American lobster (*Homarus americanus*) genetics: Using molecular tools to advance fisheries science

Description: The American lobster (*Homarus americanus*) supports one of the most valuable single-species fisheries in the United States and Atlantic Canada. Given its economic and cultural importance, *H. americanus* has been the target of numerous research efforts to better understand the ecology of the species and inform management decisions. Using molecular tools to better understand *H. americanus* biology and fill critical data gaps has recently become more popular and the assembly of the reference genome for the species represents an additional genomic resource that has the potential to advance molecular research applications in the fields of fisheries, ecology, and biomedicine. This genomic resource can allow researchers to explore high-resolution population structure, response and susceptibility to disease, and adaptation to a changing environment, among other genetic applications. In this session, we will explore the existing body of work using a variety of molecular tools and discuss how to better integrate these methods into existing research, conservation, and management efforts.

Session Chairs: Antoinette Clemetson (New York Sea Grant) and Dr. Amalia Harrington (Maine Sea Grant College Program at the University of Maine)

Keynote: Tim O'Donnell and Jennifer Polinski (Gloucester Marine Genomics Institute)