Changes in the Abundance of Kelp and Rockweed in Narragansett Bay

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Narragansett Bay contains a variety of important seaweed ecosystems that are home to diverse fish and invertebrate communities. Rockweed, *Fucus* spp., in the intertidal, and kelp, *Saccharina latissima* and *Laminaria digitata*, in the subtidal have historically been prevalent in the bay. Surveys conducted in the 1970s and 1980s have provided historical data on the location and abundance of rockweed and kelp habitats. In order to monitor changes in these habitats, video surveys on SCUBA were conducted at 24 sites chosen for their previous abundance of rockweed or kelp from historical studies in Narragansett Bay. Video surveys were conducted in both the fall and summer using a metal ski mounted with GoPro cameras, underwater lasers, and lights along a 30m transect in order to document seaweeds, invertebrates, and fishes at all sites. Current percent cover of rockweed and kelp at all 24 sites was determined by analysis of the seaweed videos based on the total time that rockweed or kelp was seen along the transect. Additionally, subsamples were collected during surveys to determine rockweed and kelp density and biomass at each site. The results from these surveys will highlight the current abundance of kelp and rockweed habitats in the bay, as compared to the historical record, and determine which invertebrates and fishes are associated with these habitats. As the ocean climate continues to change, these seaweed habitats will also be subject to change, and subsequently their associated invertebrate and fish communities. Continuing to survey these vital habitats in the future will create a better understanding of the importance and abundance of diverse seaweed habitats in Narragansett Bay.

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