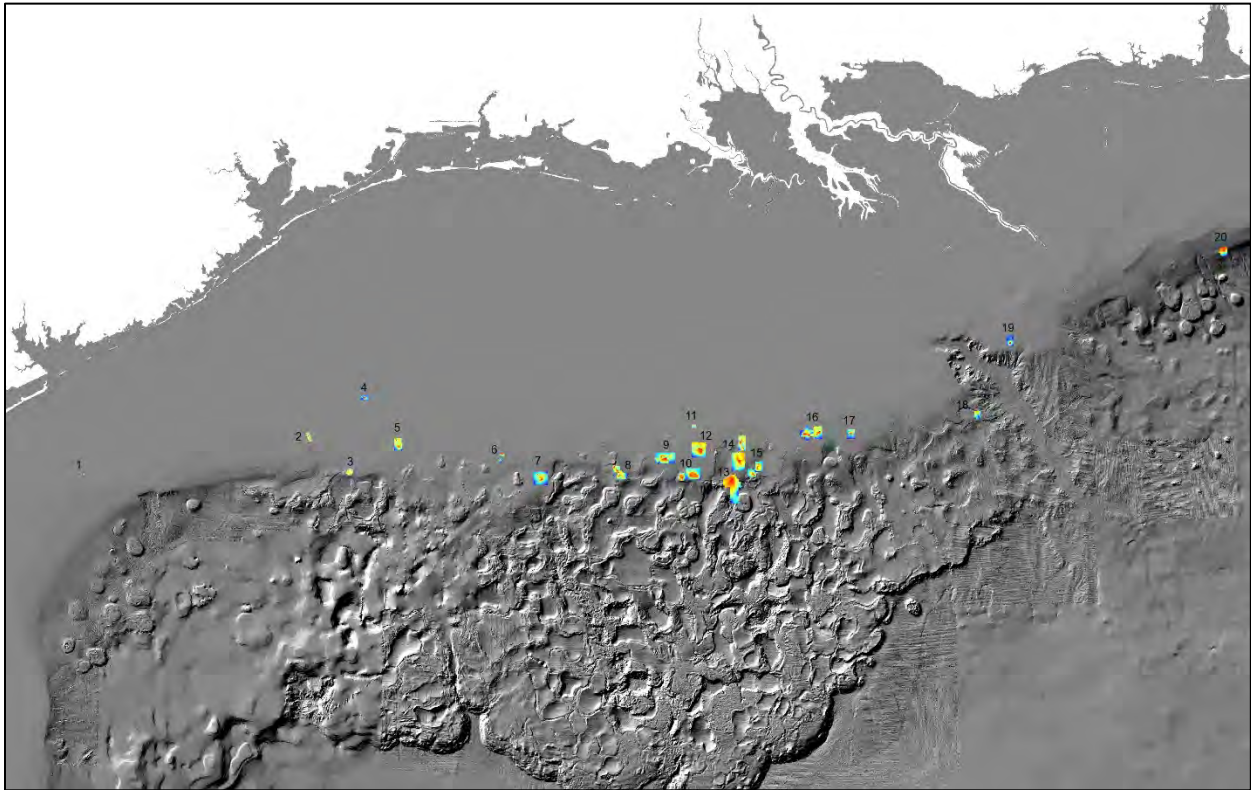


Flower Garden Banks National Marine Sanctuary Mapping Projects, 2017-2020



February 2021

U.S. Department of Commerce
Gina Raimondo, Secretary

National Oceanic and Atmospheric Administration
Benjamin Friedman, NOAA Administrator (Acting)

National Ocean Service
Nicole LeBoeuf, Assistant Administrator (Acting)

Office of National Marine Sanctuaries
John Armor, Director



Cover image: Multibeam data of areas mapped in this report. 1. Big and Small Dunn Bar, 2. 32 Fathom, 3. Applebaum, 4. Claypile, 5. Coffee Lump, 6. Davis, 7. Elvers, 8. Tresslar and Antoine, 9. Parker, 10. Phleger and Sweet, 11. Fishnet, 12. Alaminos, 13. Assumption Dome, 14. Adeline and EI385, 15. Berwick and Patterson, 16. Ewing, 17. Diaphus, 18. Henderson Ridge North, 19. Sackett, 20. Viosca Knoll East. Credit: NOAA



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GLOSSARY OF ACRONYMS

BOEM – Bureau of Ocean Energy Management
NAZ – No Activity Zone
NMSF – National Marine Sanctuary Foundation
OMAO - Office of Marine and Aviation Operations

CHAPTER 1: No Activity Zone Mapping

Project Name: Multibeam Survey of Small Topographic Features to Determine Efficacy of Current “No Activity Zones”

Status: Completed October 2020

Partnerships: Office of Marine and Aviation Operations (OMAO), and Bureau of Ocean Energy Management (BOEM)

Funding: OMAO and BOEM IA M18PG00002

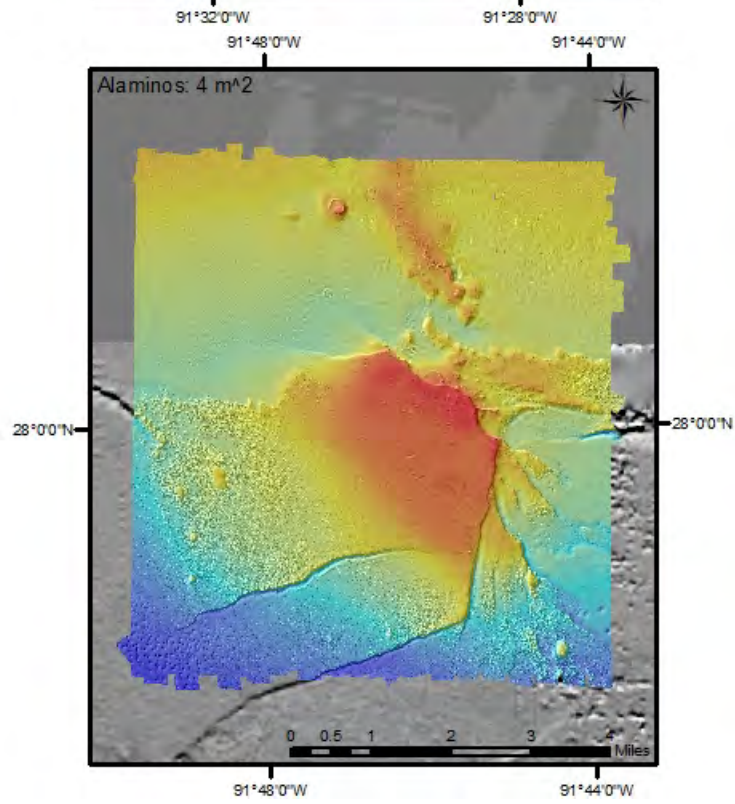
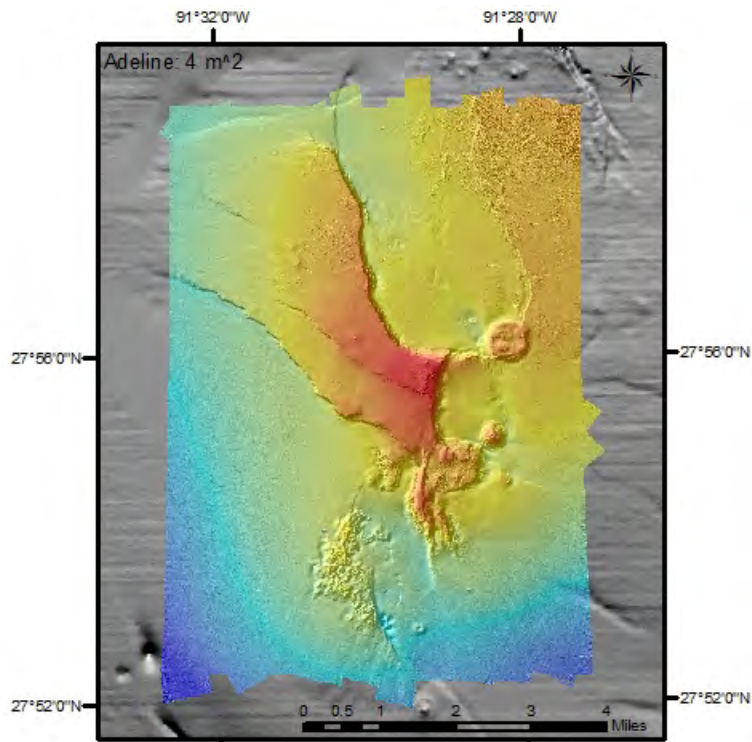
Summary: An update and evaluation of the efficacy of the No Activity Zone (NAZ) boundaries that BOEM applies to certain topographic features in the Gulf of Mexico is needed in order to distance permitted bottom disturbing activities from sensitive benthic habitats. This calls for updated bathymetric survey data. Due to NOAA’s shared interest in data collection for northern Gulf of Mexico bank features, this is a collaborative effort between BOEM and Flower Garden Banks National Marine Sanctuary (FGBNMS), co-funded by OMAO. New multibeam bathymetry and backscatter data was collected for 14 topographic features of highest interest. Work was conducted from the sanctuary research vessel (R/V) *Manta* and the hydrographic survey vessel NOAA Ship *Thomas Jefferson*. The finished datasets will be used by both BOEM and NOAA to reevaluate and modify agency policies used to manage environmental resources.

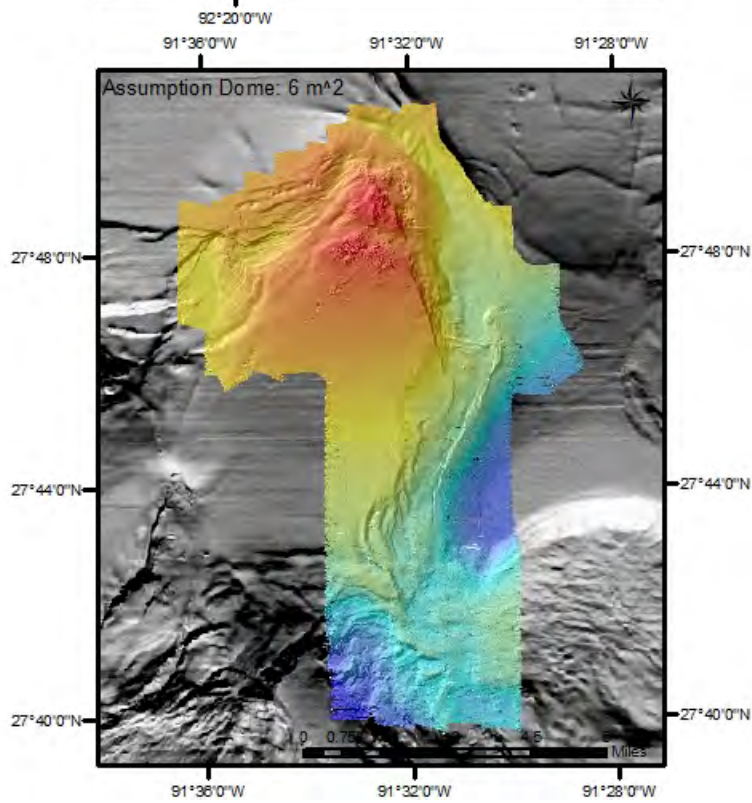
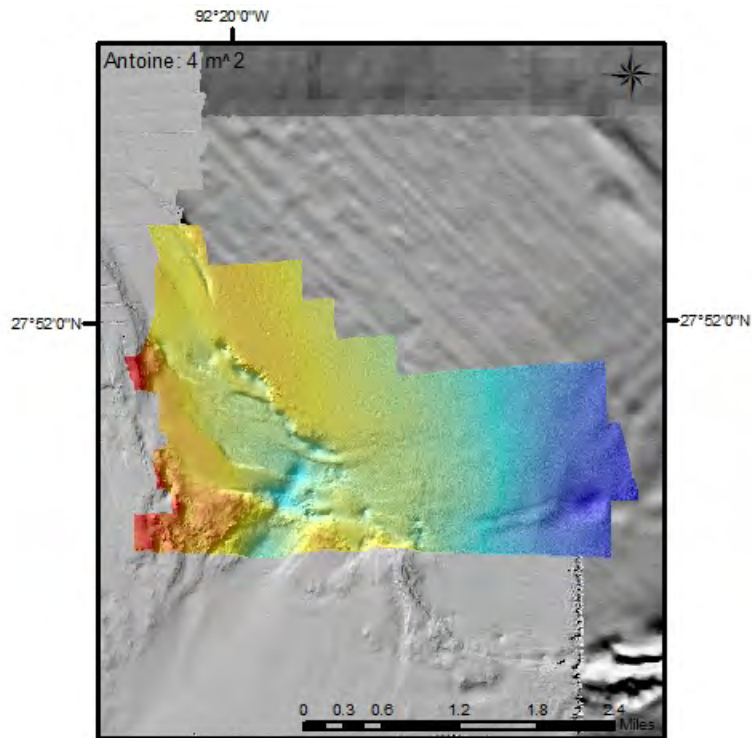
Preliminary data is available from flowergarden@noaa.gov and final data will be available on [NOAA’s Bathymetry Data Viewer](#) in 2021.

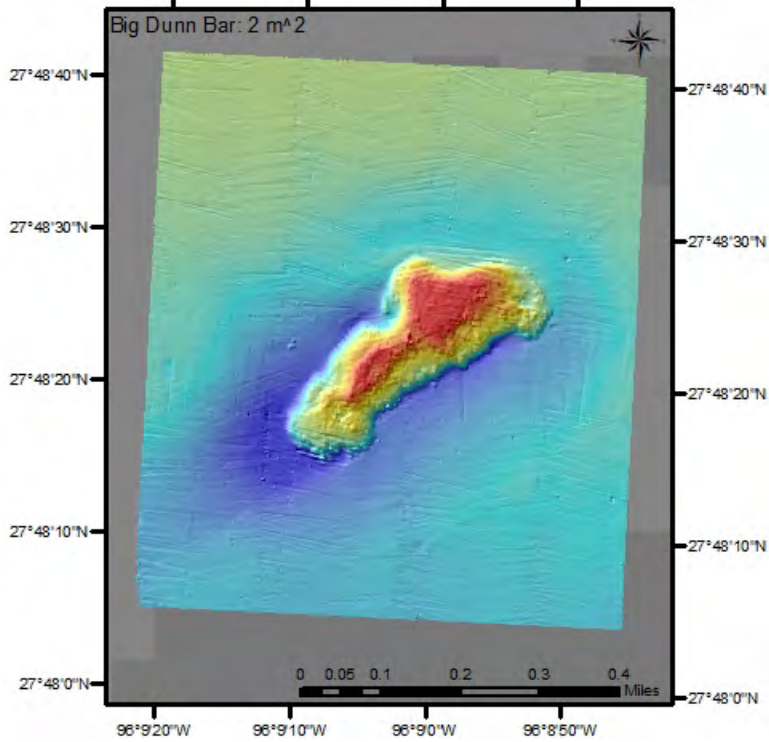
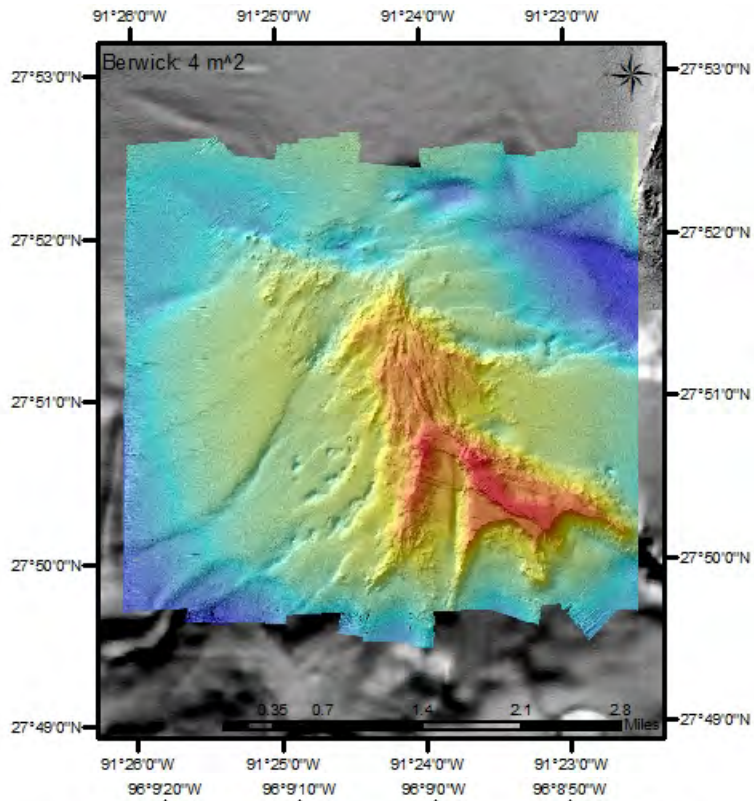
Table 1. NAZ mapping table of targets, summarizing platforms, area mapped, and resolution.

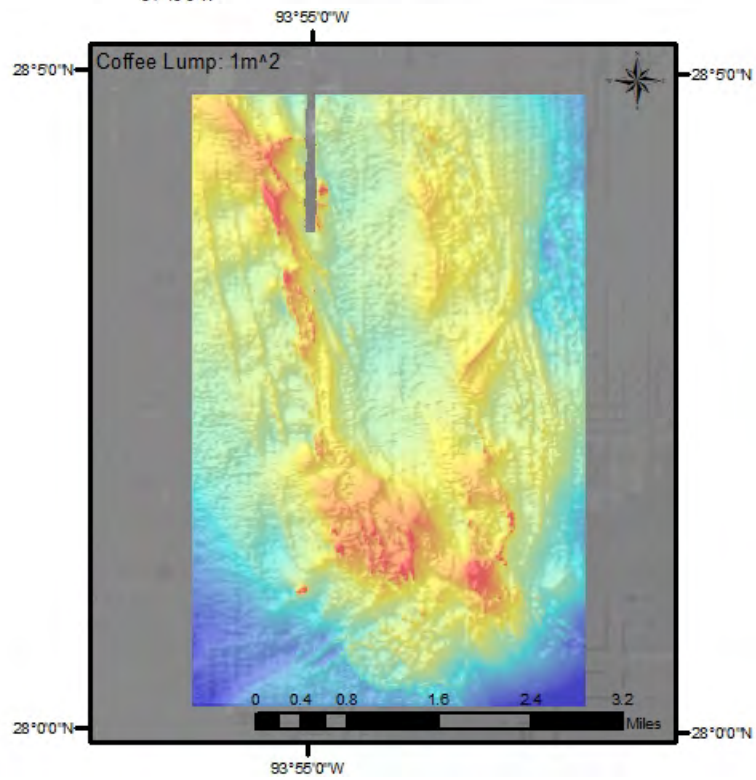
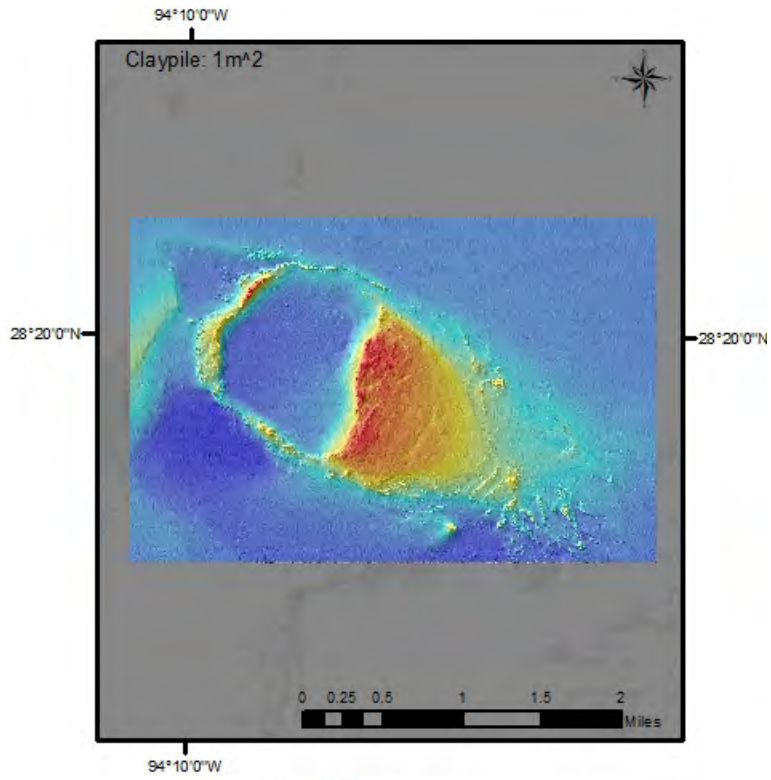
Location	Survey Vessel	Area (mi ²)	Resolution (m ²)	Project Code
Adeline Bank	NOAA Ship Thomas Jefferson	42.6	4	OPR-K306-TJ-20
Alaminos Bank	NOAA Ship Thomas Jefferson	39.2	4	OPR-K306-TJ-20
Antoine Bank	NOAA Ship Thomas Jefferson	6.4	4	OPR-K306-TJ-20
Assumption Dome	NOAA Ship Thomas Jefferson	56.5	6	OPR-K306-TJ-20
Berwick Bank	NOAA Ship Thomas Jefferson	12.1	4	OPR-K306-TJ-20
Big Dunn Bar	R/V Manta	0.4	2	S-K949-MIST-18
BOEM Target E1385	NOAA Ship Thomas Jefferson	20.7	4	OPR-K306-TJ-20
Claypile Bank	R/V Manta	7.1	1	S-K949-MIST-18
Coffee Lump	R/V Manta	18.0	1	S-K949-MIST-18
Davis Bank	R/V Manta	2.2	2	S-K949-MIST-18
Elvers Bank	NOAA Ship Thomas Jefferson	34.5	4	OPR-K306-TJ-20
Ewing Bank	NOAA Ship Thomas Jefferson	20.3	4	OPR-K306-TJ-20
Henderson Ridge North	NOAA Ship Thomas Jefferson	9.3	8	OPR-K306-TJ-20
Patterson Bank	NOAA Ship Thomas Jefferson	14.5	4	OPR-K306-TJ-20
Sackett Bank	NOAA Ship Thomas Jefferson	12.8	4	OPR-K306-TJ-20
Small Dunn Bar	R/V Manta	0.6	2	S-K949-MIST-18
Sweet Bank	NOAA Ship Thomas Jefferson	32.1	4	OPR-K306-TJ-20
USS Hatteras	R/V Manta	0.0005	0.5	S-K949-MIST-18
Viosca Knoll East	NOAA Ship Thomas Jefferson	12.3	6	OPR-K306-TJ-20
TOTAL AREA MAPPED		341.6		

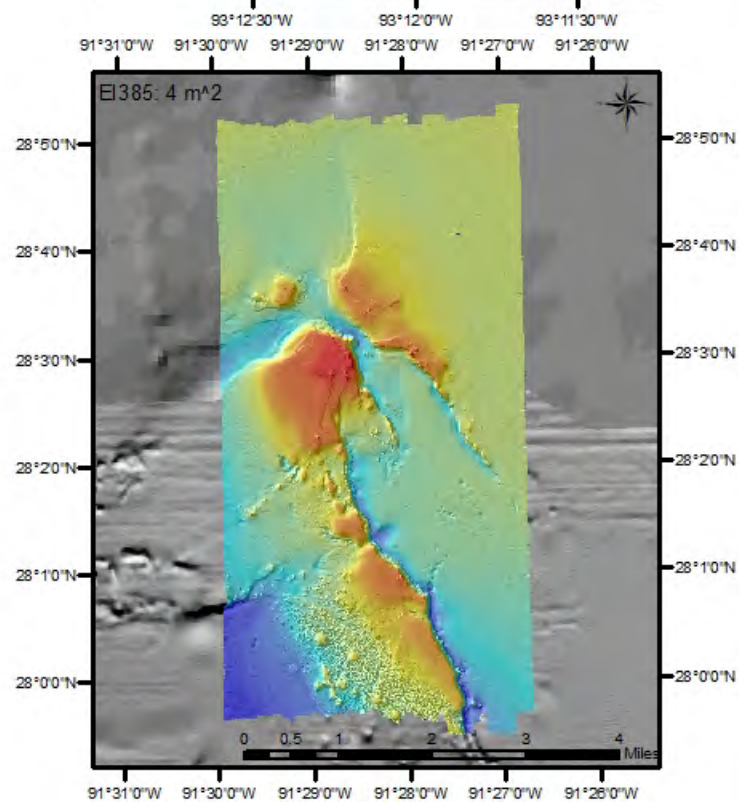
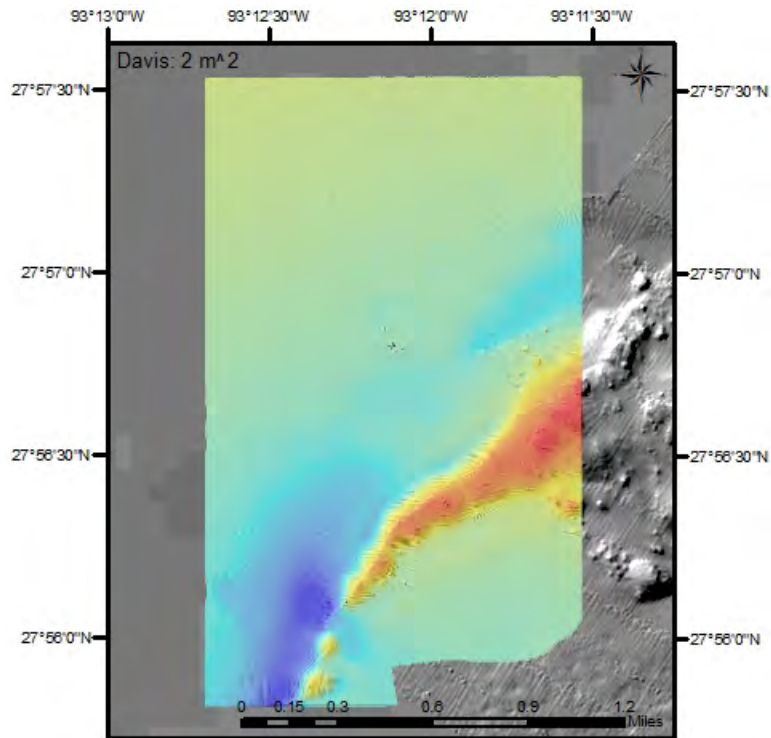
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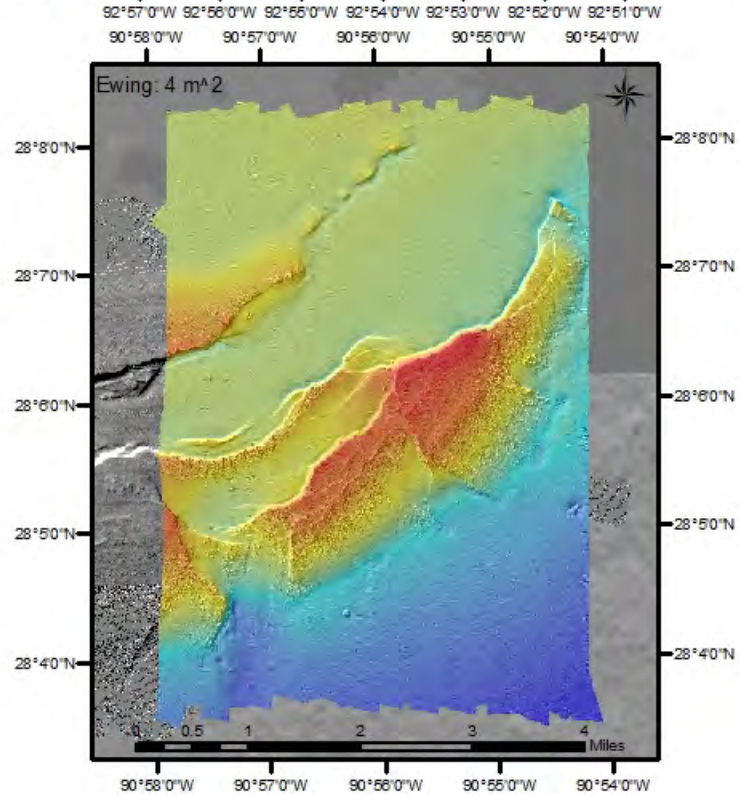
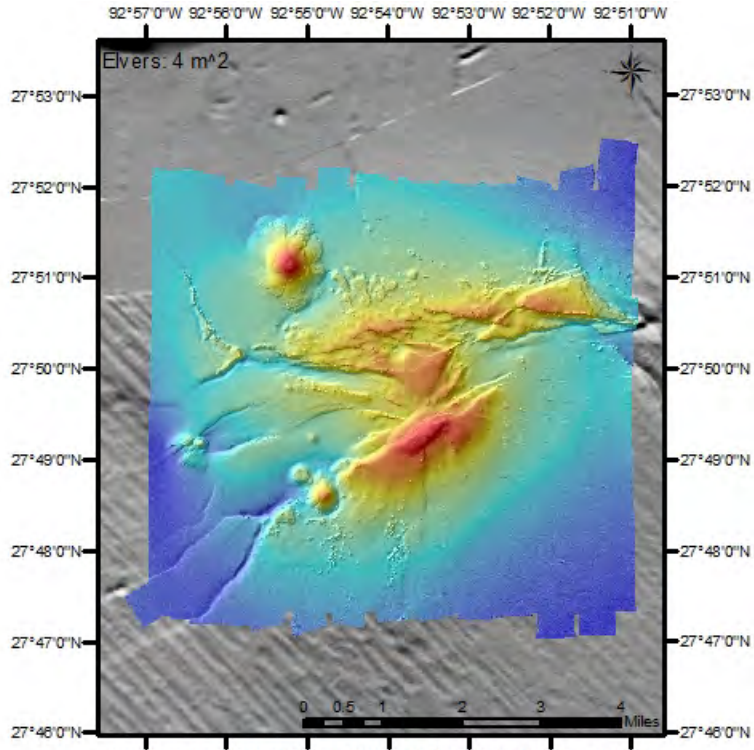


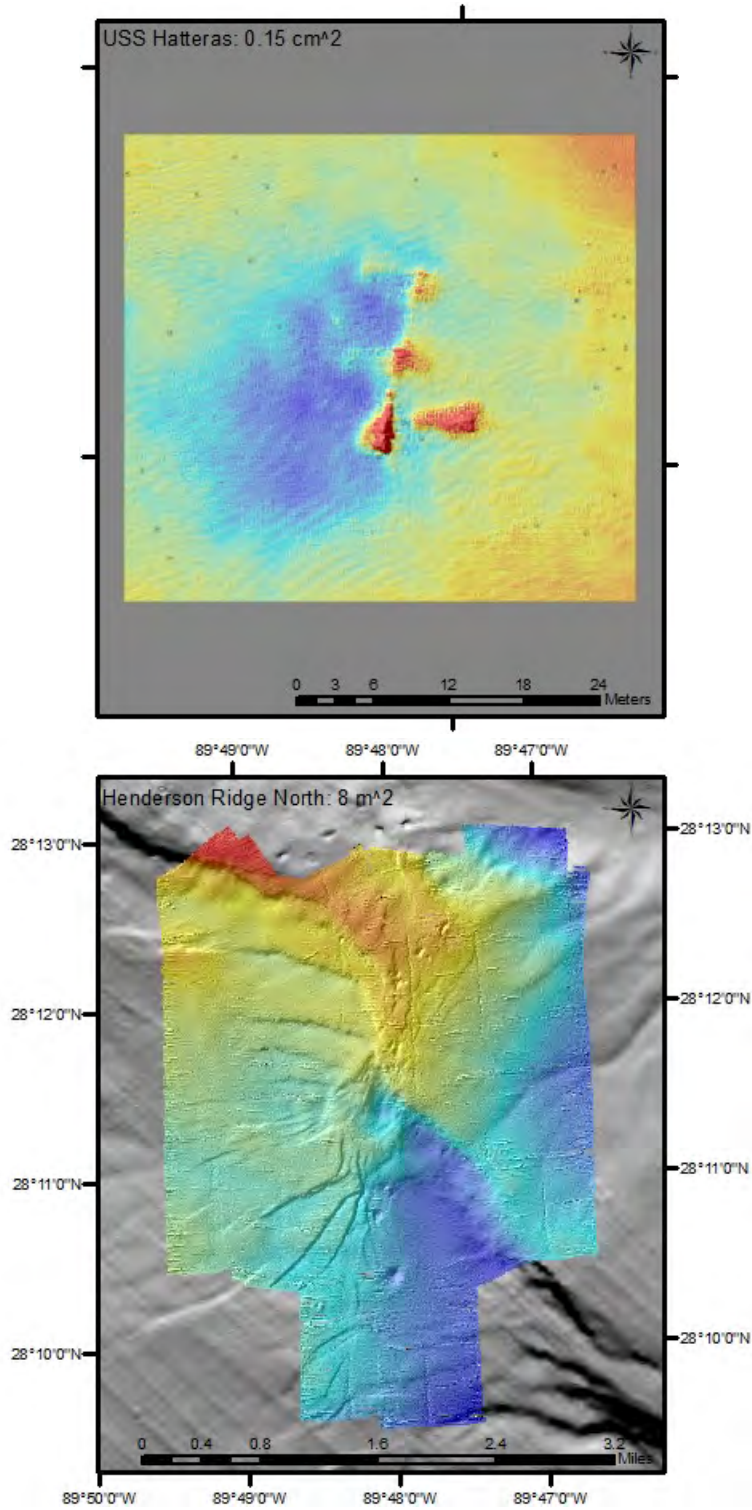


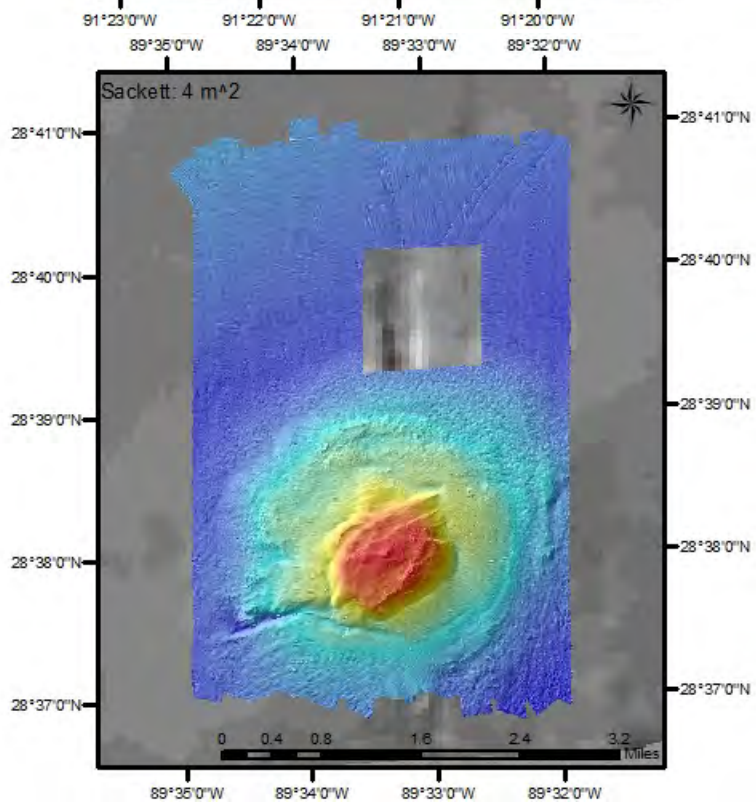
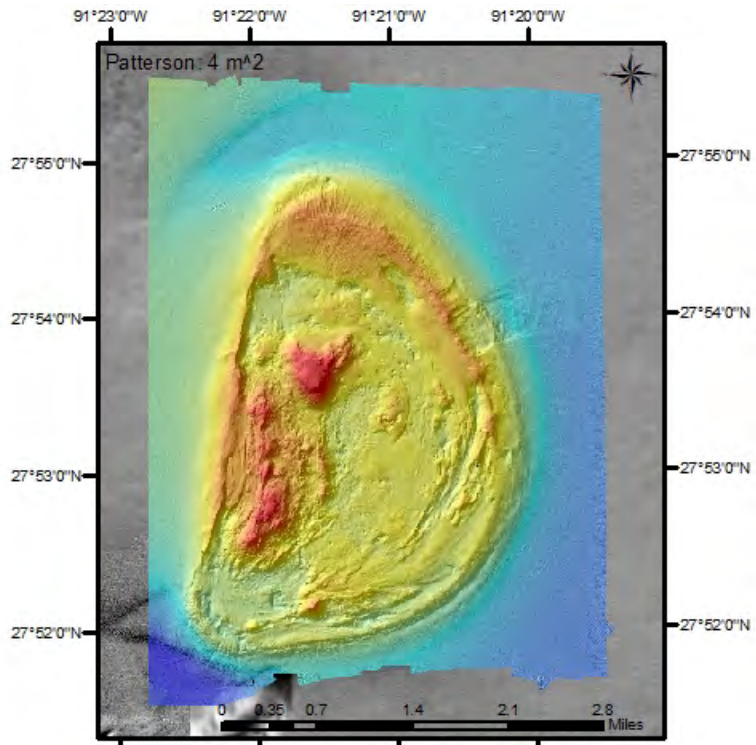


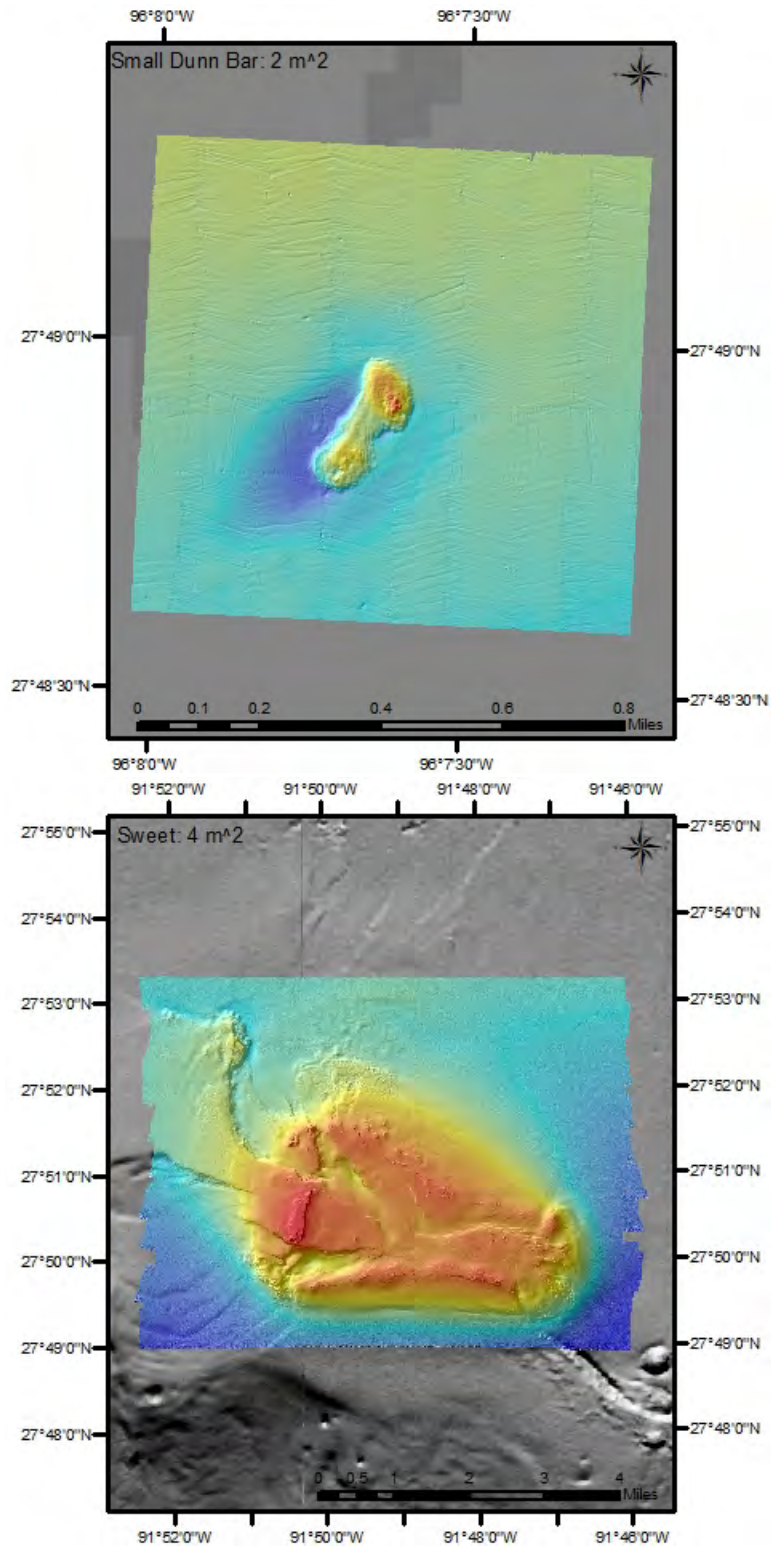


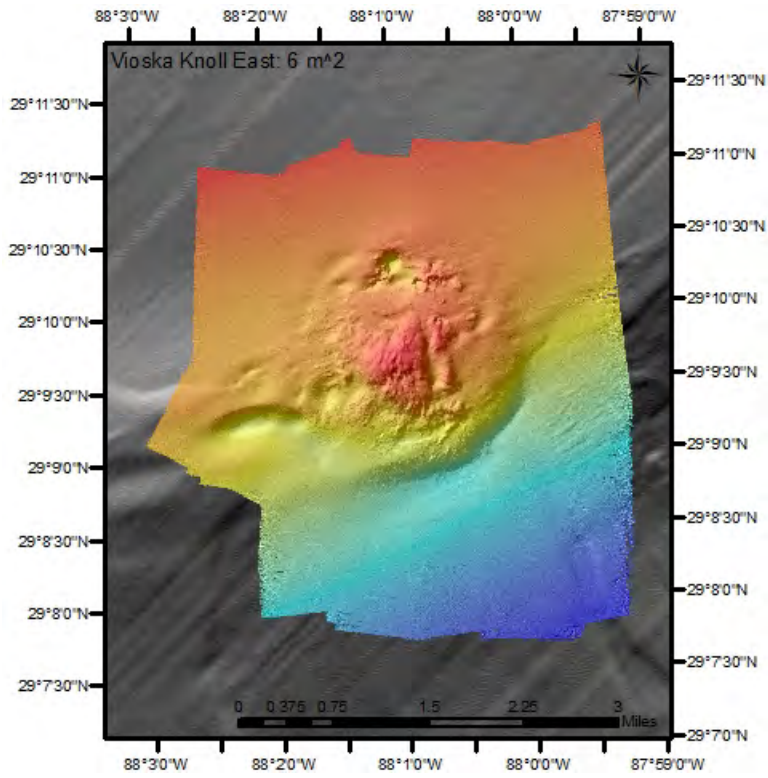












CHAPTER 2: NOAA Ship Pisces Mapping

Project Name: Opportunistic Mapping of Northwestern Gulf of Mexico

Status: Completed January 2021

Partnerships: NOAA Ship *Pisces*

Funding: OMAO

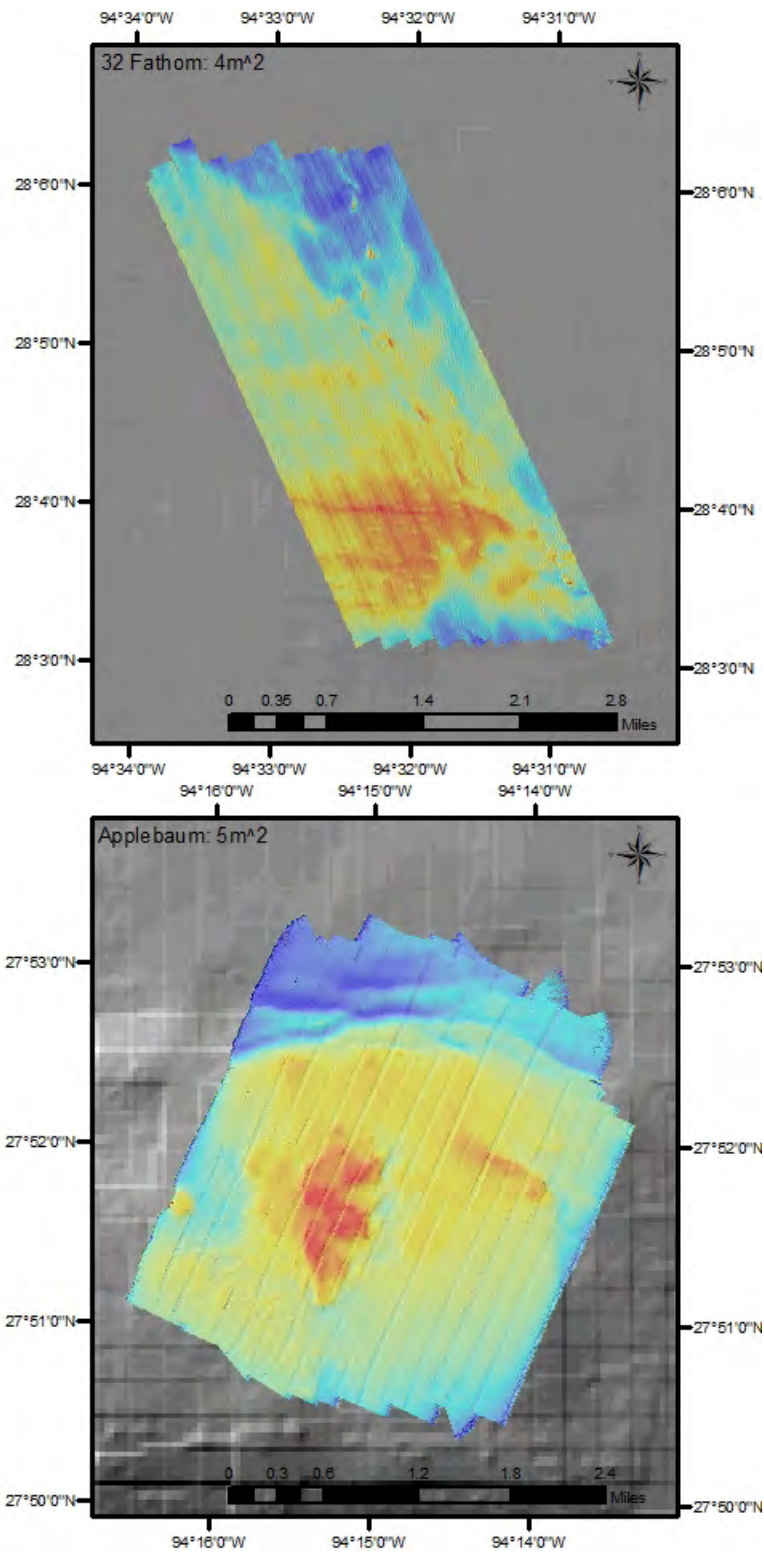
Summary: While working in the area in 2017 and 2018, NOAA Ship *Pisces* collected multibeam data at target sites provided by FGBNMS. During this interaction, NOAA Ship *Pisces* also provided previously collected data for Phleger (2013) and Diaphus Banks (2012).

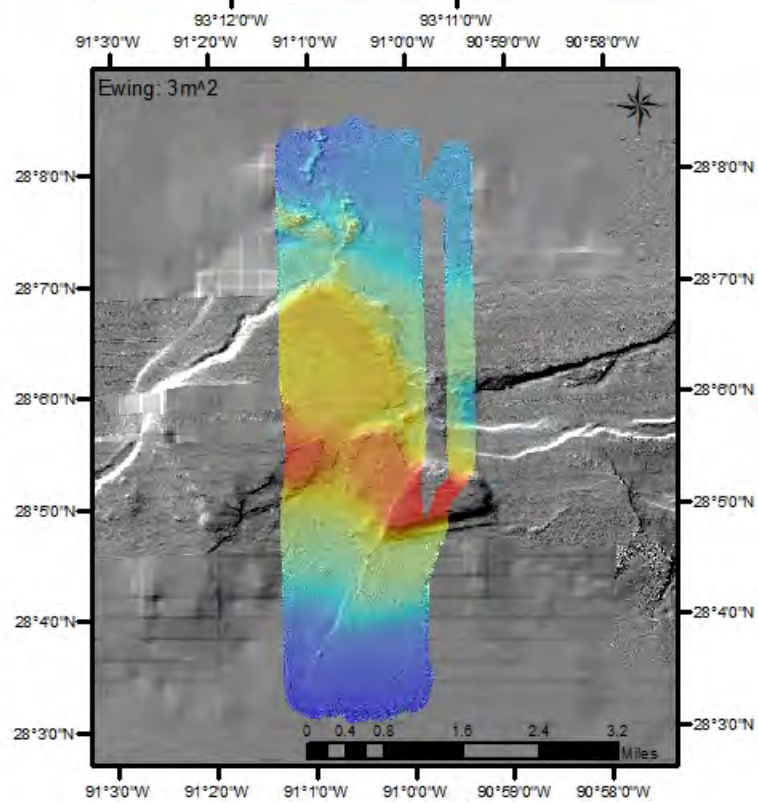
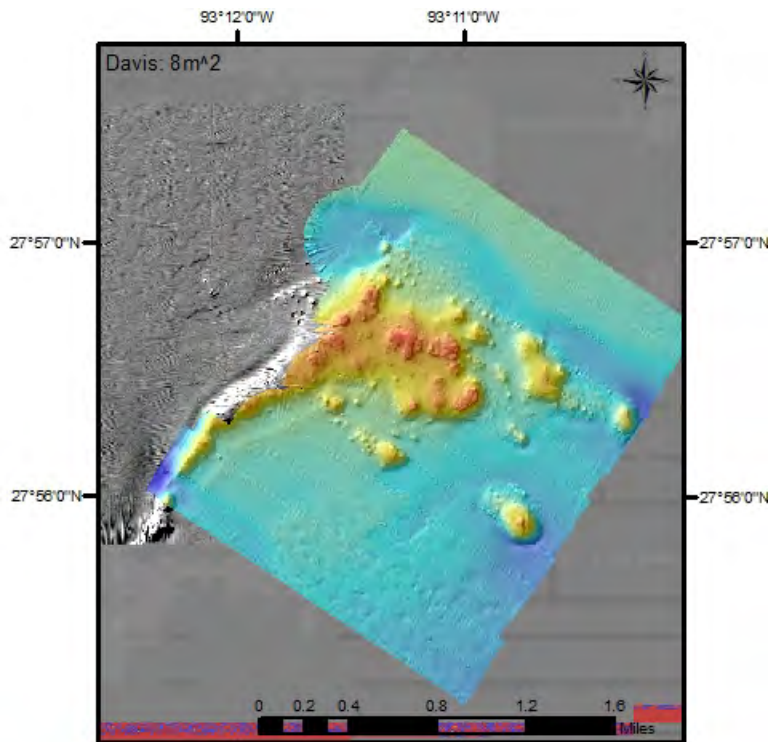
Data are available from Brandi.Noble@noaa.gov.

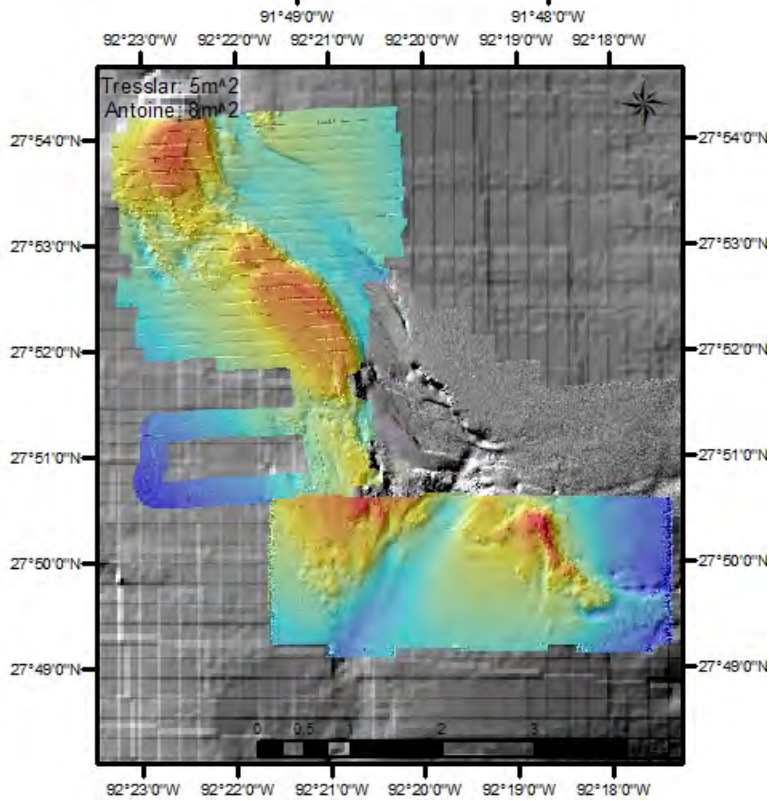
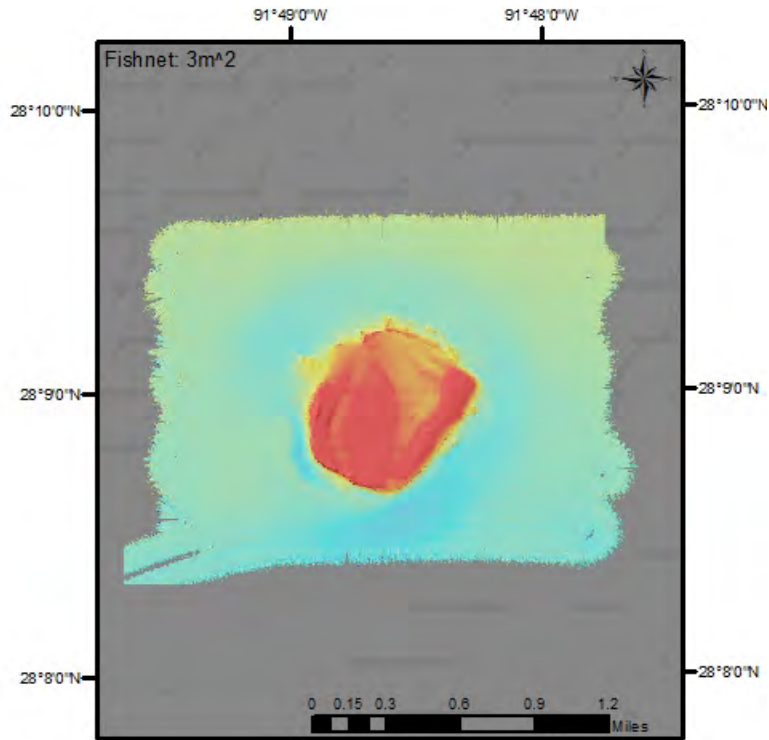
Table 2. Pisces mapping table of targets, summarizing platforms, area mapped, and resolution.

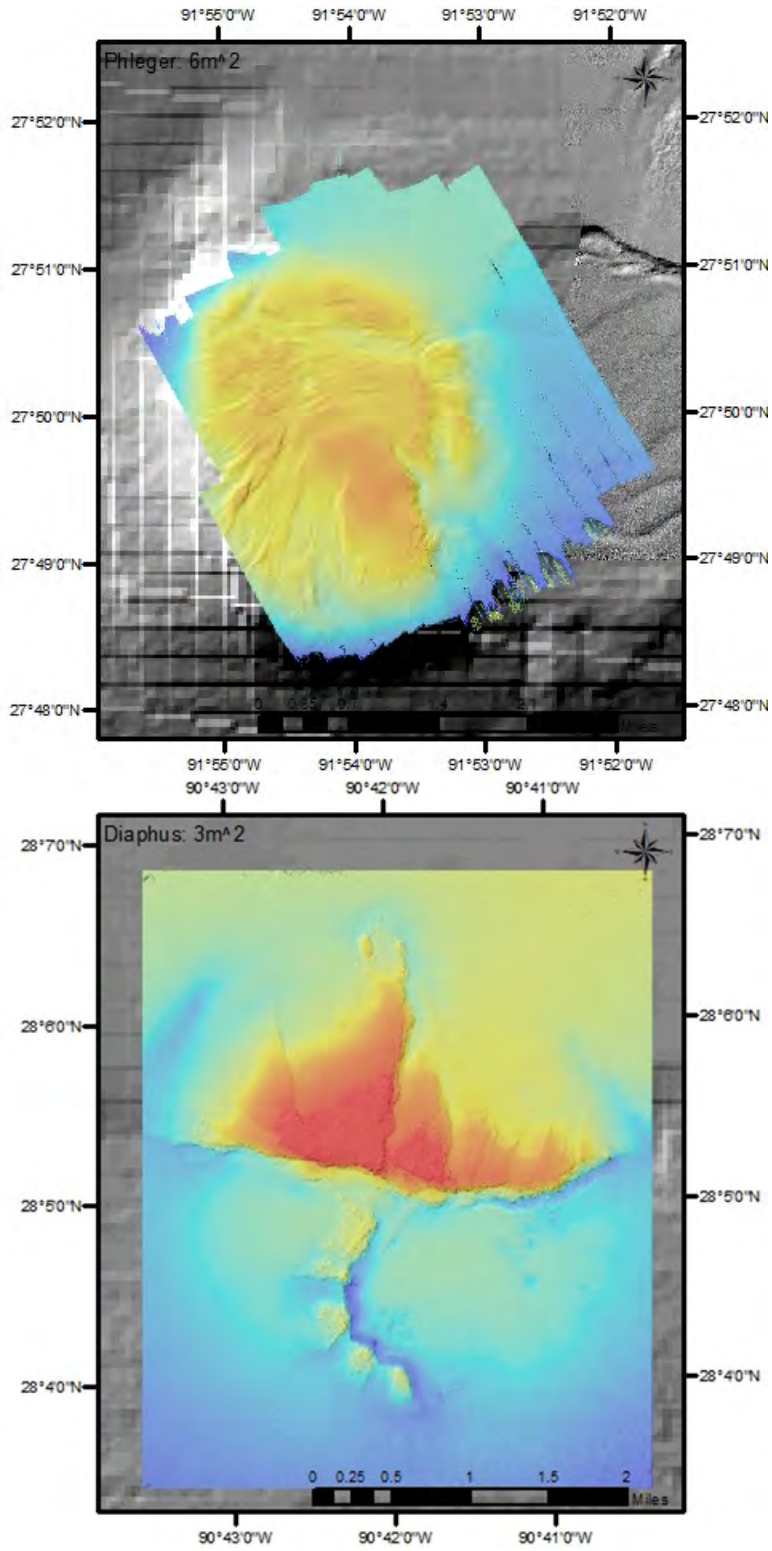
Location	Survey Vessel	Area (mi ²)	Resolution (m ²)	Project Code
32 Fathom Bank	NOAA Ship Pisces	6.6	4	Pisces 2018
Antoine Bank	NOAA Ship Pisces	7.2	8	Pisces 2018
Applebaum Bank	NOAA Ship Pisces	7.2	5	Pisces 2018
Davis Bank	NOAA Ship Pisces	5.7	8	Pisces 2018
Ewing Bank	NOAA Ship Pisces	10.3	3	Pisces 2017
Fishnet Bank	NOAA Ship Pisces	2.7	3	Pisces 2018
Tressler Bank	NOAA Ship Pisces	10.9	5	Pisces 2018
Phleger Bank	NOAA Ship Pisces	9.8	6	Pisces 2013
Diaphus Bank	NOAA Ship Pisces	12.7	3	Pisces 2012
TOTAL AREA MAPPED		73.1		

Images:









CHAPTER 3: Parker and Elvers Mapping

Project Name: Parker and Elvers Banks Multibeam Bathymetry Survey

Status: Completed May 2017

Partnerships: National Marine Sanctuary Foundation (NMSF) contract with TerraSond

Funding: NMSF

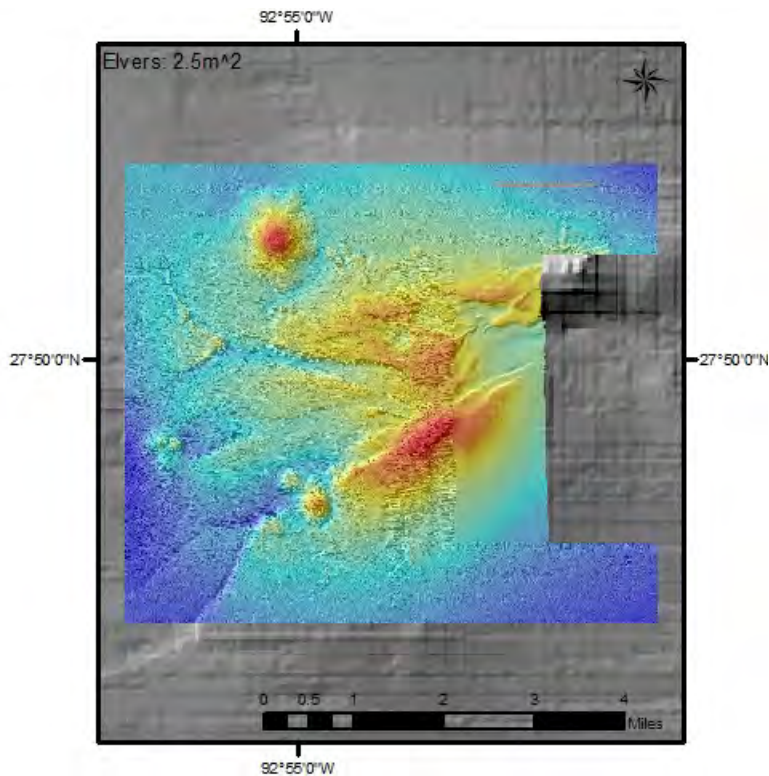
Summary: TerraSond was contracted to survey R/V *Manta* to gain precise measurements for offsets and location of instruments for multibeam operations and to complete multibeam mapping of Elvers and Parker Banks by FGBNMS. Data quality from Elvers Bank was poor due to sea state.

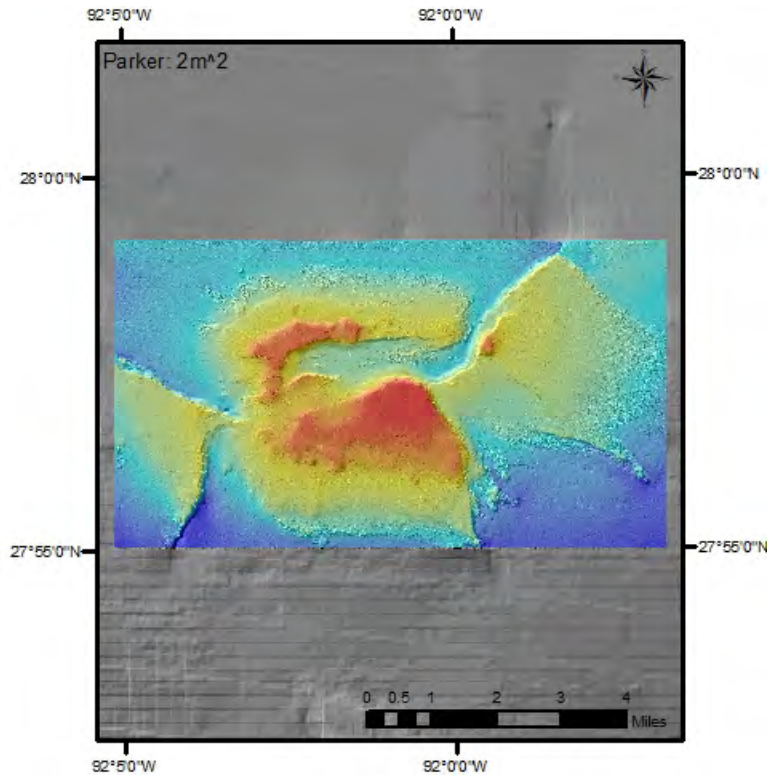
Preliminary data is available from flowergarden@noaa.gov and final data will be available on [NOAA's Bathymetry Data Viewer](#) in 2021.

Table 3. TerraSond mapping table of targets, summarizing platforms, area mapped, and resolution.

Location	Survey Vessel	Area (mi ²)	Resolution (m ²)	Project Code
Elvers Bank	R/V Manta	25.9	2.5	NMSF C.2016.00151
Parker Bank	R/V Manta	39.9	2.0	NMSF C.2016.00151
TOTAL AREA MAPPED		65.8		

Images:







NATIONAL MARINE
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AMERICA'S UNDERWATER TREASURES