

## **Working towards sustainability in green sea urchin (*Strongylocentrotus droebachiensis*) production**

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*Strongylocentrotus droebachiensis*, also known as the green sea urchin, is a cold water species commonly found in the Gulf of Maine. In recent years, due to global warming, the Gulf of Maine has been experiencing an increasing number of heat waves, which is when a specific area of the ocean warms to temperatures above the 90th percentile temperature range for 5 days in a row. Stress priming, a process by which animals are subjected to short periods of stressful environmental conditions, has shown to be successful in enhancing tolerance to field heterogeneity. In this study, we began to test this concept through a pilot trial to determine whether exposure to increasing seawater temperatures can be tolerated by hatchery-raised juvenile green sea urchins. This trial will set up the baseline for what the maximum temperature juvenile urchins can be exposed to before mortality occurs. Future research will determine if we can make adult green sea urchins more resilient to heat waves by exposing them to elevated temperatures as juveniles in a controlled environment.