

**MS Thesis**  
**Department of Environmental Science and Policy**  
**College of Science**  
**George Mason University**

**Candidate:** Ben Stablow

**Defense Date and Time:** May 5, 2:00 – 4:00 pm

**Defense Location:** Zoom (Please contact the department, [espgrad@gmu.edu](mailto:espgrad@gmu.edu), for Zoom information)

**Title:** Spatial Distributions of Cold-water Coral Mound Associates with Respect to Biotope Boundaries

**Thesis Director:** Dr. Esther C. Peters

**Committee:** Dr. Thomas Wood Dr. Jennifer Salerno

**ABSTRACT**

Cold-water coral (CWC) mounds support critical biodiversity hotspots. Extensive mounds formed by *Lophelia pertusa* exist off the U.S. southeast coast on the Blake Plateau. This study explores potential drivers of fine-scale spatial distribution patterns of taxa associated with CWC mounds. Remotely operated vehicle underwater video footage was used to determine associations of four focal taxa with different biotopes identified from five dive sites. Preferences for proximity to thicket boundaries of the four focal taxa were also assessed from five dive sites. The results of this research indicate that CWC thickets are biogeographical islands.