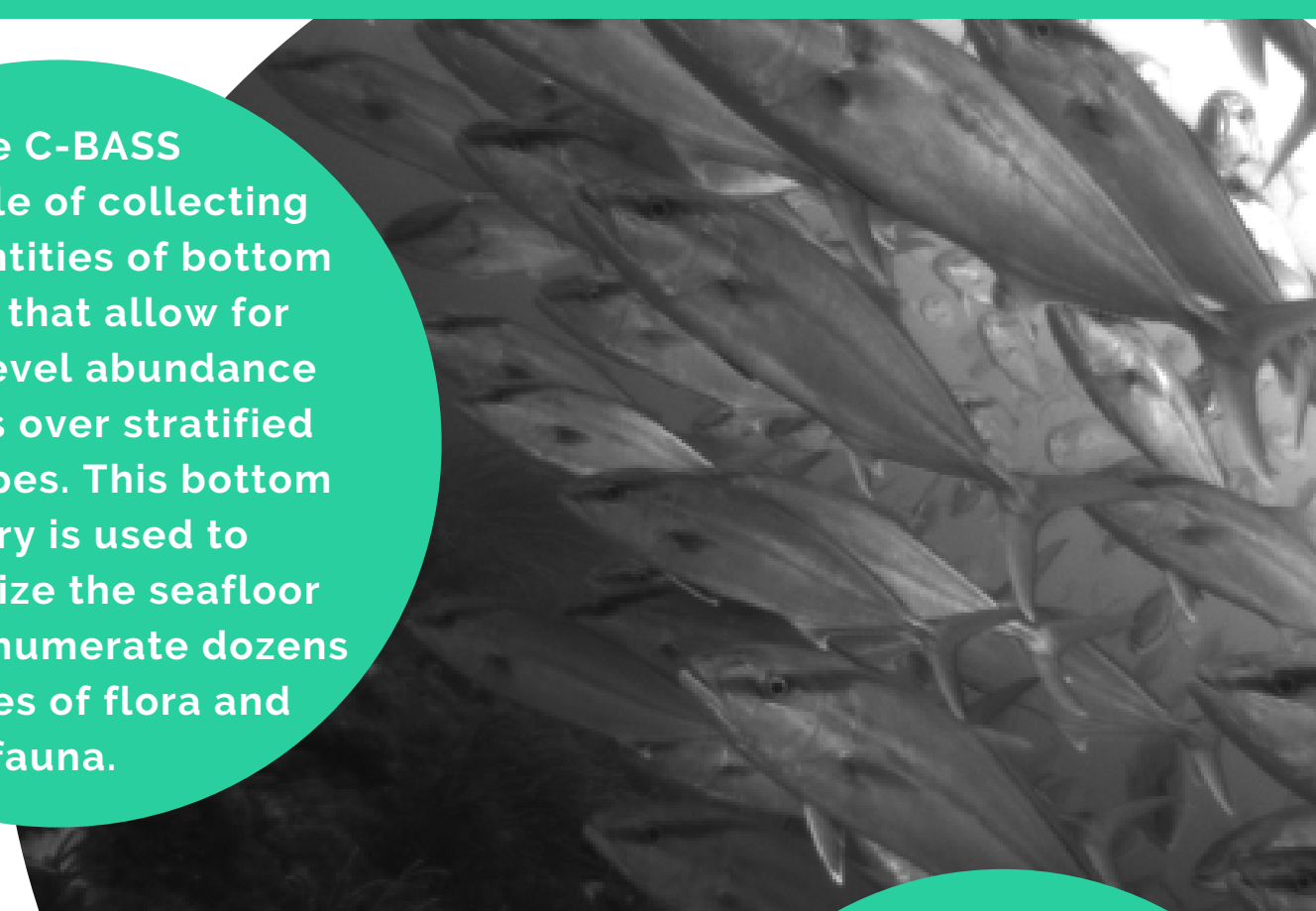
C-SCAMP

CONTINENTAL SHELF CHARACTERIZATION, ASSESSMENT AND MAPPING PROJECT

THE C-BASS: CAMERA-BASED ASSESSMENT SURVEY SYSTEM

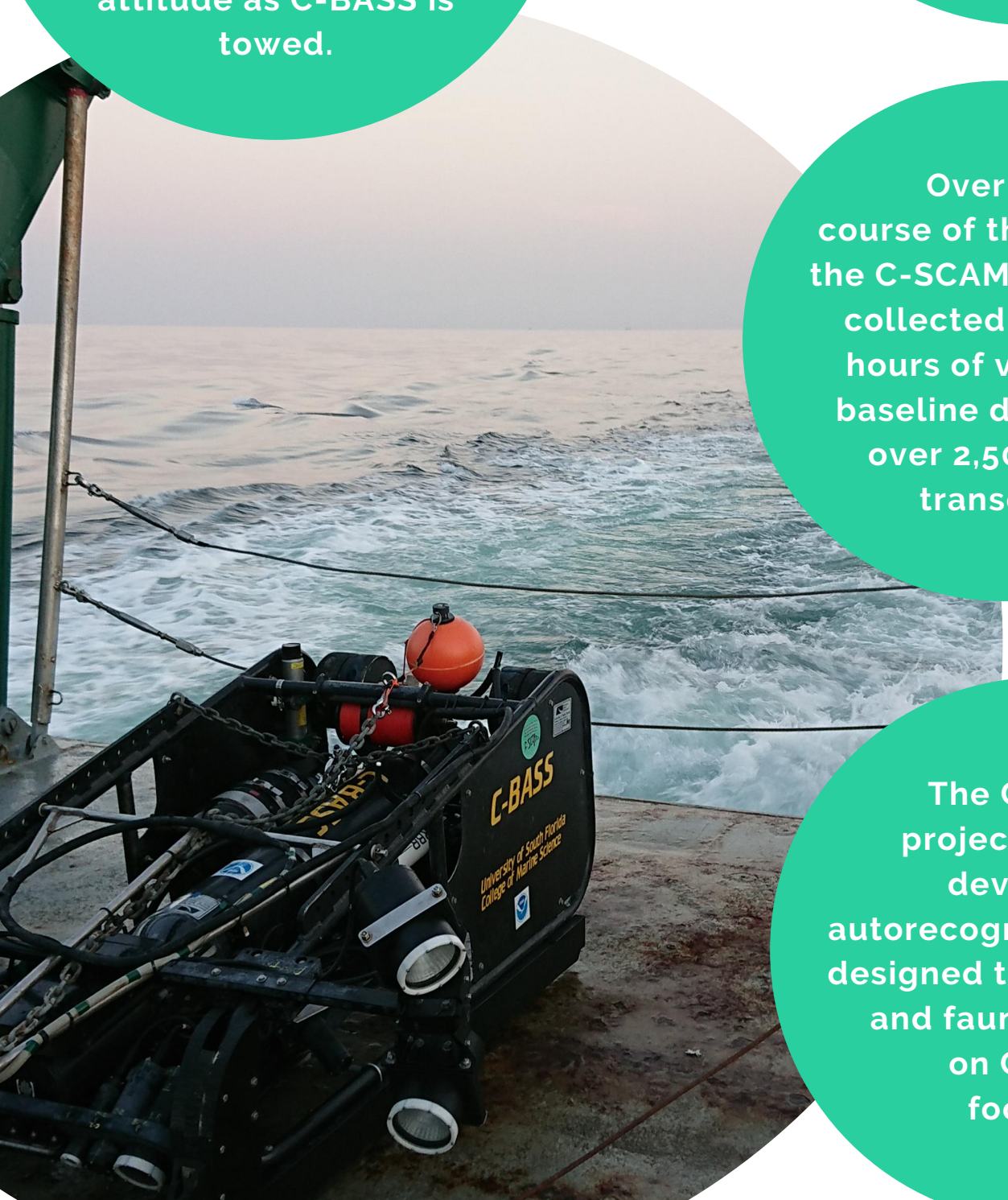
Equipped with six video cameras and a suite of scientific sensors, the C-BASS can be towed behind a vessel for over 10 hours continuously while collecting video that can be used to characterize the seafloor type as well as dozens of species of benthic flora and benthic fauna on the seafloor.



The C-BASS is capable of collecting large quantities of bottom imagery that allow for species level abundance estimates over stratified habitat types. This bottom imagery is used to characterize the seafloor type and enumerate dozens of species of flora and fauna.

The C-BASS provides near-180 degree coverage as it is towed and lowered to the seafloor via a cable off the stern of a vessel where it then samples at ~2-4 meters above the bottom.

The C-BASS is equipped with a suite of scientific and performance sensors allowing for continuous measurements of turbidity, chlorophyll, temperature, salinity, depth, altitude, and attitude as C-BASS is towed.



Over the course of this project, the C-SCAMP team has collected over 300 hours of video and baseline data along over 2,500km of transects.

The C-SCAMP project is current developing autorecognition software designed to identify flora and fauna observed on C-BASS footage.

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PUBLICATIONS

Grasty, S. E., Wall, C. C., Gray, J. W., Brizzolara, J., & Murawski, S. (2019). "Temporal Persistence of Red Grouper (Epinephelus morio) Holes in the Steamboat Lumps MPA and the Analysis of Associated Fish Assemblages from Towed Camera Data." *Transactions of the American Fisheries Society*. 10.1002/tafs.10154.

Lembke, C., Grasty, S., Silverman, A., Broadbent, H., Butcher, S., and Murawski, S. "The Camera-Based Assessment Survey System (C-BASS): A towed camera platform for reef fish abundance surveys and benthic habitat characterization in the Gulf of Mexico." 2017. *Continental Shelf Research*. 151: 62-71

Silverman, A., Lembke, C., Butcher, S., Lindemuth, M., and Murawski, S. "Enabling a Platform for Habitat and Marine Assessment with Real Time Monitoring and Synchronous Databasing." 2018. *OCEANS 2018 Marine Technology Society/IEEE Oceanic Engineering Society Conference*. Charleston, SC. 6pp.

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C-SCAMP Videos

Infographic by Rachel Crabtree, 2020