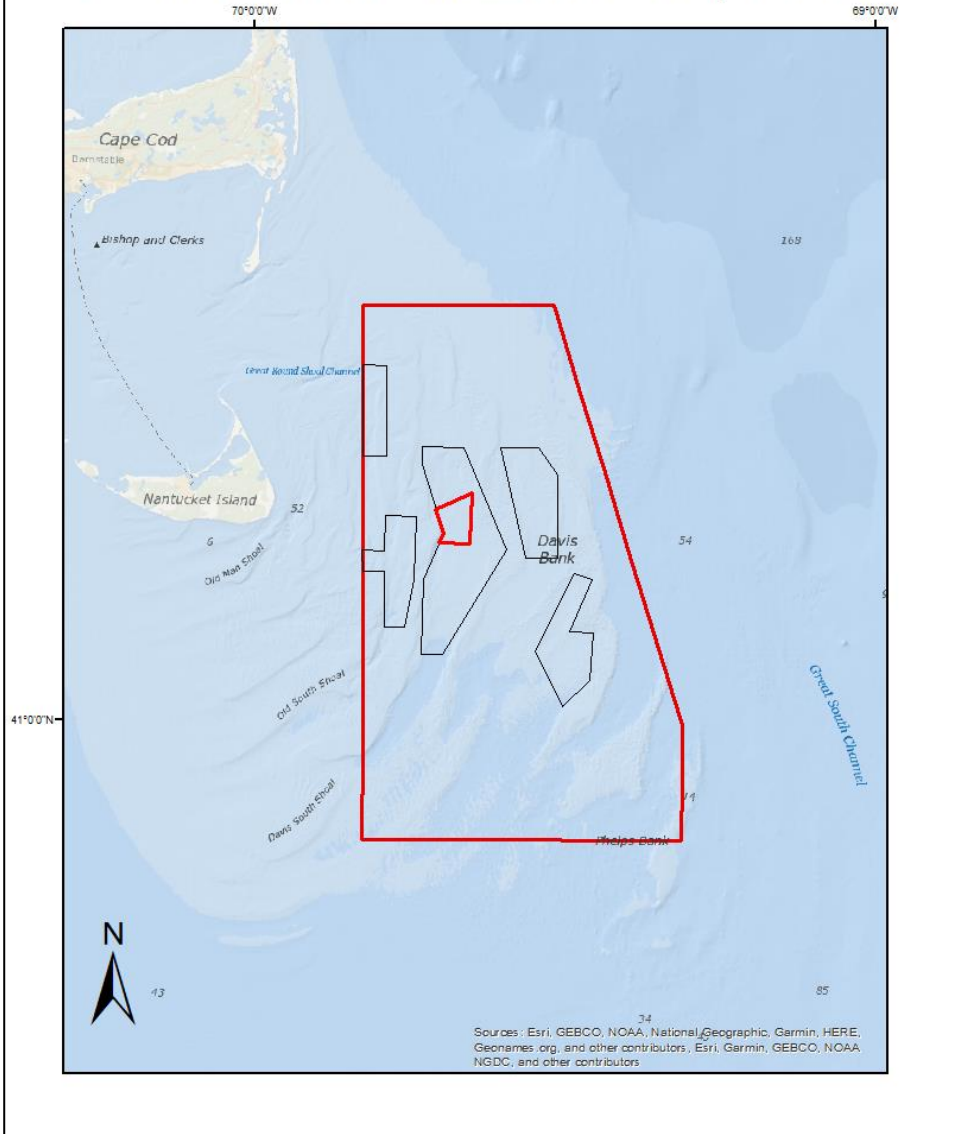
Habitat PDT + FMAT Meeting

Natalie Jennings

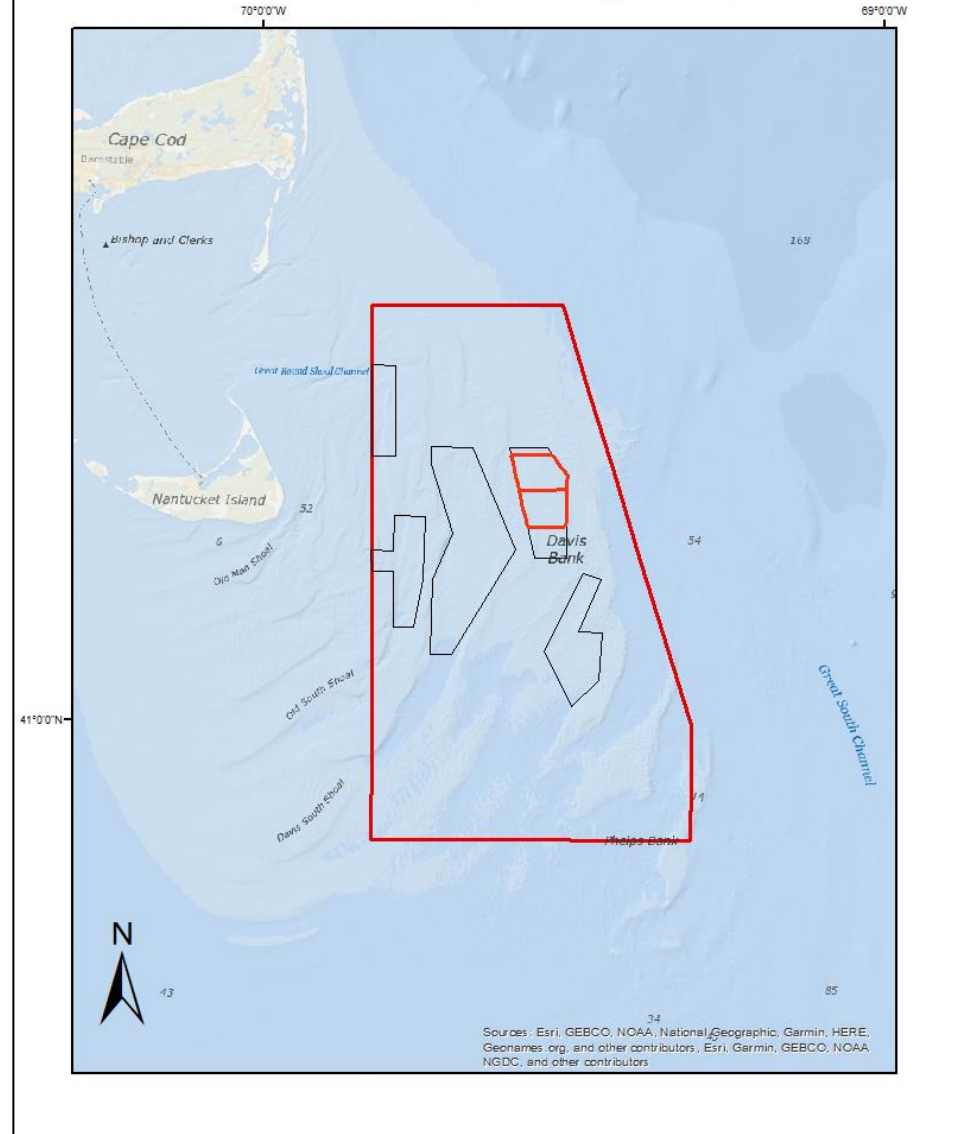
Luisa Garcia, Farrell Davis, and Ryan Munnelly



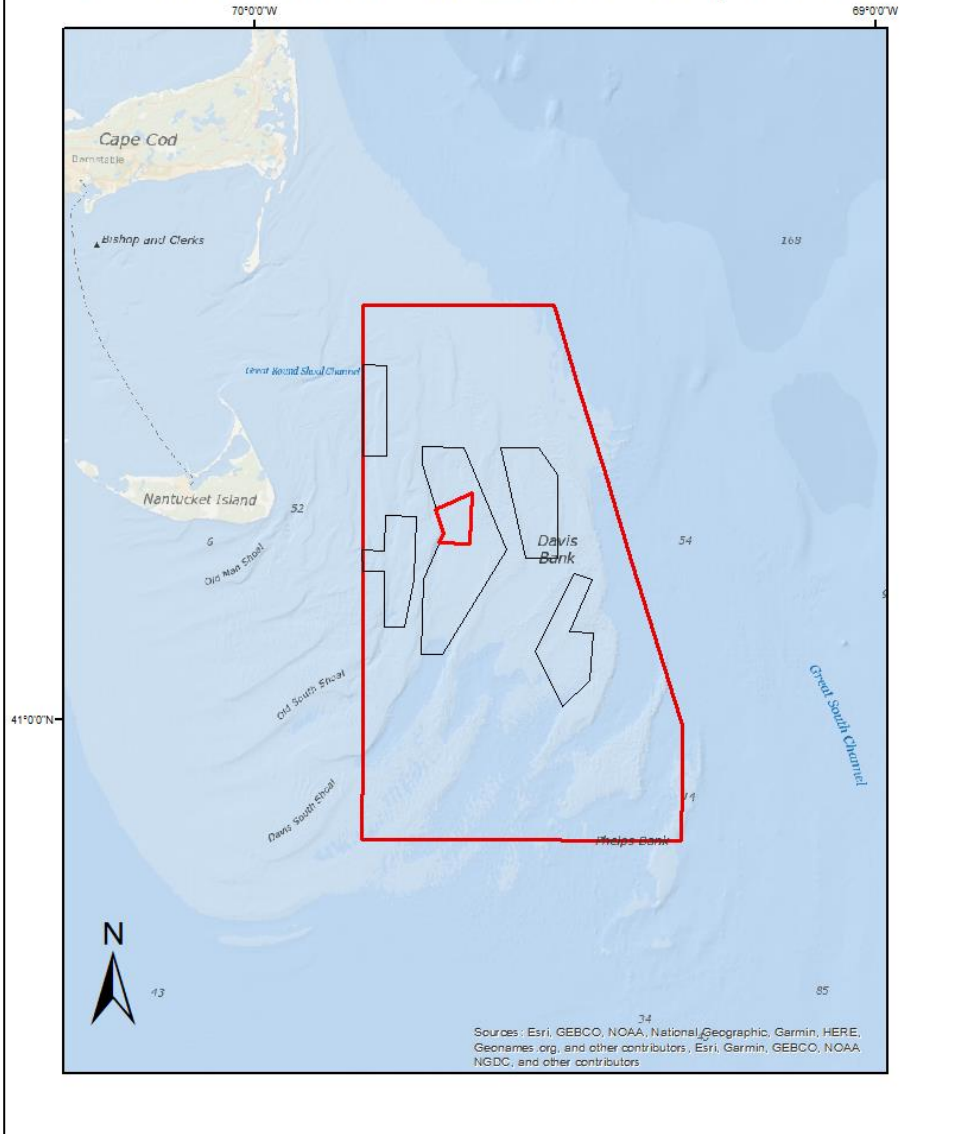
EFP #19066 Rose and Crown Sample Area



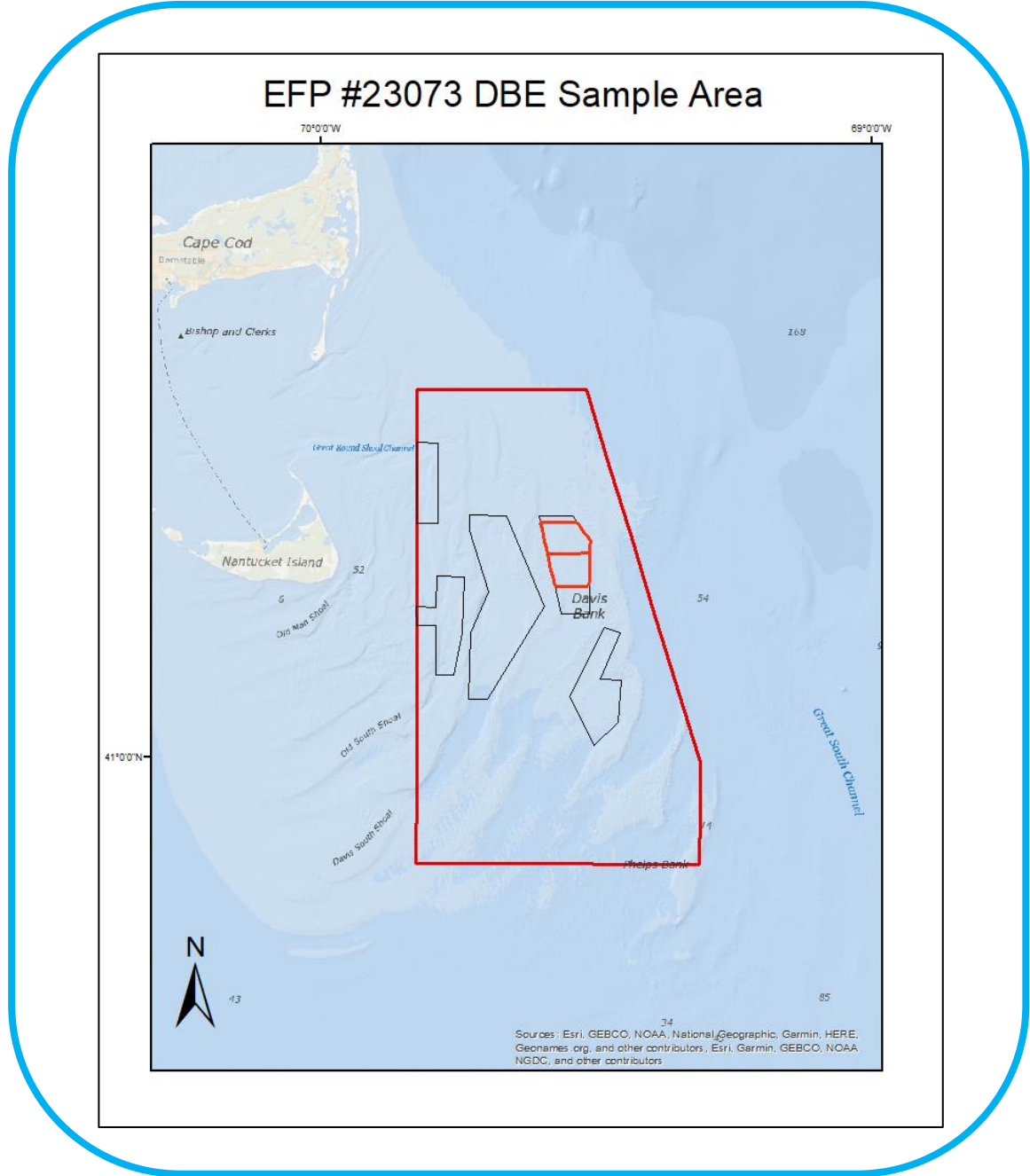
EFP #23073 DBE Sample Area



EFP #19066 Rose and Crown Sample Area



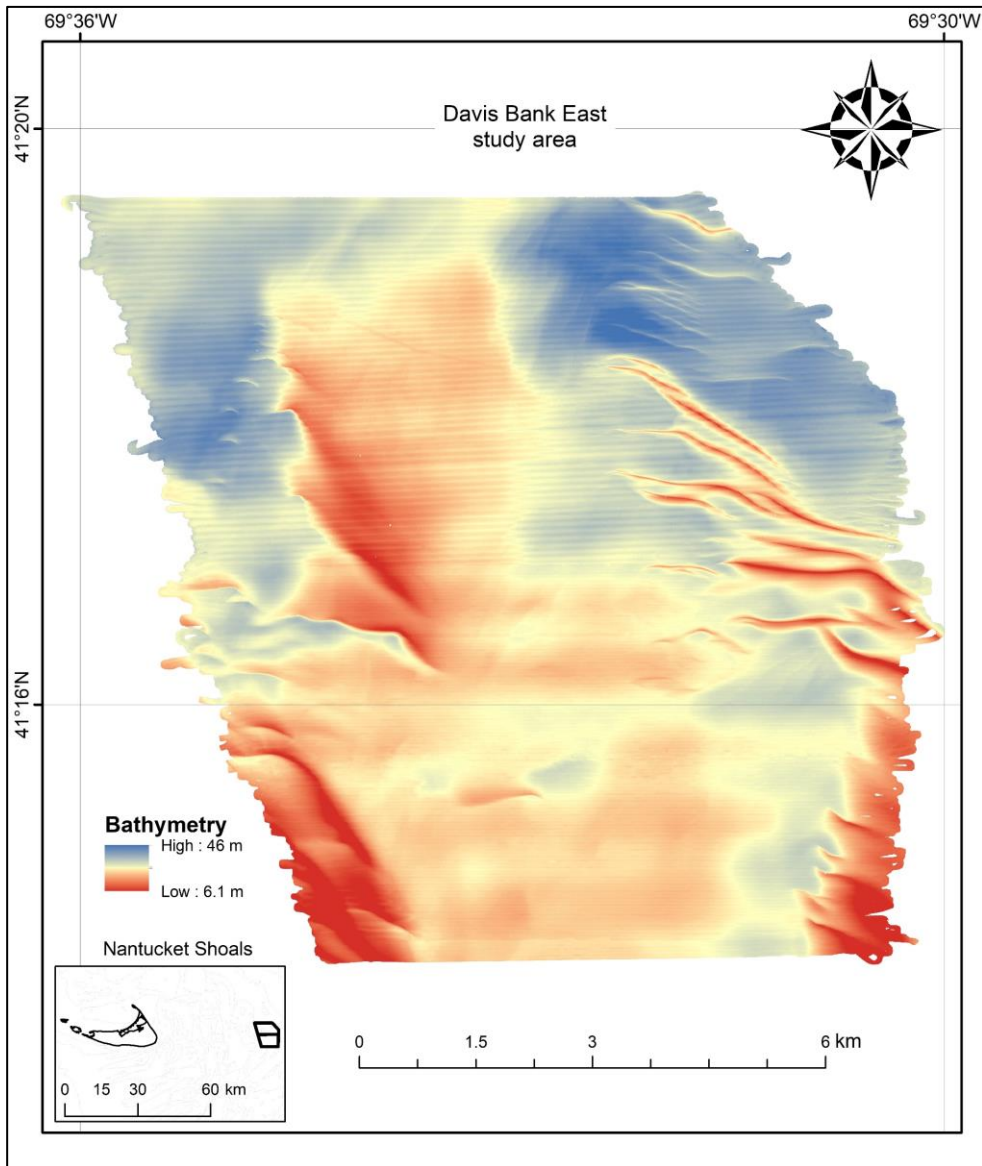
EFP #23073 DBE Sample Area



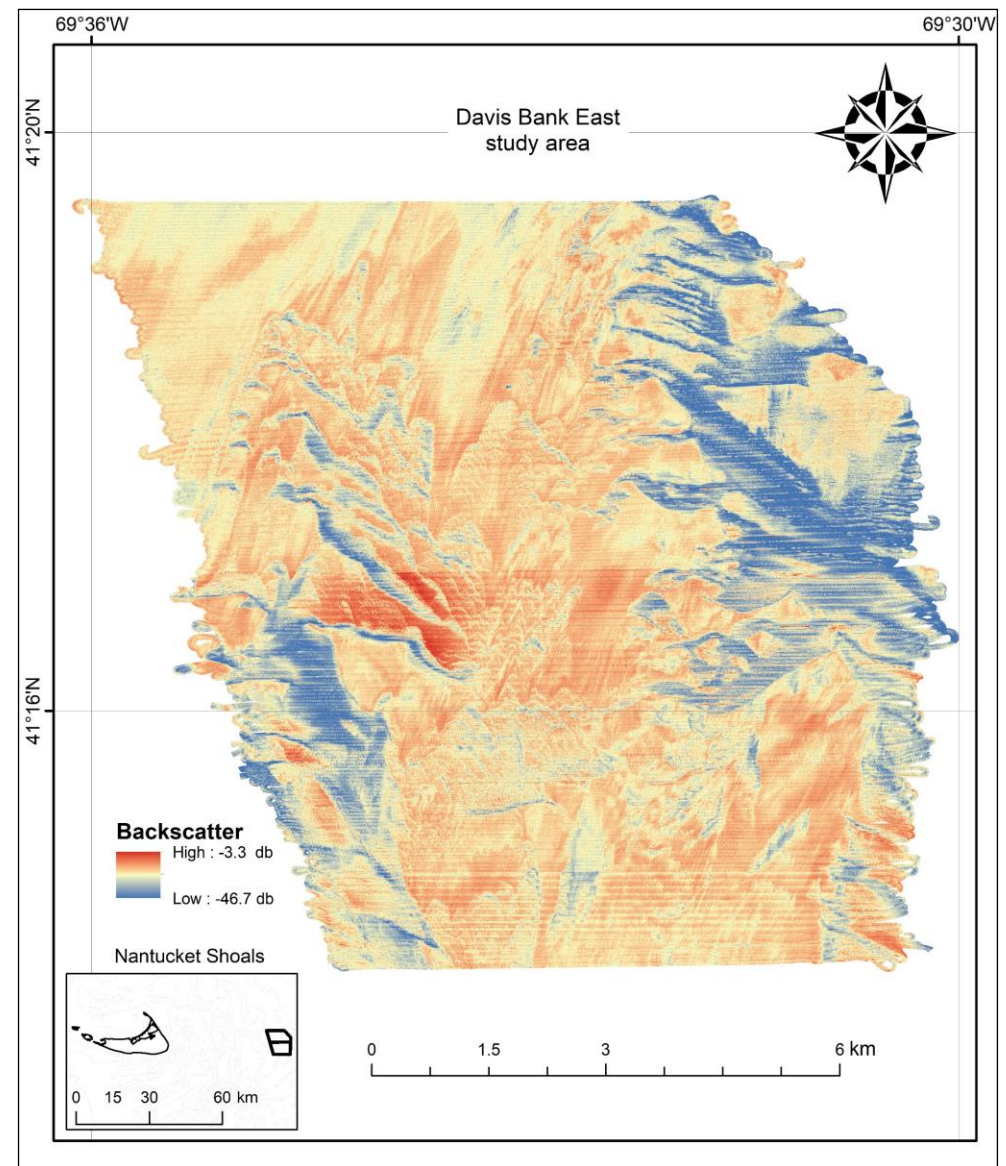
- Multibeam survey whole sample area
- Drop camera survey whole sample area
- Image annotation
- Preliminary findings
 - Sand is the most common substrate recorded
 - Particles measured are mostly pebble-sized
 - Epifauna, including hydrozoans, encrusting bryozoan, and barnacles are present but not common
 - Compensation fishing trip summary to-date

- **Multibeam survey whole sample area**

- Drop camera survey whole sample area
- Image annotation
- Preliminary findings
 - Sand is the most common substrate recorded
 - Particles measured are mostly pebble-sized
 - Epifauna, including hydrozoans, encrusting bryozoan, and barnacles are present but not common
 - Compensation fishing trip summary to-date

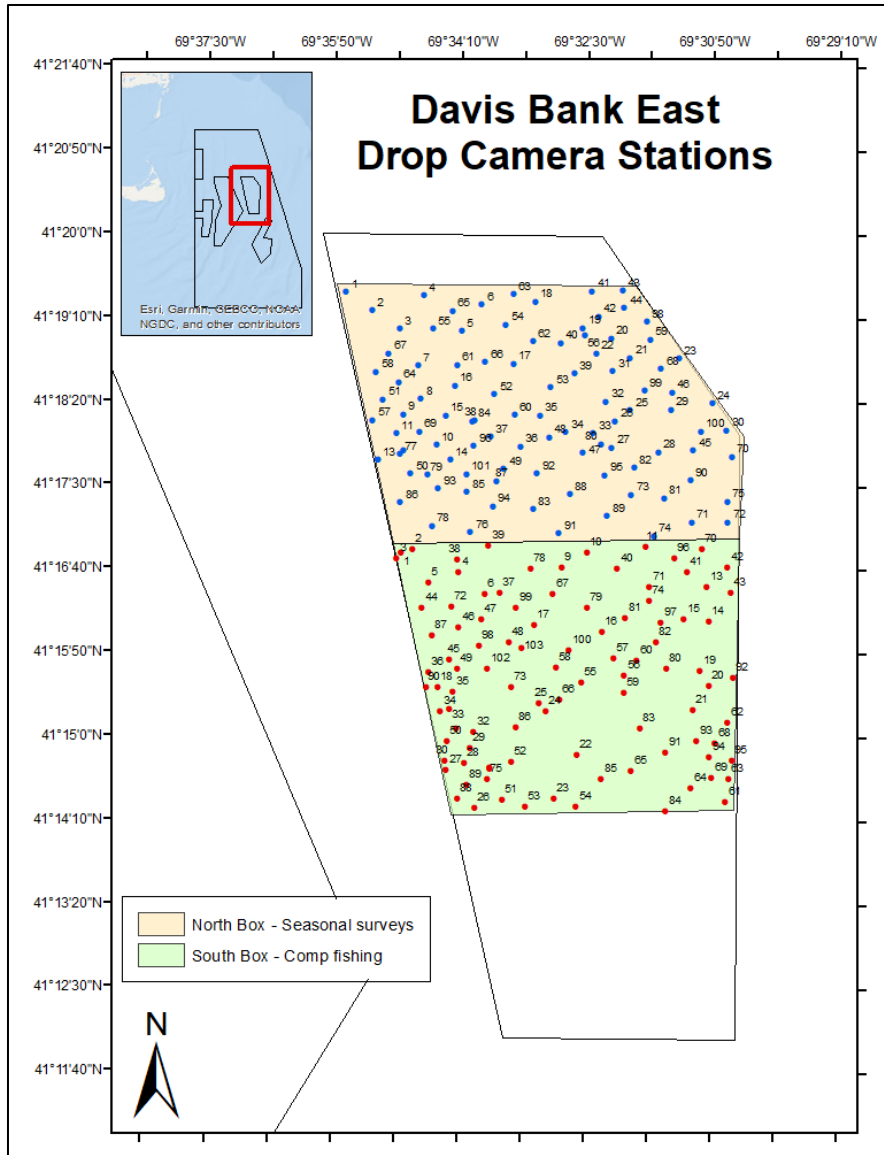


Measured bathymetry with shallow and deeper depths represented by warmer and cooler colors, respectively.

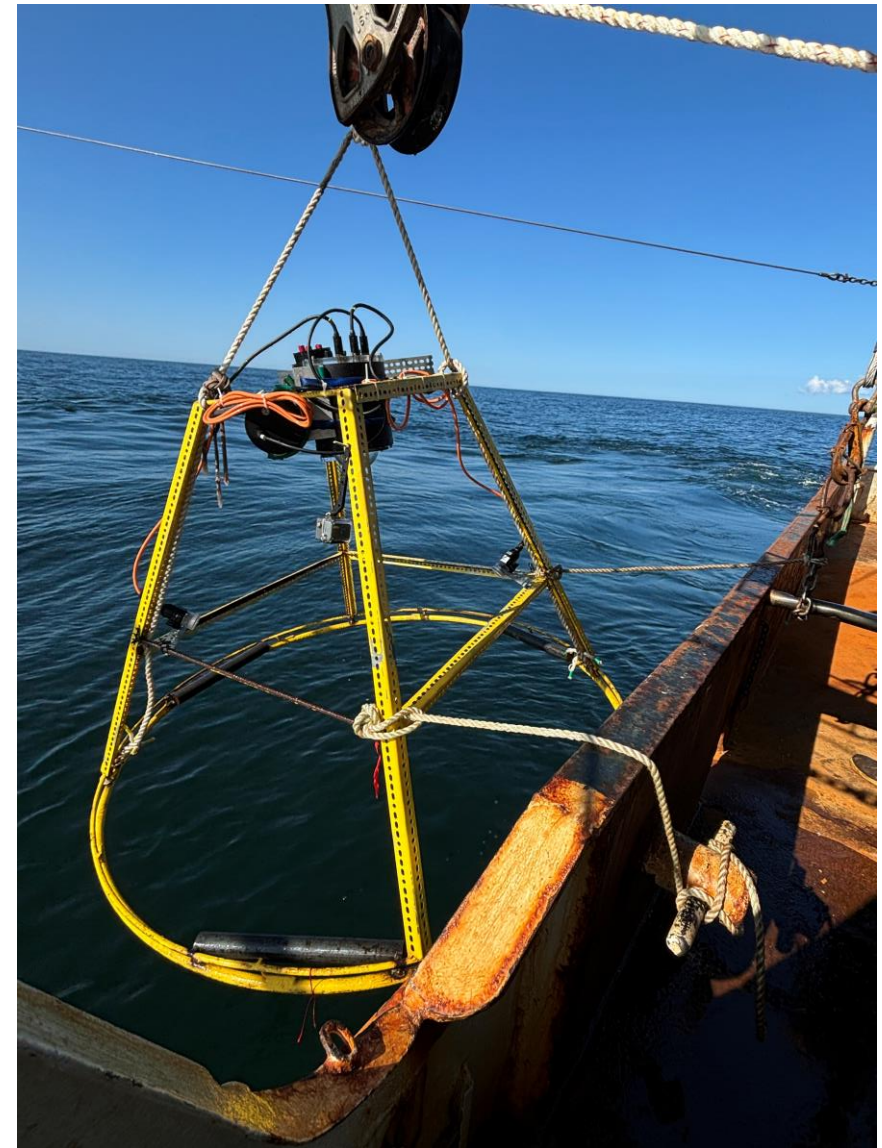


Measured backscatter with harder and softer substrates represented by warmer and cooler colors, respectively.

- Multibeam survey whole sample area
- Drop camera survey whole sample area
- Image annotation
- Preliminary findings
 - Sand is the most common substrate recorded
 - Particles measured are mostly pebble-sized
 - Epifauna, including hydrozoans, encrusting bryozoan, and barnacles are present but not common
 - Compensation fishing trip summary to-date



100 drop stations in each survey box



Time-lapse camera array took an image every 5 seconds

- Multibeam survey whole sample area
- Drop camera survey whole sample area
- Image annotation
- Preliminary findings
 - Sand is the most common substrate recorded
 - Particles measured are mostly pebble-sized
 - Epifauna, including hydrozoans, encrusting bryozoan, and barnacles are present but not common
 - Compensation fishing trip summary to-date



Image Examples

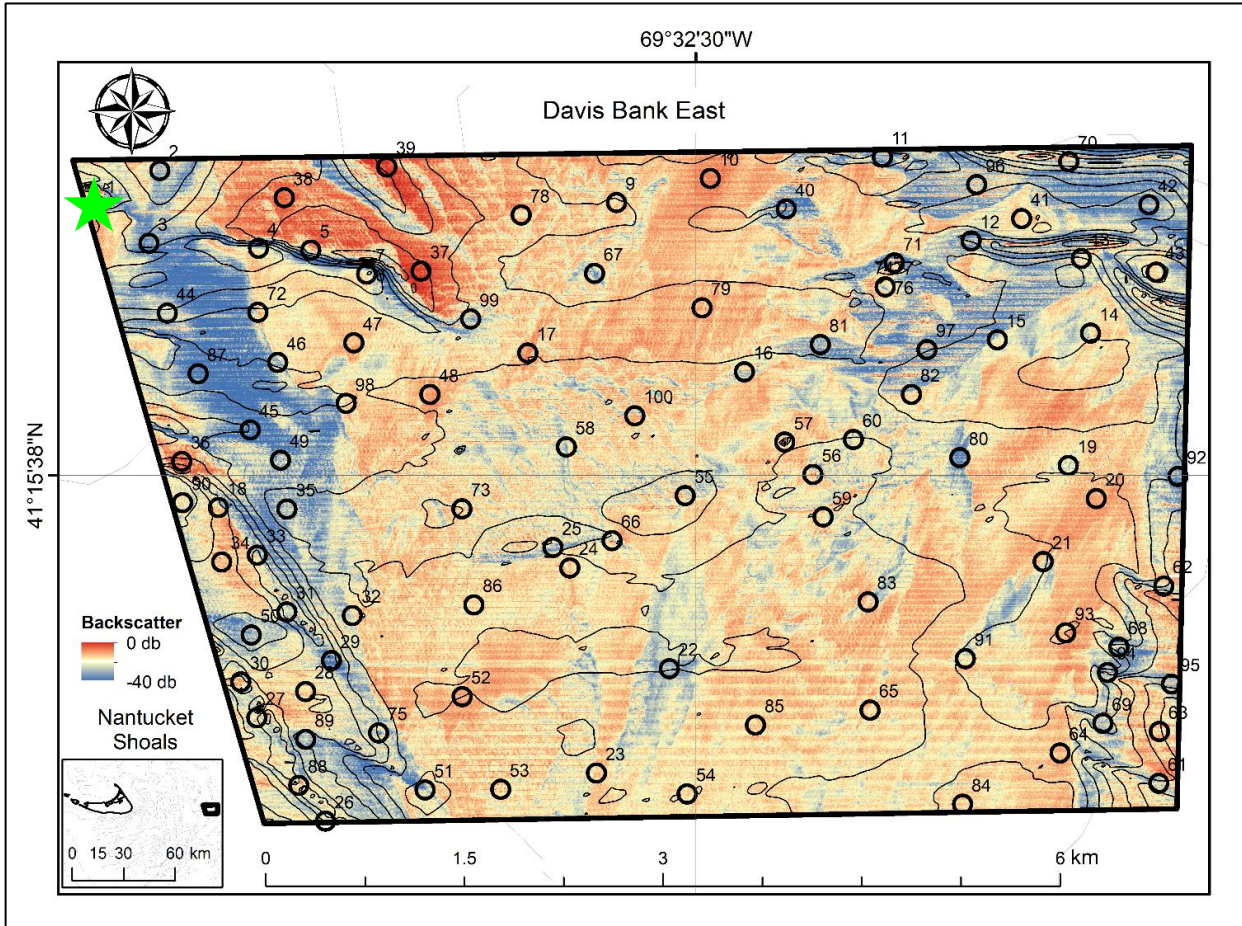


Image Examples

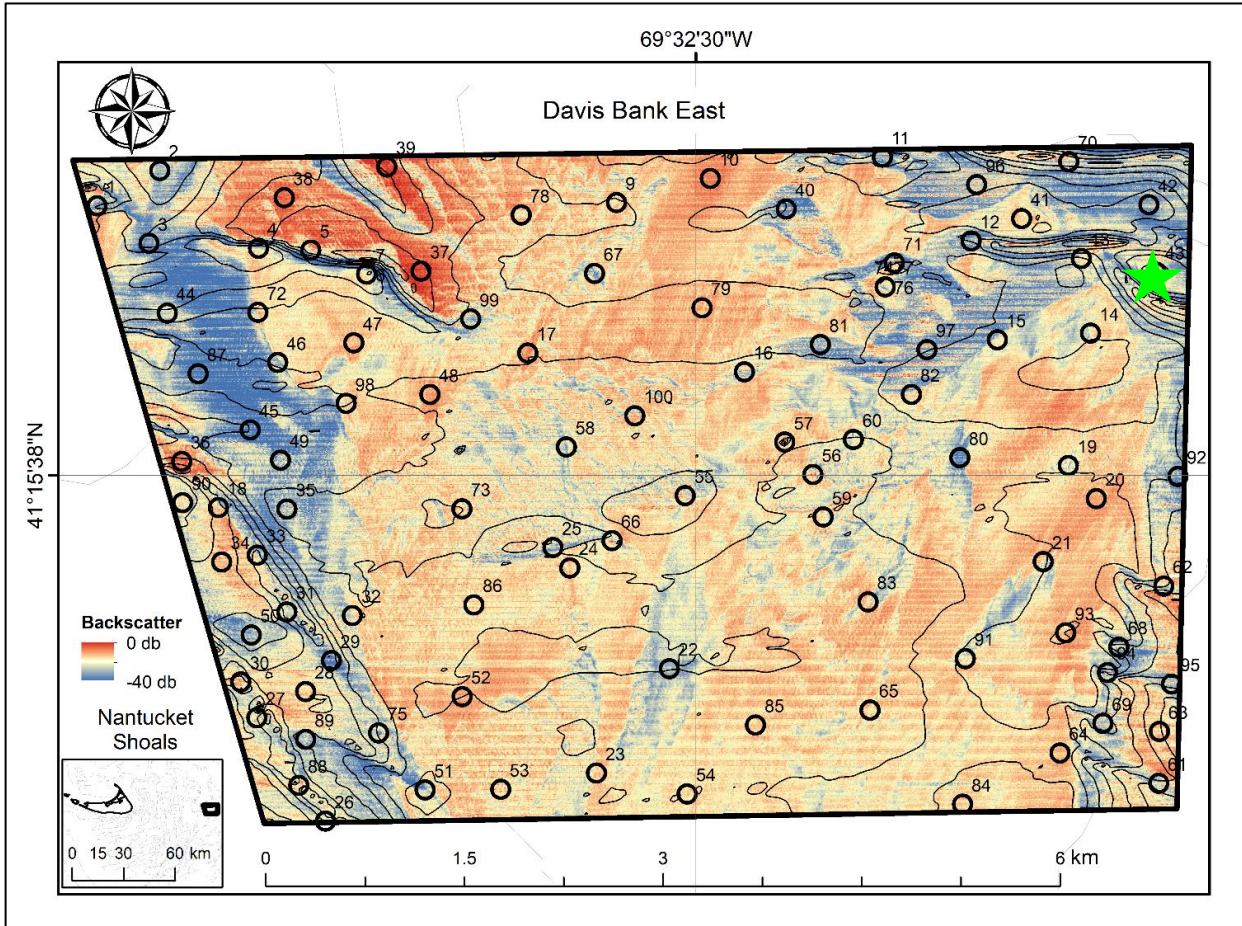


Image Examples

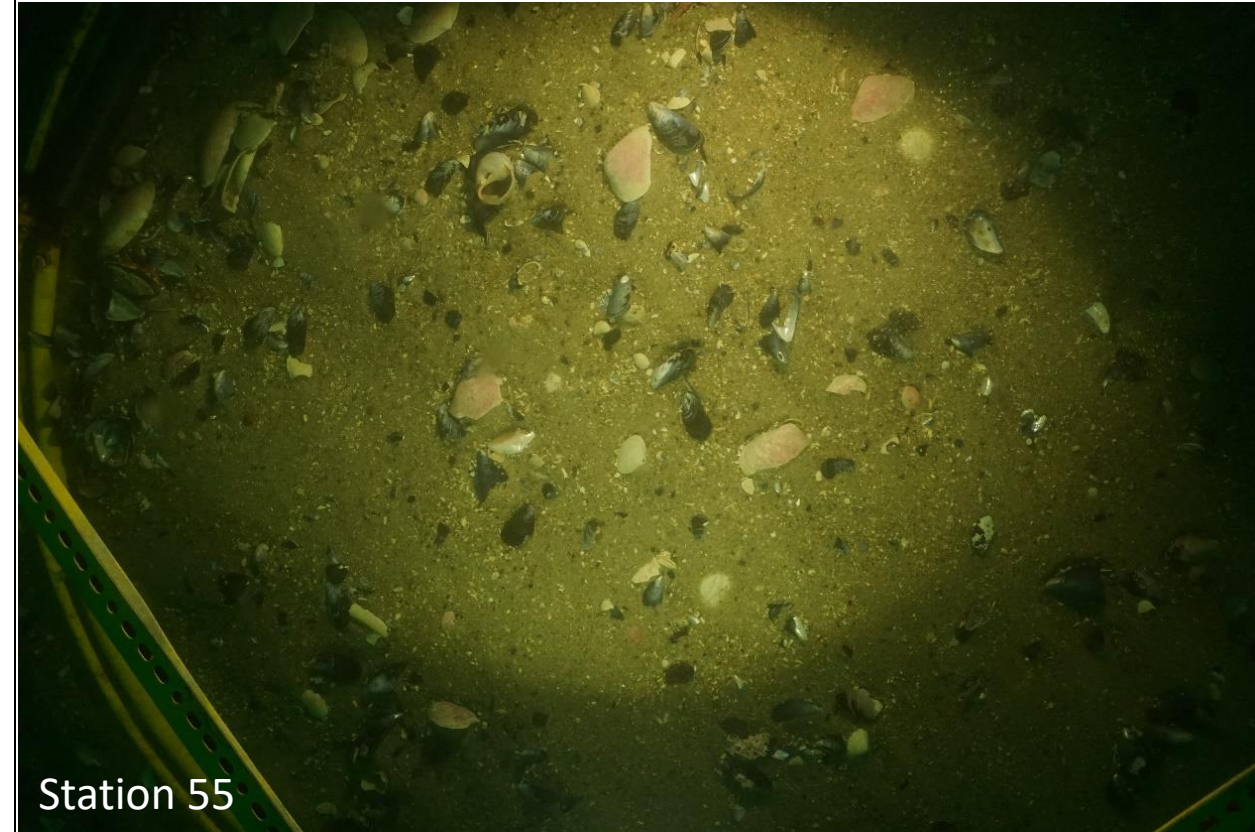
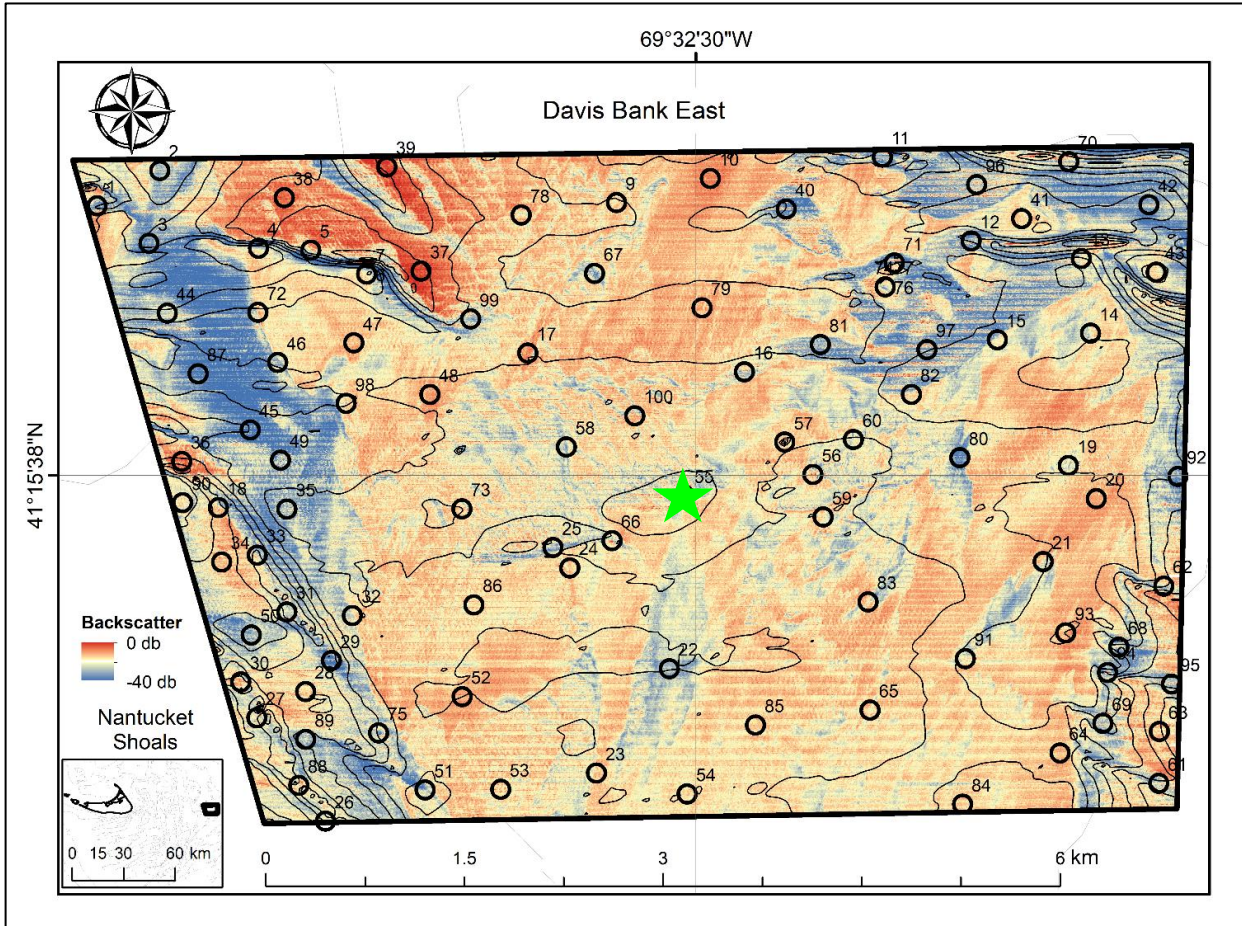


Image Examples

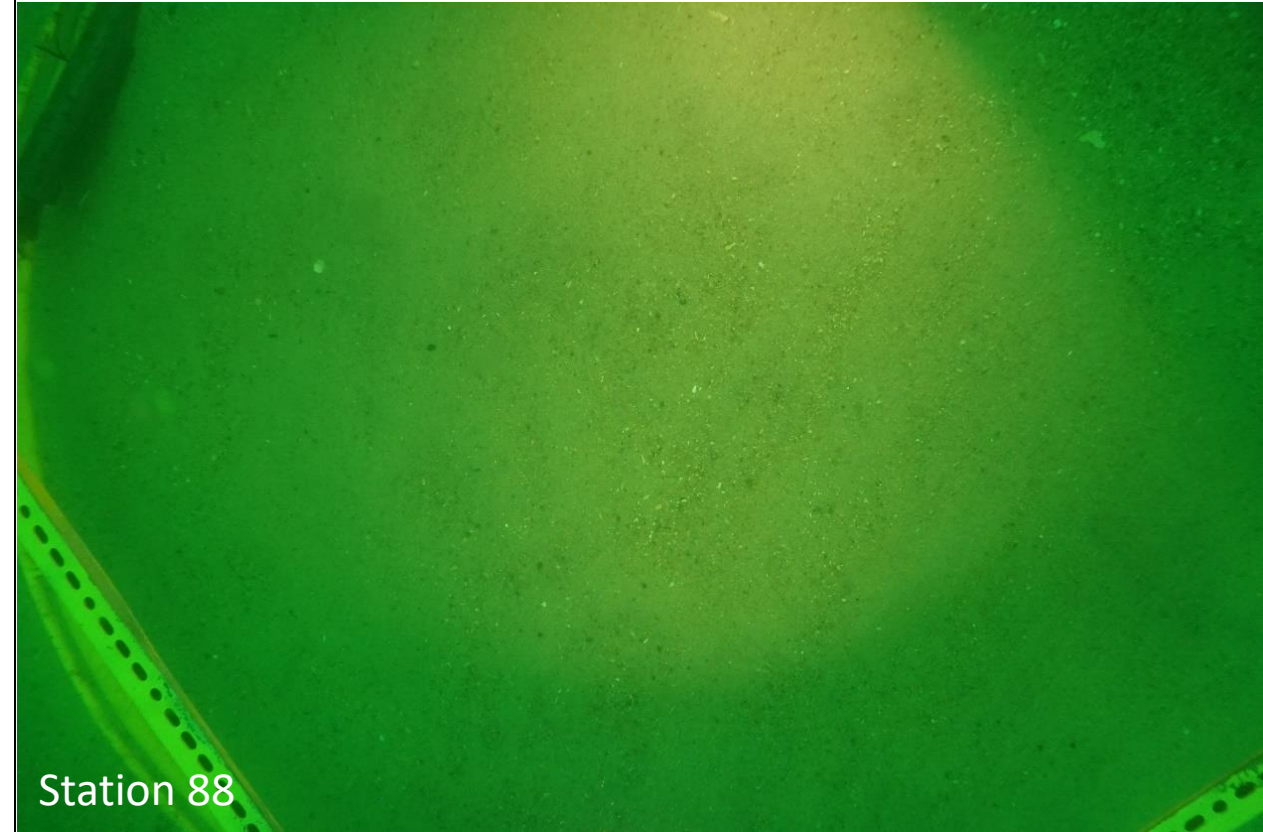
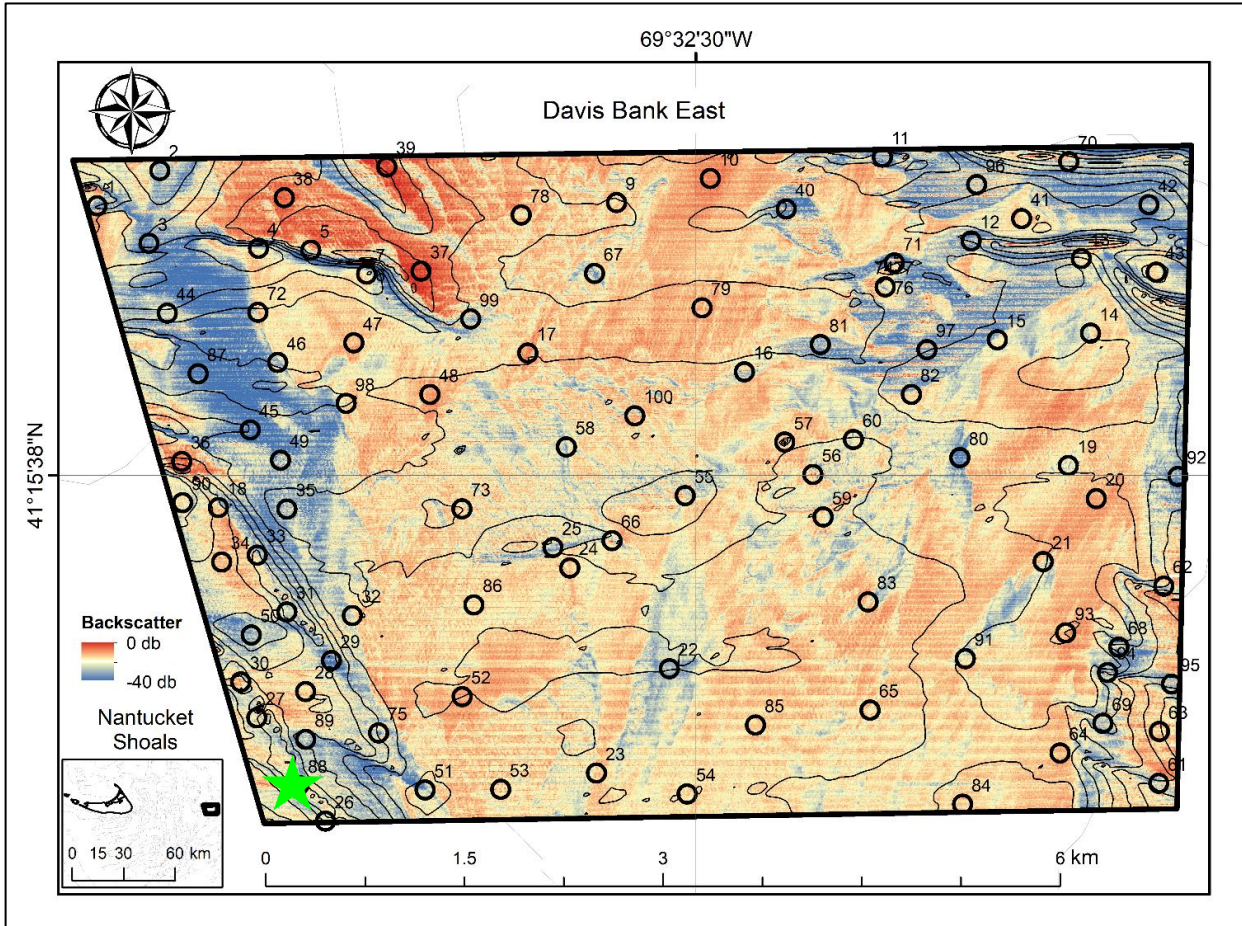
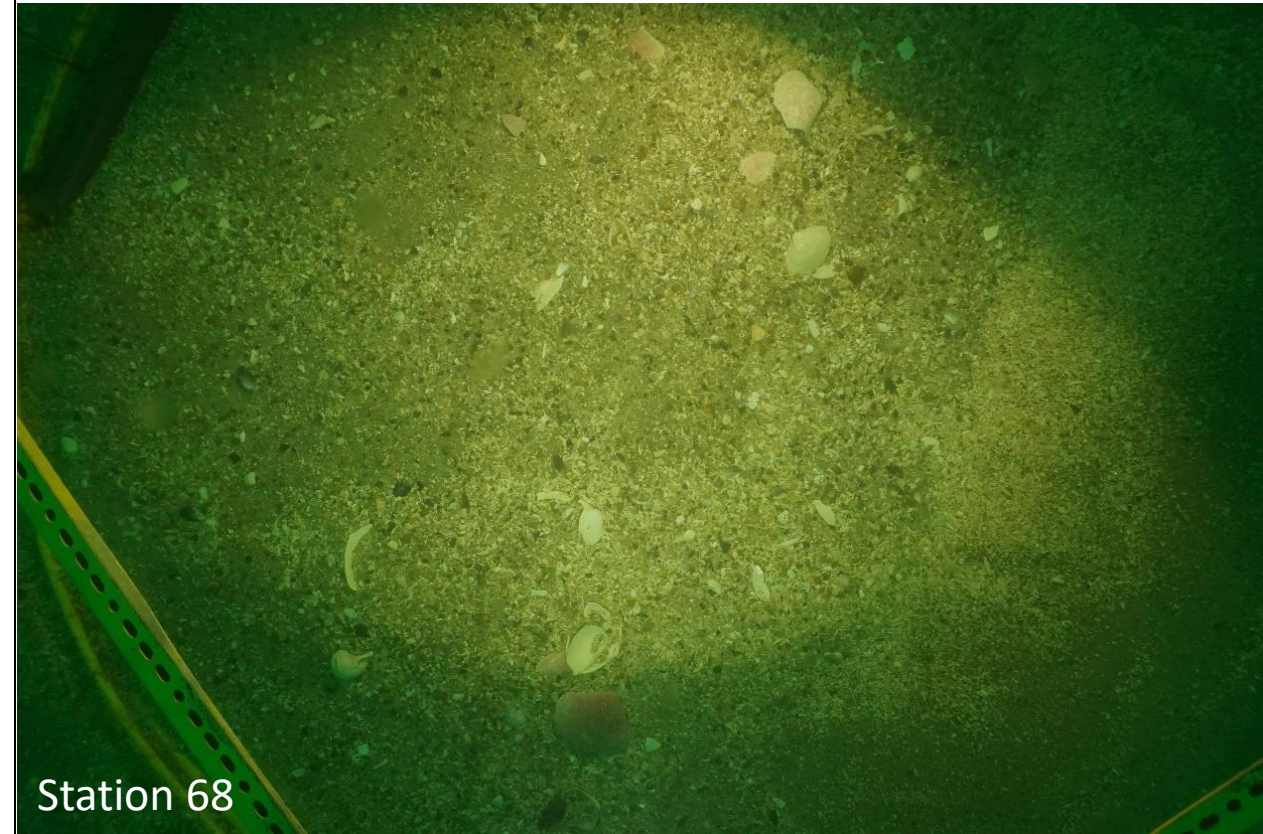
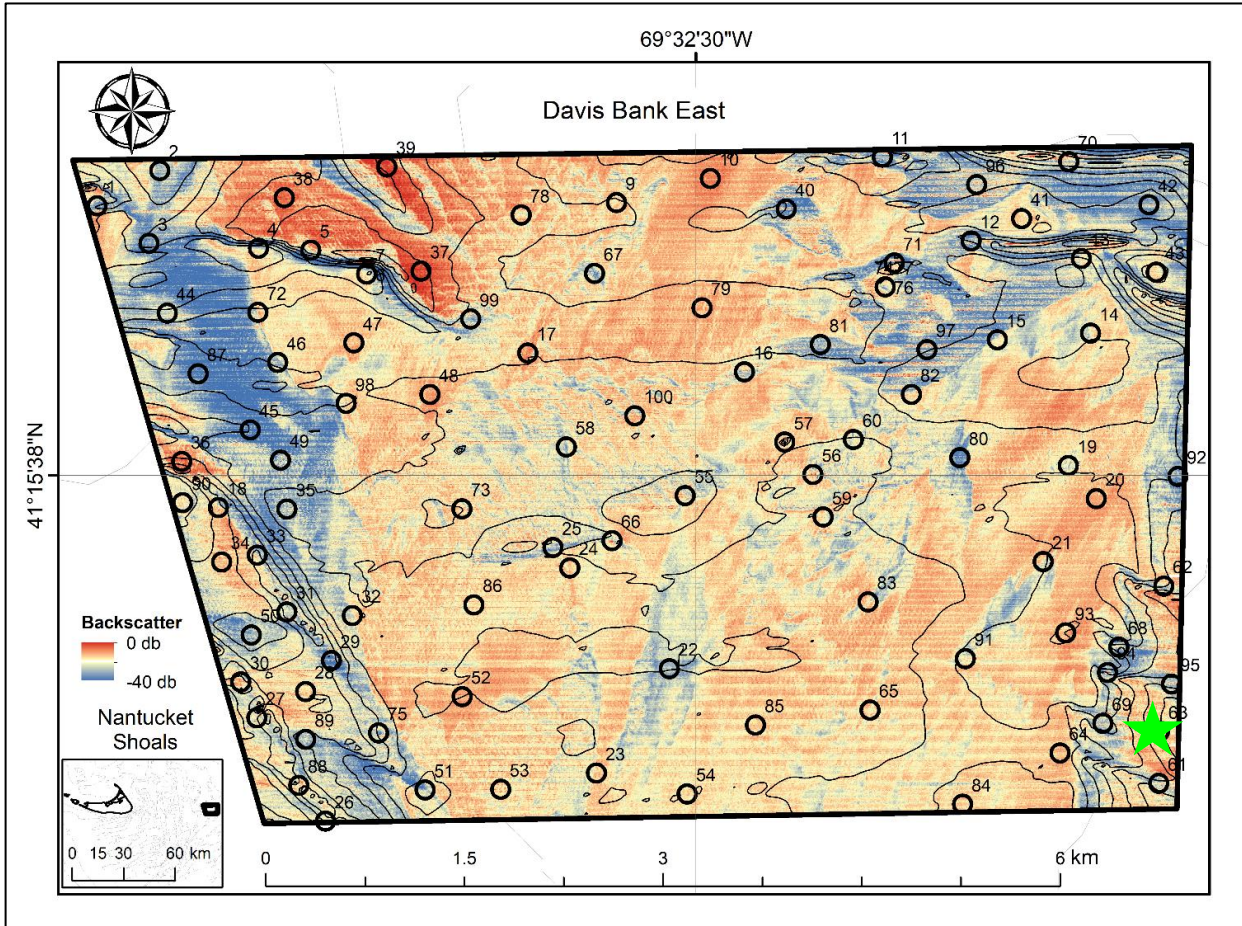
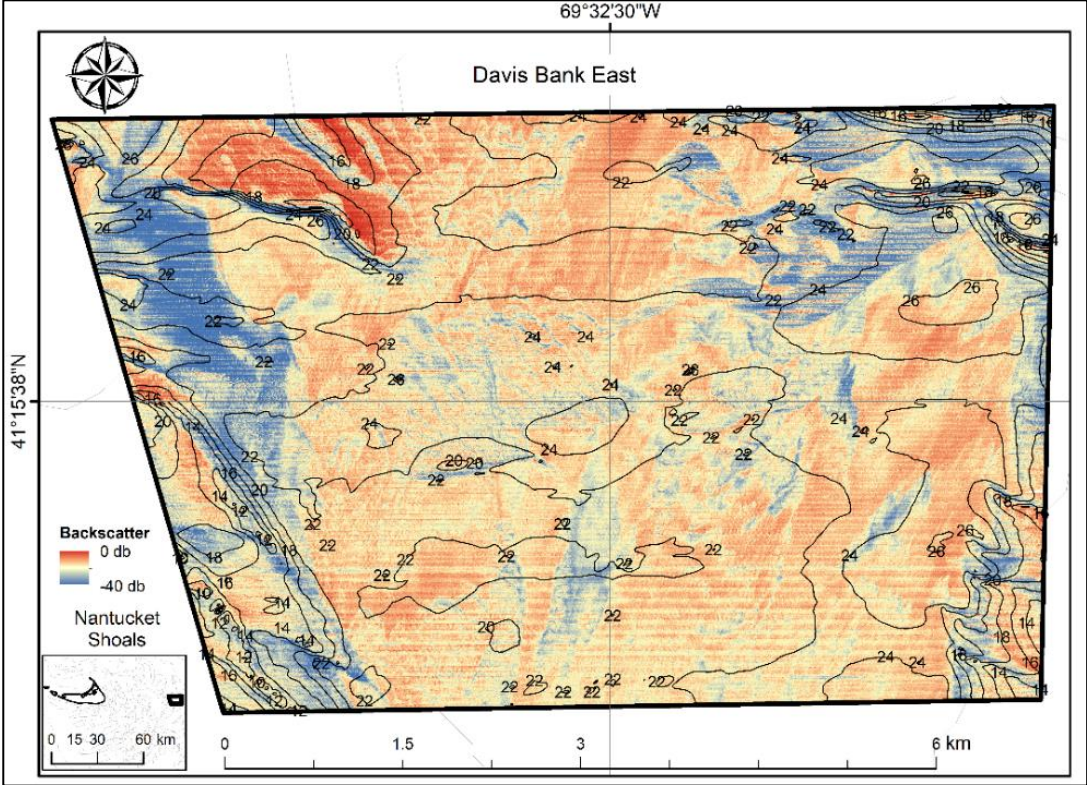
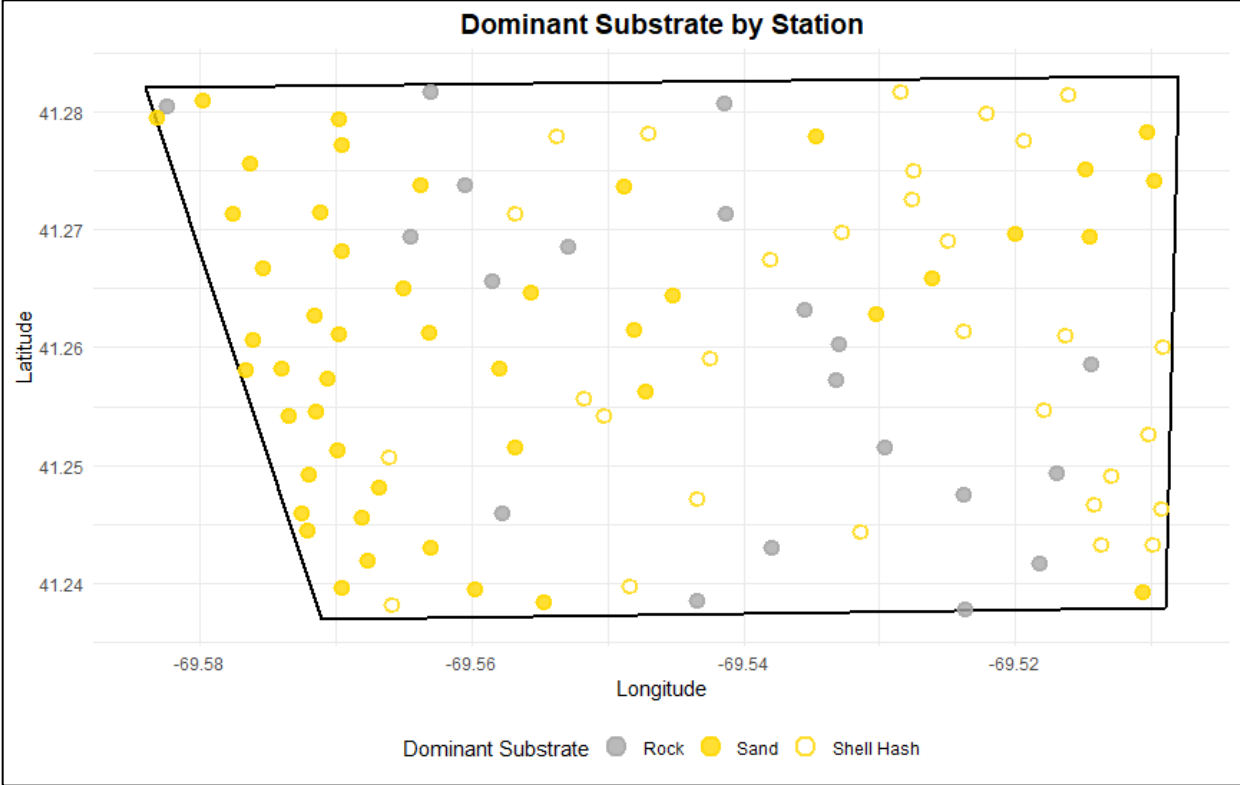


Image Examples

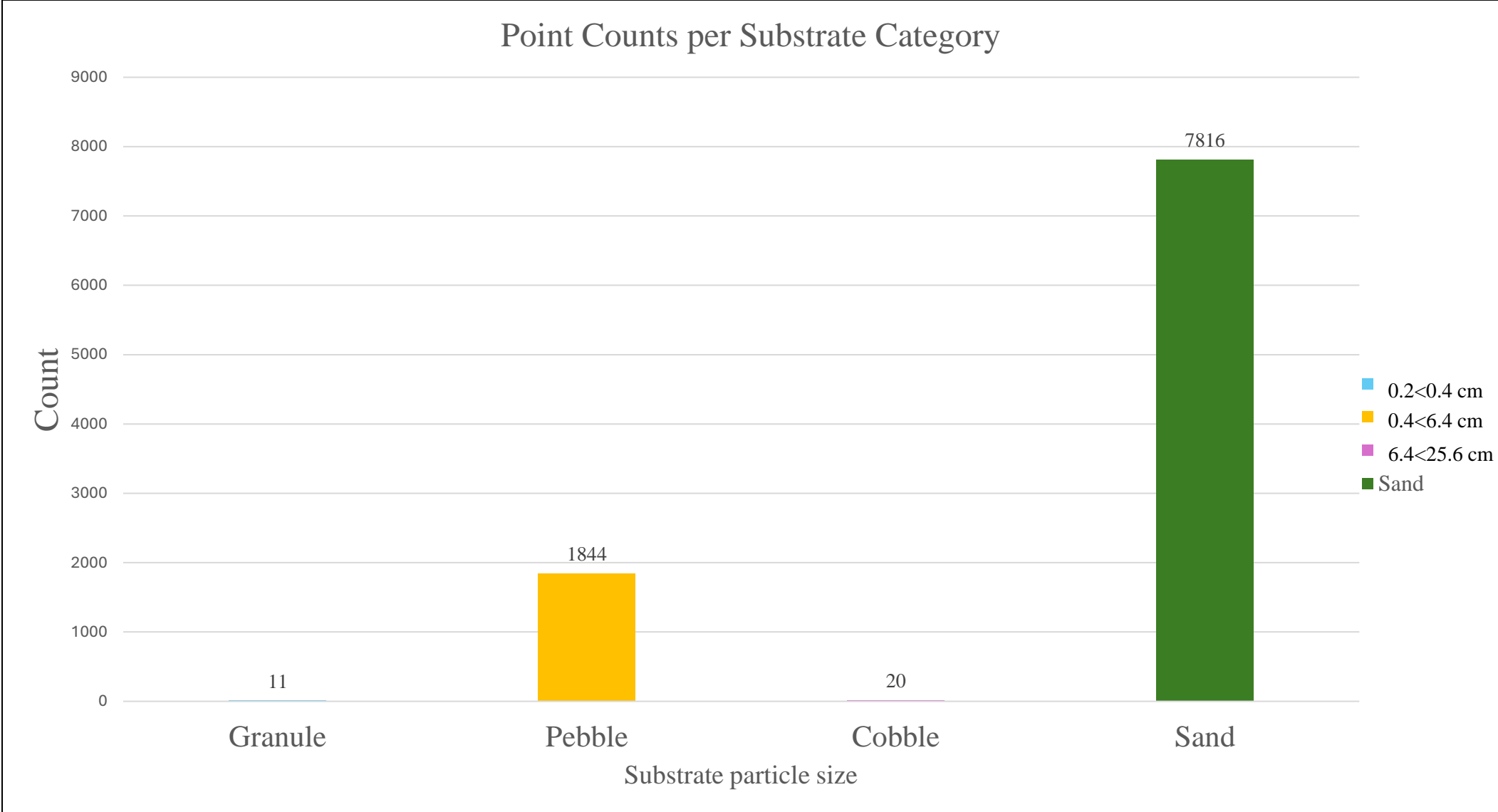


- Multibeam survey whole sample area
- Drop camera survey whole sample area
- Image annotation
- Preliminary findings (south box only)
 - Sand is the most common substrate recorded
 - Particles measured are mostly pebble-sized
 - Epifauna, including hydrozoans, encrusting bryozoan, and barnacles are present but not common
 - Compensation fishing trip summary to-date

Substrate



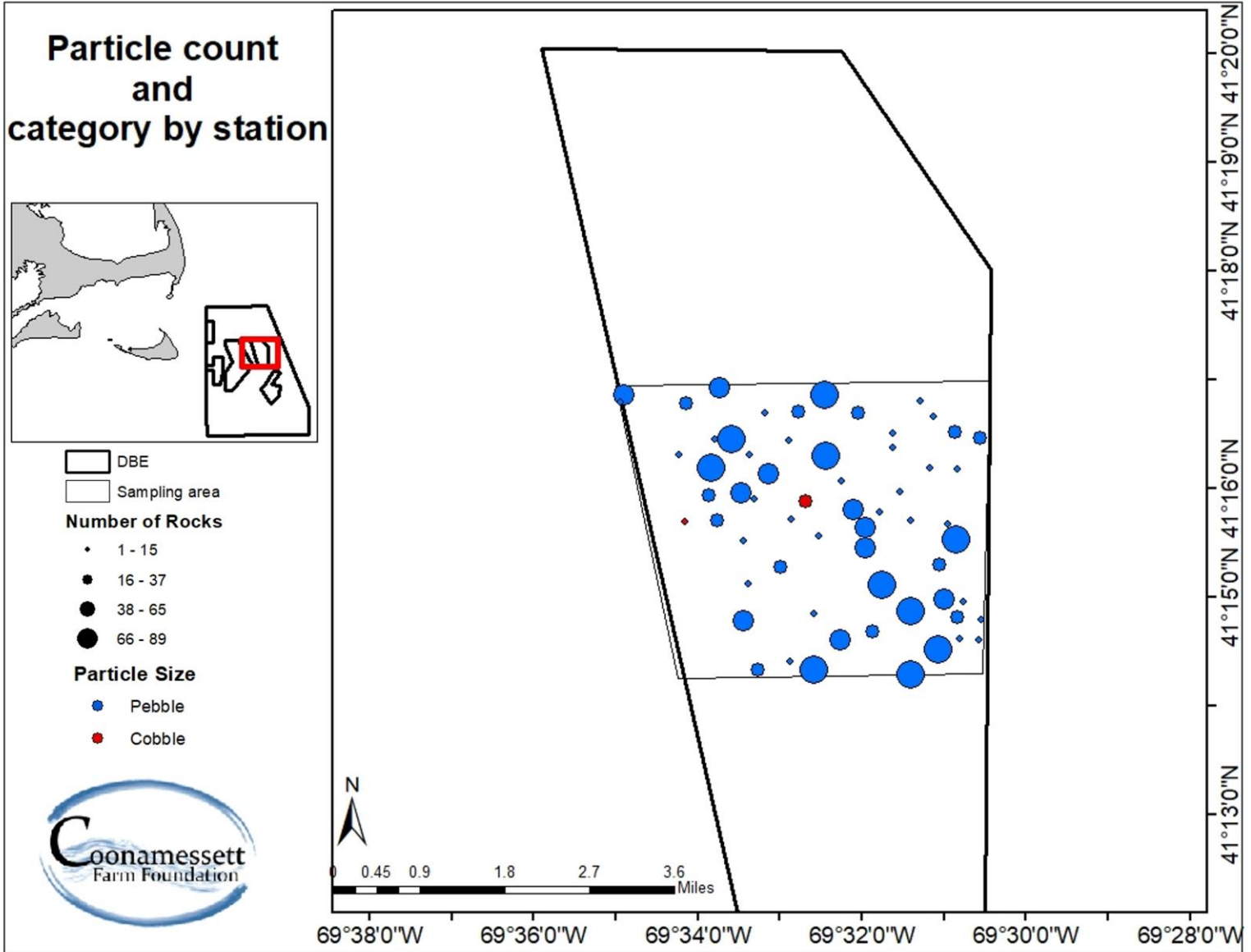
Substrate



Substrate

Particle	Size (mm)	Phi Scale
Granule	2 to < 4	-1 to < -2
Pebble	4 to < 64	-1 to < -6
Cobble	64 to < 256	-6 to < -8
Boulder	256 to < 4,096	-8 to < -12

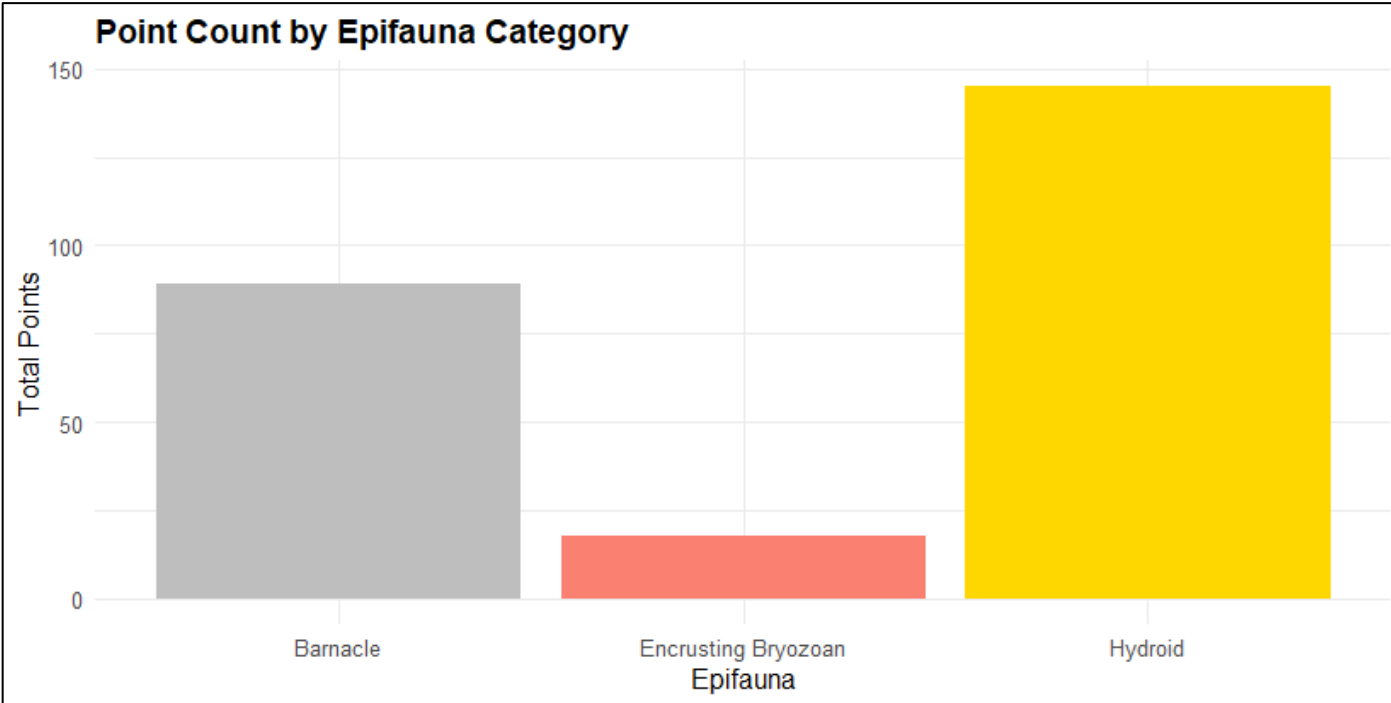
Adapted from Wentworth 1922



Particle category calculated by mean of particles present by station.

Epifauna

2.5% substrate data points included epifauna



Random Point Designation	Data Points
Sand	4520
Sand plus small shell hash	3296
Rock	1662
Clam shell	108
Rock with hydroid	86
Rock with barnacles	61
Mussel shell	53
Clam shell with hydroid	29
Live mussel with barnacles	15
Rock with encrusting bryozoan	12
Clam shell with barnacles	11
Hydroid	11
Mussel shell with hydroid	10
Other shell	6
Other shell with hydroid	5
Live mussel with hydroid	4
Live mussel with encrusting bryozoan	3
Mussel shell with barnacles	2
Clam shell with encrusting bryozoan	1
Live mussel	1
Mussel shell with encrusting bryozoan	1
Other shell with encrusting bryozoan	1
Total	9899

Compensation Fishing Trips

Data from Covered Trips

Total Tows	Bottom Contact Time (hrs)	Total Tow Lengths (km)	Total Swept Area (km ²)	Average Swept Area per tow (km ²)
399	112.47	469.92	0.57	0.0014

Species Caught in Dredge

Atlantic surfclam	Windowpane flounder	Northern sculpin
Blue mussels	Winter flounder	Sea star
Moonsnail	Summer flounder	
Skate (unclassified)	Monkfish	
Jonah crab	Barndoor skate	
Rock crab	American lobster	
Waved whelk	Sea robin	

Num of Comp Trips

Num covered by CFF

F/V Seafox – 15	4
F/V Tom Slaughter – 29	9
44	13

Financials

416 bushels surfclams avg landed per trip	\$12,493
15% to CFF research set-aside	\$1,874
Total trips fished - 44	Total amount to CFF to date- \$82,400

- Discussion Points:
 - CFF next steps...
 - Correlate multibeam imagery with still image data
 - Progress report in early February
 - What we know now:
 - High energy environment without organisms requiring recovery
 - End of summer/ early fall survey
 - Sand dunes are the dominant seafloor feature seen
- What further research is required to adapt policy?