Fish Community Monitoring in Restored Saltmarshes at Poplar Island, Chesapeake Bay, MD - David Bruce

As a Federal and State partnership, restoration efforts at Poplar Island will reestablish the approximate 1847 footprint that had been severely diminished by hydrodynamic factors. Using dredged navigation channel sediment, the project will provide approximately 776 acres of wetland, 829 acres of upland, and 110 acres of open-water habitat. In addition to providing avian and terrestrial habitat, the project design has incorporated the "fish use is important" concept in an attempt to provide high-quality habitat for transient and resident fishes. Currently, 8 restoration cells (23% of area) have been completed and work in an additional 14 cells is ongoing. NOAA Fisheries has monitored fish communities at restoration sites and nearby reference marsh creeks since 1996. Although there is considerable temporal variability, based on relative abundance metrics for grass shrimp, marsh resident finfish, and transient finfish, restored marshes generally function similarly to unrestored marsh habitats. Finfish species richness and diversity, however, are usually greater in the natural reference creeks. In addition to sinuous creeks, marsh design in some restored marsh cells include deeper pond habitats. Survey data indicate that relative abundance of transient finfish species in marsh cell ponds and natural reference creeks is greater than in constructed creeks in restored cells. Factors such as access point dimensions and bathy-topographic complexity likely influence differences in fish communities at restored and natural marsh treatment. Both restored and natural marsh habitats serve as nursery areas for early juvenile transient species such as spot and American eel.

Comparison of varying designs for fisheries-focused coastal habitat restoration - JoEllen Wilson

Habitat loss and degradation due to development, altered waterflows and introduced contaminants is decimating our coastal fisheries habitats. Nursery habitats that are essential for early life stages are the most vulnerable since young fish typically have smaller ranges of movement and therefore have a harder time avoiding these impacts. In the case of juvenile sportfish common snook (centropomus undecimalis) and Atlantic tarpon (Megalops atlanticus), their proximity to humans also makes their habitats vulnerable.

For this study, we compared three different nursery habitat designs:

1)An open creek mouth that provides consistent passage from the estuary into the canal, followed by a deep hole with a slowly inclined shallow creek system.

2)A "sill" at the mouth of the creek to act as a physical barrier to predators by restricting access to the canal when water levels drop, followed by the deep hole and shallow creek.

3)A "sill" at the mouth of the creek that transitions immediately to a shallow meandering creek system that mimics natural habitat without the inclusion of a deep hole.

The results of this study show that both growth and emigration rates increased following

restoration, regardless of the specific treatment design, indicating that nursery habitat restoration can be a successful tool for improving juvenile fish productivity in degraded habitats. The caveat being that the design should be specific for the species or habitat that is being improved. Both snook and tarpon from Treatment 3 had the highest growth rates and Treatment 1 produced the highest emigration rates for both species. Our goal is to work with other land and fisheries management agencies to restore additional nursery habitats. With effective habitat restoration, there is hope for healthy habitats and healthy fisheries.

The Atlantic Coastal Fish Habitat Partnership – Making the Connection - Simen Kaalstad

The Atlantic Coastal Fish Habitat Partnership (ACFHP) employs a comprehensive approach to protecting, preserving, and enhancing Atlantic diadromous, estuarine, and coastal fish habitats. Consisting of fish habitat resource managers, scientists, and communications professionals, the Partnership extends from the Florida Keys to Maine. ACFHP has partnered with several RAE member organizations, including the American Littoral Society, Chesapeake Bay Foundation, and the North Carolina Coastal Federation. Priority habitats include submerged aquatic vegetation, riverine bottom, tidal vegetation, marine & estuarine shellfish beds, and coral & live hard-bottom habitats. ACFHP excels in building local and regional relationships to advance strategic fish habitat conservation priorities that address threats like fish passage obstructions, eutrophication, dredging, coastal development, and invasive species. The Partnership actively engages in funding on-the-ground habitat restoration projects, develops science and data products, and coordinates outreach initiatives to foster connections among partners and, ultimately, connect people with recreationally and ecologically important fish habitats spanning from Atlantic headwaters to the continental shelf. Through these efforts, ACFHP has made significant contributions to coastal fish habitat conservation, restoration, and protection, in addition to facilitating access to thousands of acres of riverine areas across the Atlantic coast.

Rockin' Around the Clock: Exploring Diel Activity Differences in Young-of-Year Rockfish for Conservation in the Salish Sea - Stena Troyer

Rockfish (Sebastes spp.) populations in the Salish Sea face significant challenges due to historical fishing pressures, leading to the listing of certain species under the Endangered Species Act. To address crucial data gaps in variable recruitment patterns outlined in the recovery plan, a partner-driven Young-of-the-Year (YOY) rockfish survey program began in 2014. This program uses SCUBA surveys to collect data on abundance, distribution, and habitat preferences. However, the potential influence of diel activity patterns on survey data interpretation remains unexplored.

To fill this gap, we are conducting SCUBA surveys along consistent transects within multiple index sites during both day and night over several months. Additionally, time-lapse cameras are deployed at these sites to complement direct observations. The data may inform the development of a correction factor for reporting habitat use patterns. This correction factor could be applied to a decade's worth of existing survey data in the YOY program database, benefiting state and federal managers responsible for regulating rockfish in Washington State

waters and British Columbia.

In addition to sharing our methodology, preliminary findings, and anticipated outcomes, we will highlight the significance of collaborative efforts between NOAA, marine research and education groups, community SCUBA divers, and other stakeholders in marine conservation. By using a team to address critical gaps in understanding YOY rockfish ecology, this study models the success of collaborative efforts in providing valuable insight for conservation strategies in the Salish Sea.