Visual Survey of the proposed Shrimp Fishery Access Area (SFAA) within the *Oculina* Habitat Area of Particular Concern (OHAPC)

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- The SEFSC has been working in the *Oculina* HAPC for over 25 years. These activities have included mapping, direct restoration and most recently monitoring and assessment.

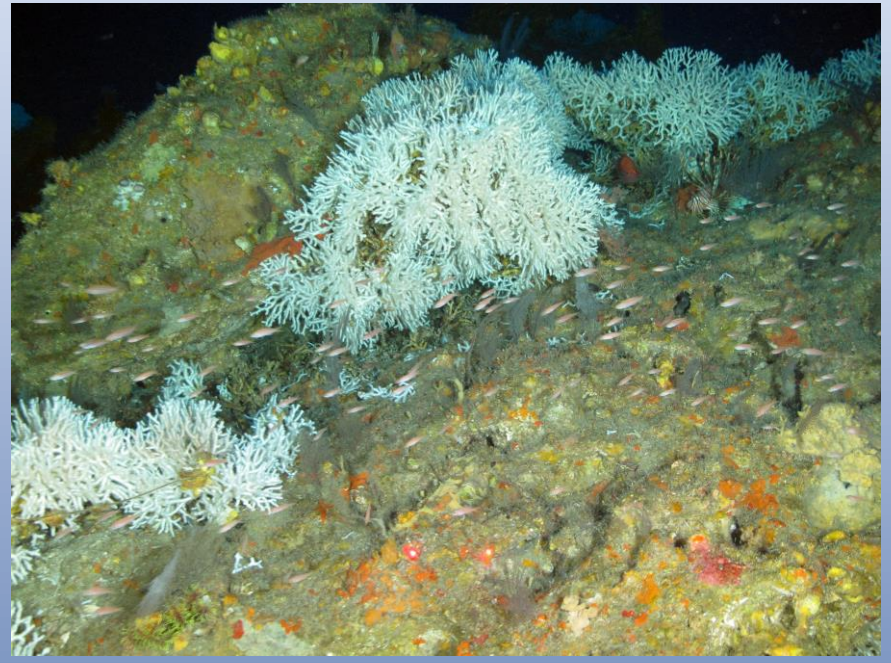
- Our most recent activity, prior to this mission, was an annual ROV survey conducted in June 2021 as part of a region-wide assessment of deepwater MPAs.

- We had no visual data from the area included in the SFAA, primarily due to the low probability of encountering corals or other significant habitat (based upon multibeam mapping data) and to the difficulty in using tethered instruments or vehicles in areas with currents as high as those normally found in the Gulf Stream.

- We were tasked with generating a quick-turnaround survey to provide visual data on the presence or absence of *Oculina* coral in the SFAA to the SEFSC, SERO and NOAA Fisheries.

Our intent was to classify the bottom within the SFAA by habitat type, relative to *Oculina*

Live
(Standing)

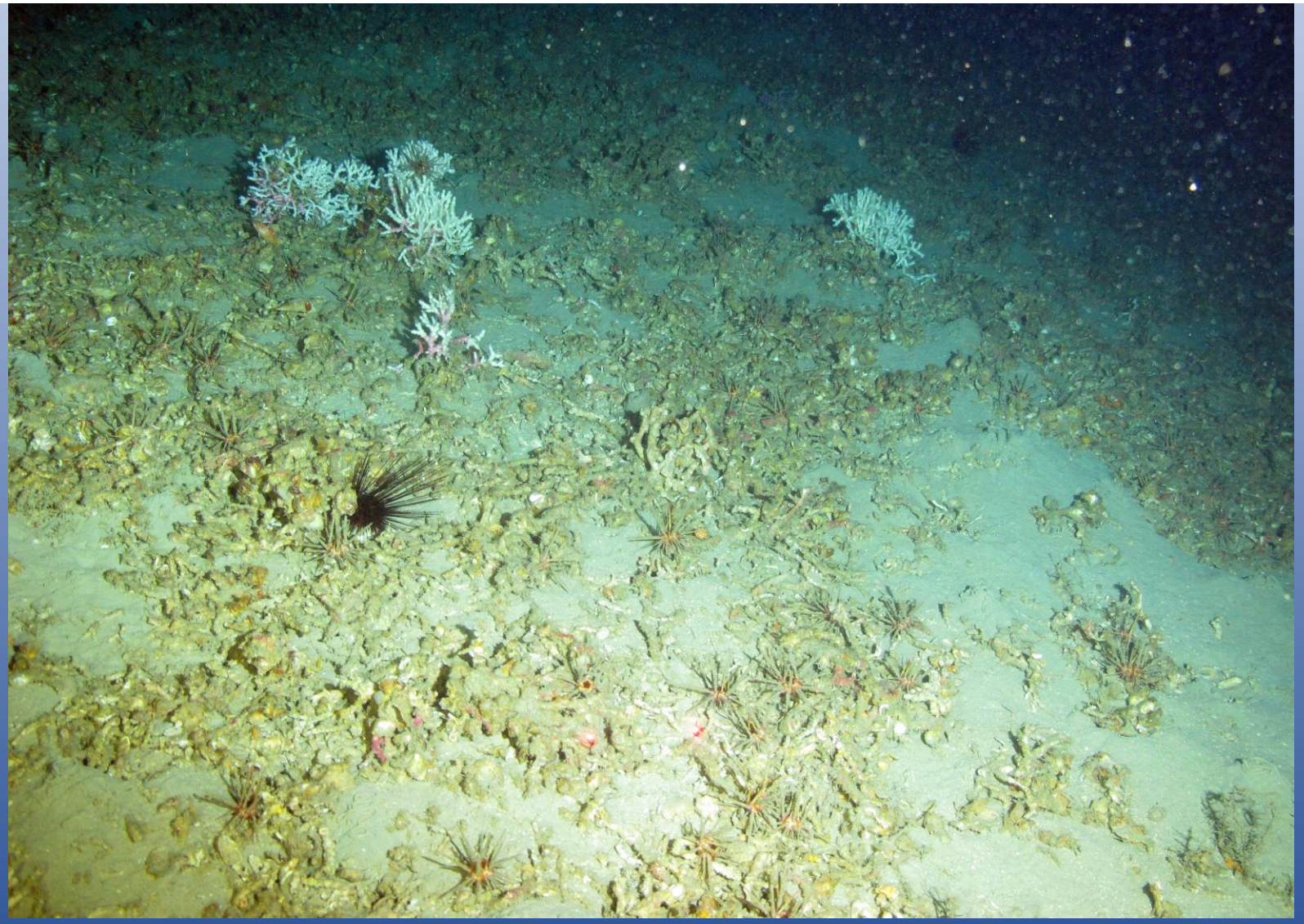


Dead
(Standing)

Rubble

Sand
(Mud, Clay, Silt)

Based upon the multibeam bathymetry, we anticipated our most likely coral observations would be small colonies of live *Oculina* in the 5-10 cm size class mixed with standing dead and rubble.

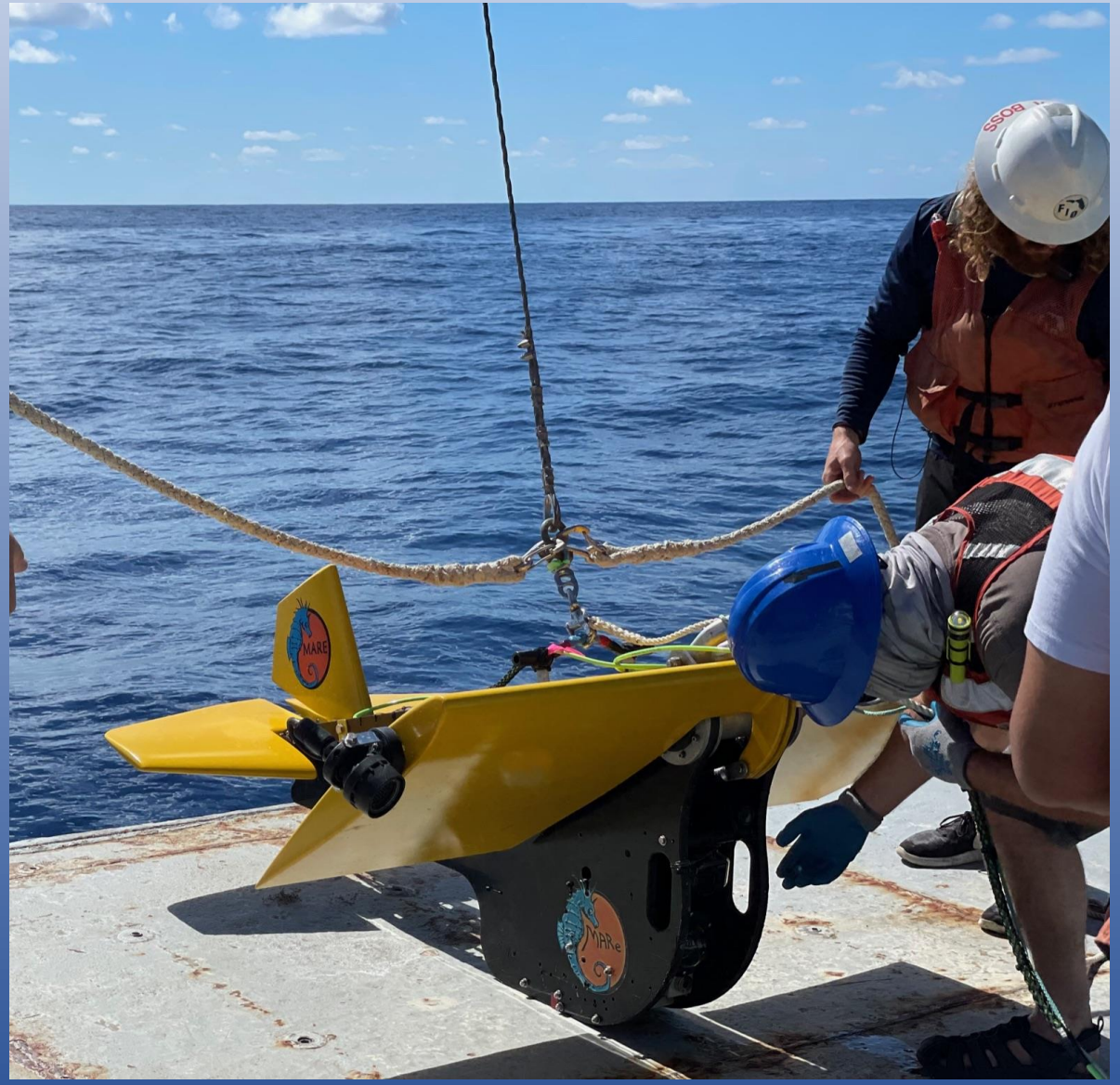


Due to the time window available for the survey, the available budget and the environmental challenges of working in the Gulf Stream, we chose a towed camera system as our observation platform.

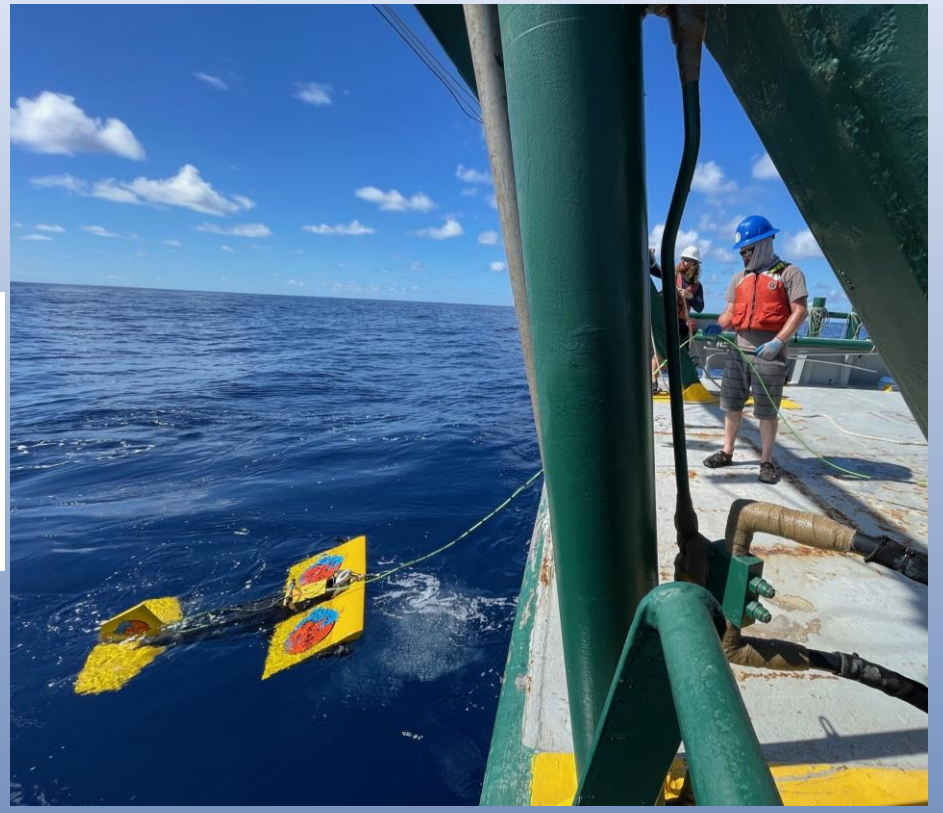
The BATFish is a towed camera sled operated by Marine Applied Research & Exploration (MARE). It has hi-def video and the wings & tail allow fine adjustments in altitude over bottom.

R/V Weatherbird II is operated by the Florida Institute of Oceanography.

BATFish equipped with high definition video, lights, scaling lasers & performance instrumentation



Deployed & recovered through the stern A-frame

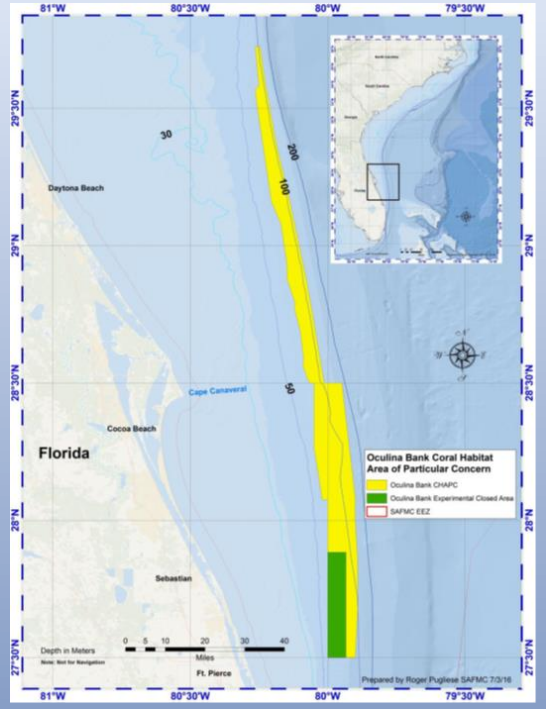


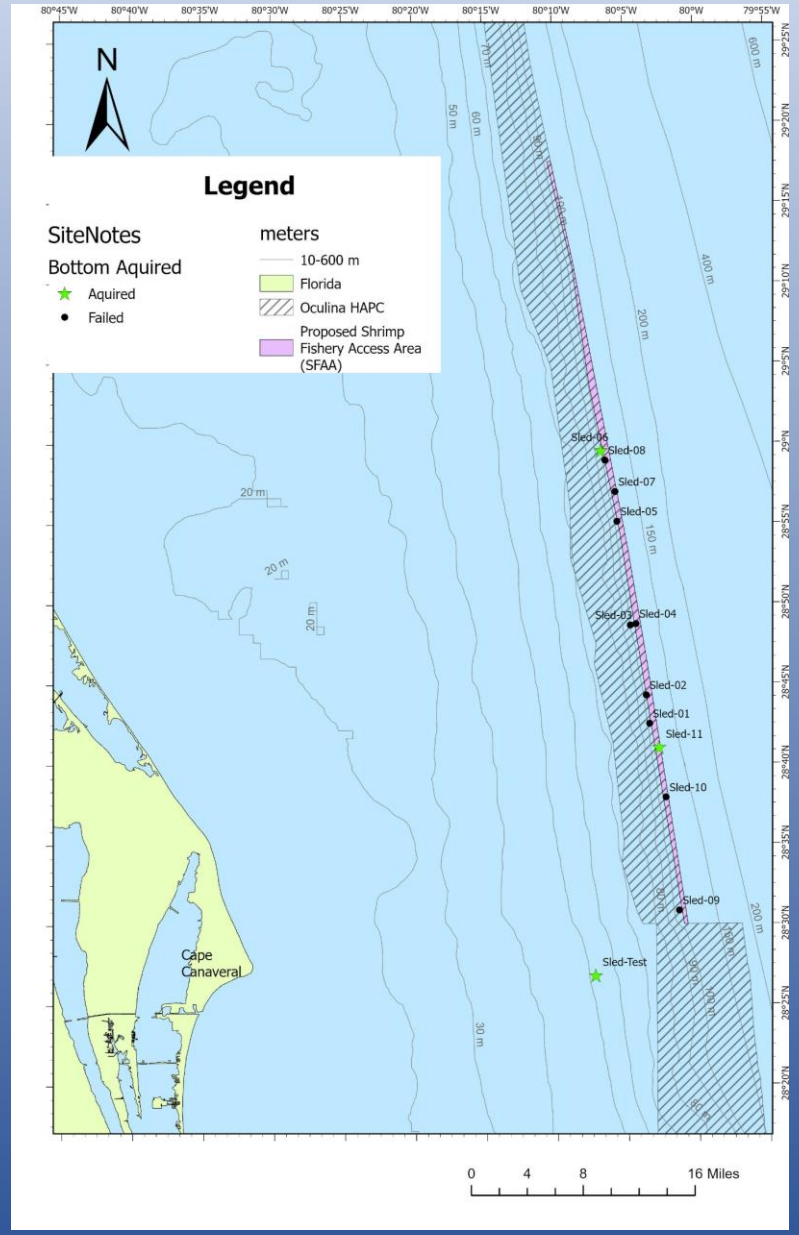
300 m of umbilical cable, 7 mm in diameter to reduce drag

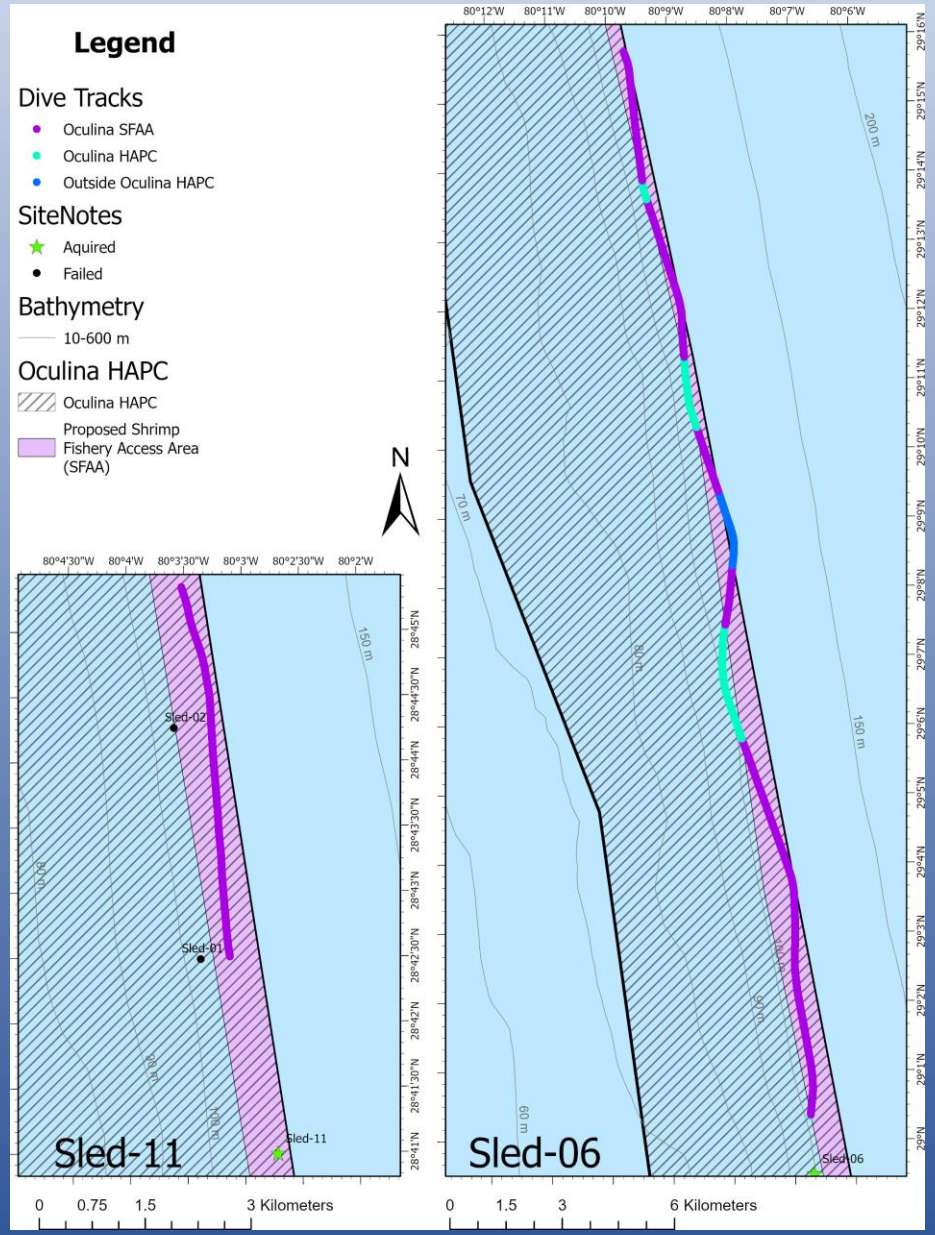
Screen overlay details depth, altitude, water temperature, diving angle, roll angle, heading, and wire angle.

Representative image of bottom within the SFAA. Sand/mud with small amount of shell hash. Laser spacing is 10 cm.

We made 14 dives but with currents between 4 and 5 kts, were only able to attain the bottom on 2 dives







Camera Deployment Results

MPA_Status	Min Depth (m)	Max Depth (m)	Far-field Area (m2)	Near-field Area (m2)	Linear Distance (km)
Oculina HAPC	81.6	93.7	43,781	26,268	5.57
Oculina SFAA	80.6	98.7	184,617	110,770	26.84
Outside Oculina HAPC	94.7	97.9	17,880	10,728	2.05
TOTAL			**246,278**	**147,766**	**34.46**

Dive Number	Date	Launch Latitude	Launch Longitude	Bottom Acquired
Sled-Test	29-May-2022	28°26.7980'N	080°07.2950'W	Successful
Sled-01	30-May-2022	28°42.4860'N	080°03.3760'W	Failed
Sled-02	31-May-2022	28°44.2590'N	080°03.5960'W	Failed
Sled-03	31-May-2022	28°48.6300'N	080°04.6750'W	Failed
Sled-04	31-May-2022	28°48.7090'N	080°04.2900'W	Failed
Sled-05	2-Jun-2022	28°55.0960'N	080°05.5710'W	Failed
Sled-06	2-Jun-2022	28°59.5050'N	080°06.6866'W	Successful
Sled-07	2-Jun-2022	28°56.9480'N	080°05.7030'W	Failed
Sled-08	2-Jun-2022	28°58.9170'N	080°06.3910'W	Failed
Sled-09	3-Jun-2022	28°30.8360'N	080°01.3770'W	Failed
Sled-10	3-Jun-2022	28°37.8860'N	080°02.2450'W	Failed
Sled-11	3-Jun-2022	28°40.9920'N	080°02.7160'W	Successful

No *Oculina*, live, dead or rubble, observed in the ~35 km surveyed (~27 km in the SFAA, ~7.5 km immediately east & west of the SFAA).

Conclusions

- In our >25 years of working on *Oculina* reefs off the east coast of Florida, all live colonies have been found on medium and high relief habitat. *Oculina* rubble is often found along the perimeter of the relief. We have never observed live or standing dead colonies on the low and no relief areas between *Oculina* mounds, although small amounts of dispersed rubble have been noted.

- No live, standing dead or *Oculina* rubble was observed in or immediately adjacent to the SFAA in the May-June 2022 SEFSC visual survey.

- We cannot state definitively that no live *Oculina* colonies exist within the SFAA. However, based upon the results of the visual survey and the existing multibeam bathymetry of the entire SFAA (which shows only low or no relief), we predict the likelihood of live *Oculina* within the SFAA is very low.

Questions?