



New Exhibit Provides Unique View Of Gulf Of Maine Ecosystem

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DURHAM, N.H. -- A new exhibit at the Seacoast Science Center in Rye provides an opportunity to peer into the depths of the complex marine ecosystem of the Gulf of Maine like a scientist and learn about the underwater web of life that ebbs and flows through the twelve months of the year.

"Seasons of the Sea" is a hands-on display created through collaboration between University of New Hampshire marine scientists and Seacoast Science Center staff using NASA and Gulf of Maine Ocean Observing System (GoMOOS) data sources. The exhibit uses current scientific data from ocean observing tools like high-tech buoys and satellites to illustrate the yearlong inner workings of the Gulf of Maine's unique character.

For example, two buoys, one in the coastal zone and one far offshore in deep waters, send live data to a six-foot buoy display. Viewers can compare data from the two buoys – water temperature and salinity levels at the surface and deep below, wind speed and air temperature, current speed and direction – and put in updated information on dials that accompany the display.

Graphic, informational kiosks provide details on each of the underwater seasons, and large floor maps of the Gulf of Maine orient viewers and show where the dozen science and meteorological buoys that pepper the waters are located.

"Seasons of the Sea illustrates some of the high-level efforts of scientists who are seeking to understand this ecosystem," says Amy Cline, education and outreach coordinator for the UNH Coastal Observing Center. Cline adds, "We hope this will help viewers better understand and appreciate this critically important part of our environment."

Cline notes that the new exhibit is a one-of-a-kind display of modern ocean observing methodology, an approach marine scientists commonly refer to as involving "buoys, boats, and satellites."

Today's scientific buoys – like the two GoMOOS buoys sending data directly back to the Seasons of the Sea exhibit – are sophisticated sentinels that provide scientists with a wide array of data. In addition to meteorological measurements, buoys can monitor levels of salinity, chlorophyll concentration, the amount of sunlight available to underwater plants, and many other environmental parameters.

Earth-orbiting satellites provide a host of both big-picture and small-scale data, including chlorophyll concentrations and the related blooms of phytoplankton – the miniscule plant life that shifts with the seasons and upon which the vast majority of ocean ecosystems depend.

Notes Cline, “Phytoplankton are the basis of everything. They’re at the lowest trophic level on the food chain and are responsible for everything from whales to the fish on your plate.” Thus, scientists must understand the “lowly” phytoplankton if they are to understand how ocean ecosystems work, and help humanity protect and manage the 70 percent of our planet that studies have recently identified as being in deep trouble.

In addition to giving people insight into how scientific ocean observing is done and what data it can provide, it is hoped that Seasons of the Sea will illustrate the fact that it will be up to future generations of scientists to fill in the blanks of our understanding of the sea.

Says Cline, “I believe there’s a general misconception with students, and it could be the same with much of the public, that we know everything about the oceans, but there are many fundamental questions that we don’t have answers to.”

The exhibit was funded through NASA and National Oceanic and Atmospheric Administration (NOAA) grant money, and was initiated by UNH oceanographer Ru Morrison of the Institute for the Study of Earth, Oceans, and Space.

The Seacoast Science Center is open from 10:00 a.m. to 5:00 p.m., Saturday-Monday and will be open Tuesday-Friday, December 26-29 for the holiday break. To learn more, call the Center at 603-436-8043 or visit www.seacoastsciencecenter.org.

Editors: A photograph is available to download here:

<http://unh.edu/news/img/SeasonsSea.jpg>

Caption: Seasons of the Sea, a new exhibit at the Seacoast Science Center in Rye, N.H., provides students of all ages with a unique view of the Gulf of Maine ecosystem.

Photo courtesy of the Seacoast Science Center.