# C-SCAMP

CONTINENTAL SHELF CHARACTERIZATION, ASSESSMENT, AND MAPPING PROJECT

ESTIMATING REEF FISH DENSITIES USING EK60 SONAR

In conjunction with underwater video, a water column sonar was used to concurrently collect data to analyze fish biomass throughout the water column.

CREATING ECHOGRAMS

The C-SCAMP project used a scientific sonar called an EK60 which is mounted to the bottom of the boat. Much like a traditional fish finder, it sends out pulses of sound that are reflected back by objects in the water below. To visualize what is in the water column, the series of sound returns can be placed sequentially side by side to create an echogram.

Smaller scatterers

Top of Aggregation

CBASS Altitude

Valve Structure
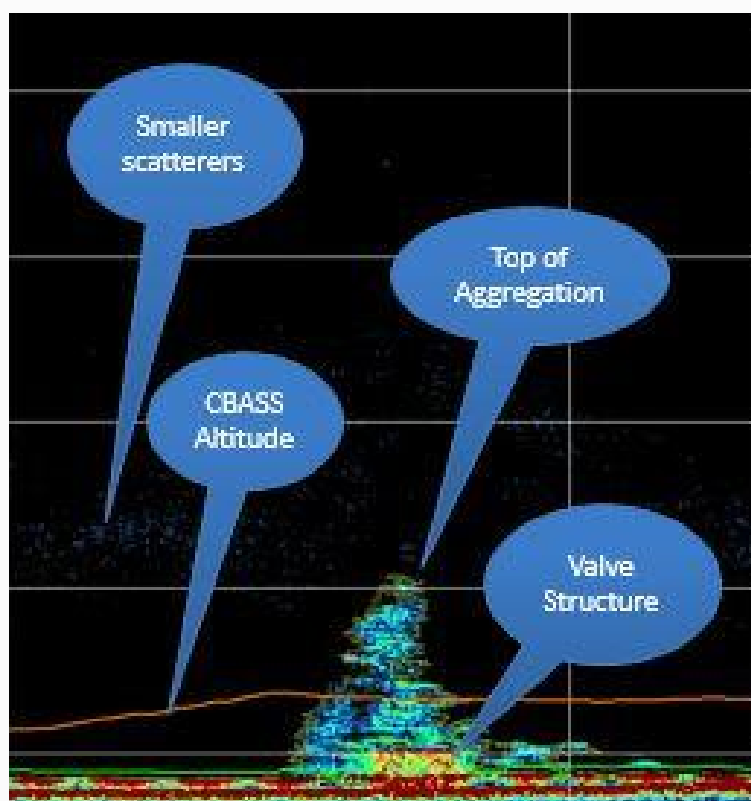
A large school of amberjack is observed with the EK60 in the Elbow region of the West Florida Shelf (above).

From echograms, we can estimate the biomass and density (number per unit area) of fish, which are then comparable to the date collected by our underwater video camera, the Camera-Based Assessment Survey System.

90.61 m
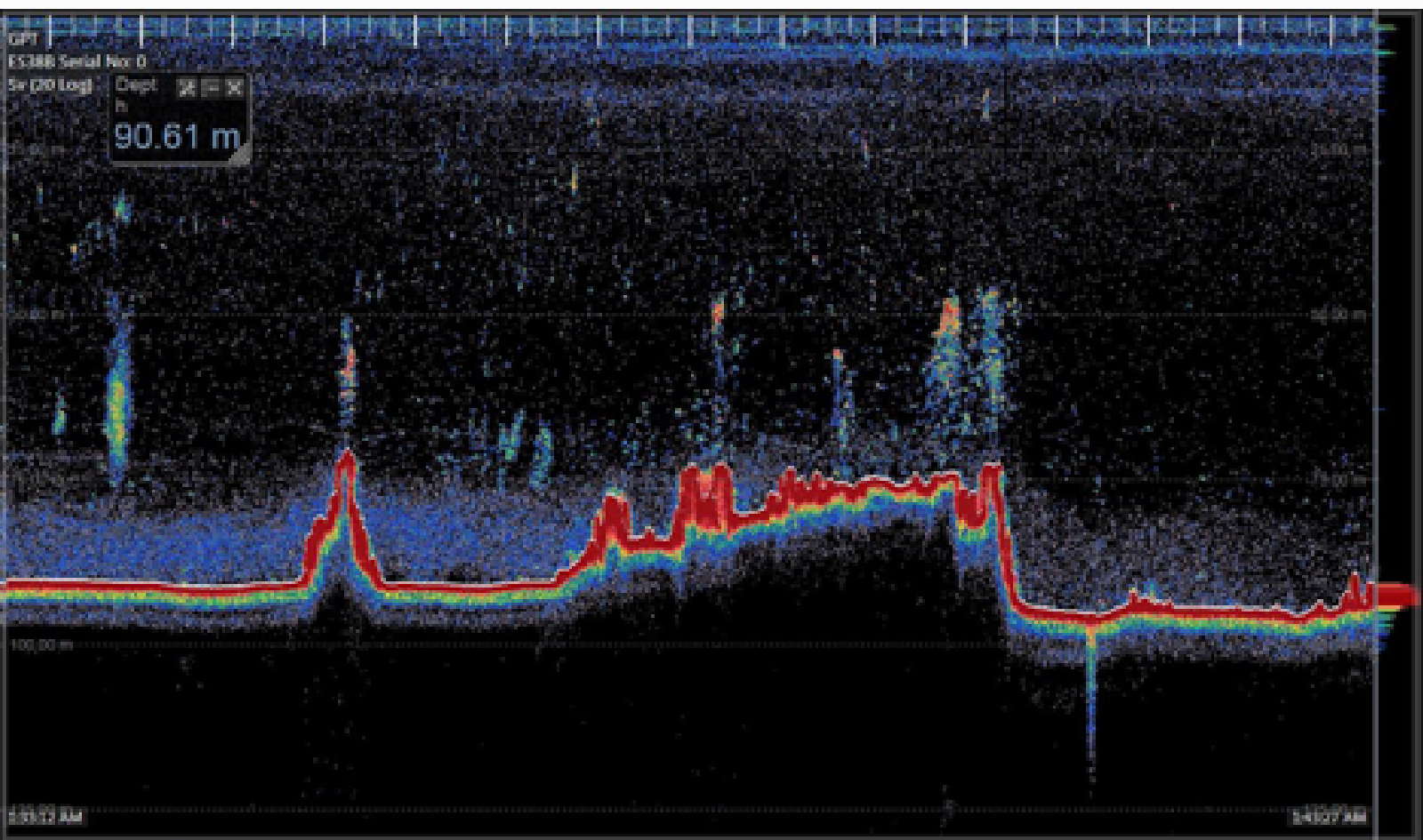
Echogram depicting pinnacle features in the Alabama Alps region in the northern Gulf of Mexico (above). Overlying fish schools are visible above several of the pinnacles.

C-SCAMP scientists continue to investigate how complimentary sonar data relate to underwater video captured by the C-BASS. This will better help scientists characterize reef fish abundance in the Gulf of Mexico.

PUBLICATIONS

Hughes, E., Grasty, S., and Murawski, S. "Reef Fish Densities As Determined by Acoustics and Video Technologies – Comparative or Complimentary?" *In preparation for submission mid-2020.*

🐦 **@CSCAMPscience**

▶️ **C-SCAMP Videos**

Infographic by Rachel Crabtree, 2020