- Genetic considerations for oyster restoration

  Ami E Wilbur- University of North Carolina Wilmington

  Strategies for oyster restoration can range from simple cessation of activities that contribute to resource depletion, to considerably more aggressive strategies involving supplementation. Strategies involving supplementation, whether through transplantation of wild oysters or the use of hatchery-produced oysters (unselected or domesticated lines), carry the potential for significant and perhaps unintentional genetic impacts. The potential for impact depends on a multitude of factors, including the fitness of the supplemented oysters (will they survive to reproduce?), the potential for introgression (will they successfully interbreed with wild oysters?), and the nature and magnitude of the genetic difference between wild and supplemented oysters (will gene introgression from supplemented oysters erode the diversity of wild oysters, leaving them less resilient, and threatening long-term stability of the restored populations?). The use of supplementation for the restoration of natural populations raises numerous questions that can only begin to be addressed with existing data, and further research is needed prior to consideration of supplementation as a major management tool.