



## UNH Scientists Explore Climate Change Impact On Top Marine Predators

Contact: [Beth Potier](#)  
603-862-1566  
UNH Media Relations

January 10, 2008

**Editors and reporters: Molly Lutcavage is available at [molly.lutcavage@unh.edu](mailto:molly.lutcavage@unh.edu) or 603-767-2129.**

---

DURHAM, N.H. – Scientists from the Large Pelagics Research Center (LPRC) at the University of New Hampshire joined more than 150 colleagues from 25 countries at the first Climate Impacts on Oceanic Top Predators (CLIOTOP) Symposium last month. Hosted by the Centro Interdisciplinario de Ciencias Marinas in La Paz, Mexico, the symposium launched a 10-year project to investigate the impact of climate variability and change on top predators in the world's oceans. These predators include the tunas that support major global fisheries, as well as billfish, sharks, marine mammals, sea turtles and sea birds.

UNH participants were LPRC director and research associate professor Molly Lutcavage, postdoctoral researcher Andy Myers, LPRC program manager Nuno Fragoso, and graduate students John Logan and Jessie Knapp.

"Here in the Gulf of Maine, we're already witnessing the impacts of climate variability – changes in ocean temperature, currents and resident sea life – on marine animals and their habitats. In less than five years or so, bluefin tuna have shifted their distribution patterns in a major way, and climate shifts are affecting other top predators and their prey, including whales and sharks," says Lutcavage. "This international project aims to understand how these species respond to climate variability and climate change. We're also interested in the broader socio-economic impact of changes in the habits of valuable species like tuna."

Lutcavage notes that oceanic top predators respond to changes in their environment by changing their behavior and shifting their distribution. As a result, ocean ecosystems may experience changes in the relative abundance of different species, as well as changes in overall productivity. The Atlantic Ocean is the world's second largest (after the Pacific Ocean), and its watermass is crucial in regulating the climate of the planet. It also supports the world's most valuable tuna fishery (Atlantic bluefin tuna), as well as high biodiversity of oceanic top predators.

El Niño / La Niña changes are the best-known and most significant aspects of year-to-year climate variability; climate change occurs over decades and centuries. Global warming may also increase the frequency and intensity of year-to-year variability.

Lutcavage is member of the international scientific steering committee that organized the symposium. Members of the Large Pelagics Research Center and many international collaborators presented work on ecosystem indicators relevant to tuna, sharks, seabirds, and sea turtles, as well as some modeling predictions for long-term changes in their distributions. The program for the symposium also included biology, ecology, fisheries science, resource management, socio-economics and computational modeling.

For more information on the CLIOTOP Project, including a downloadable science plan, go to <http://web.pml.ac.uk/globec/structure/regional/cliotop/cliotop.htm>.

The UNH Large Pelagics Research Center is a center for excellence established through partnership between the University of New Hampshire and the National Oceanic and Atmospheric Administration through the National Marine Fisheries Service. Its mission is to improve the management of large pelagic marine species (such as tunas, marlins, sharks and sea turtles) by enhancing biological information needed to manage these resources within a biological, oceanographic and fisheries science framework. The key elements of the Large Pelagics Research Center include the UNH Large Pelagics Research Lab, directed by Lutcavage, a competitive grants program in large pelagics research and two education initiatives. For more information, go to <http://largepelagics.unh.edu/>.

-30-

