

## Using Mercury to Model Bioenergetics in the Gulf of Maine Food Web

Atlantic herring, *Clupea harengus*, are the dominant fish species in the North Atlantic. They represent a key link between plankton and predatory fishes. Climatic shifts in the late 1990s resulted in drastic changes in the North Atlantic including the food web in the Gulf of Maine. A drop in the North Atlantic Oscillation index resulted in a severe decline in the prey of adult herring and rippled up the food web. The goal of this project is to develop a realistic model that incorporates multiple trophic levels and can be used to track impacts of climatic change on feeding rates and condition of Atlantic herring and bluefin tuna. We expect that once the model is created we will be able to simulate various situations, such as temperature, prey structure, and prey conditions and see the impacts across the entire system.