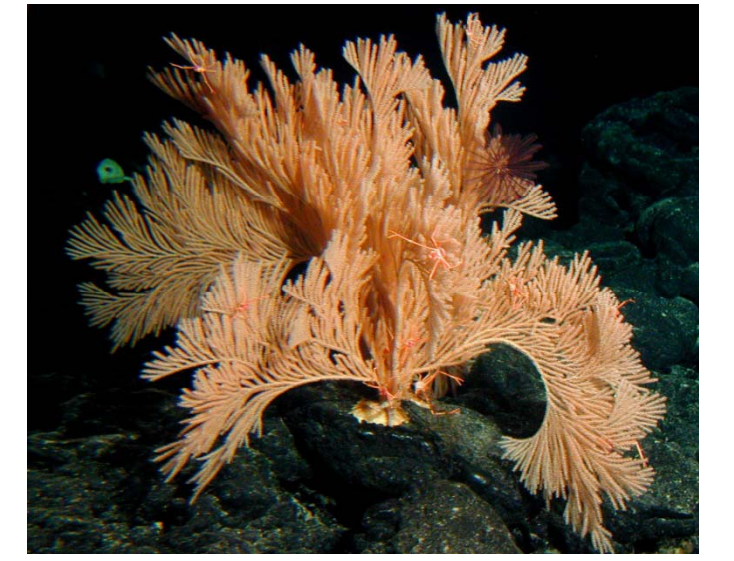
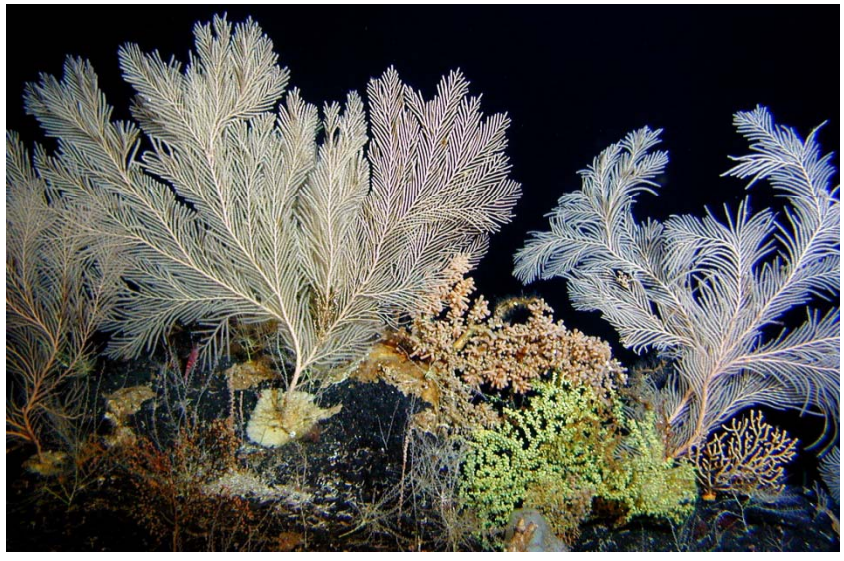


Building a Genetic Database for Pacific Deep-Sea Octocorals



Amy Baco-Taylor, abacotaylor@fsu.edu
Earth, Ocean, and Atmospheric Sciences

- Seamounts, undersea mountains, are thought to be highly isolated habitats but are heavily impacted by trawl fisheries. Corals are among the dominant fauna on seamounts and so make an ideal organisms to use in seamount conservation studies
- Morphological identification of seamount corals is hampered by a lack of keys and substantial numbers of unidentified specimens



From 565 specimens morphologically identified to 121 species, found 196 unique DNA sequences

Level of variation of the marker suggests at least 60% of species diversity has been missed to date

DNA haplotypes have relatively narrow depth and geographic ranges



- Using a DNA barcoding approach, the goals of this project were:
 1. To begin to build a database of DNA sequences for identified specimens
 2. To help determine the full range of diversity of coral species on seamounts and determine their distribution
 3. To help identify newly collected specimens more rapidly
- Work Accomplished During and Since FYAP:
 - 1400 museum specimens extracted in collaboration with Smithsonian high throughput barcoding facility
 - 565 museum and Baco-Taylor lab specimens sequenced for first of 3 genes

Next Steps:

Sequencing of remaining specimens, for this and 2 additional genes

This study focused on specimens from the North Pacific, we are expanding to include specimens from the South Pacific

