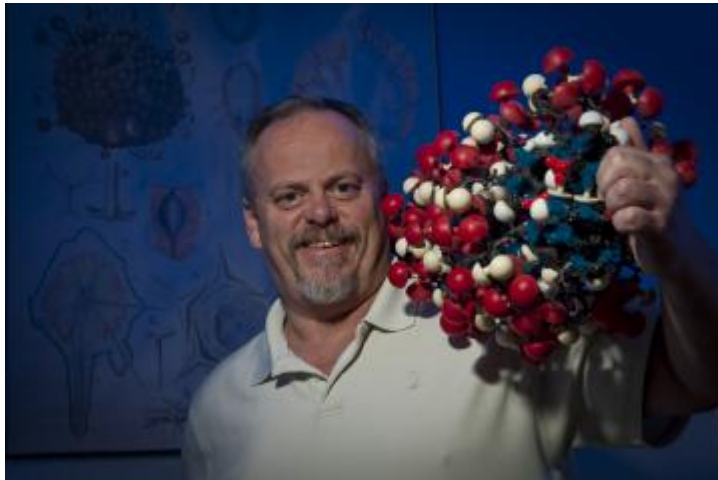


## Media Relations

November 24, 2015

### UNH Scientist Receives \$2.47M to Study Ocean's Smallest Creatures and Help Assess Damage Caused by Oil Spills

Funding Provided by BP Following Deepwater Horizon Disaster



W. Kelley Thomas, professor of molecular, cellular, and biomedical sciences, and director of the Hubbard Center for Genome Studies, has received a grant from the Gulf of Mexico Research Initiative (GoMRI) as part of nearly \$38 million awarded to individuals and teams studying the effects of oil on the Gulf of Mexico ecosystem and public health. Credit: UNH

molecular, cellular, and biomedical sciences, and director of the [Hubbard Center for Genome Studies](#), has received a grant from the [Gulf of Mexico Research Initiative \(GoMRI\)](#) as part of nearly \$38 million awarded to individuals and teams studying the effects of oil on the Gulf of Mexico ecosystem and public health. GoMRI is an independent, 10-year research program established with a \$500 million commitment from BP following the Deepwater Horizon incident.

DURHAM, N.H. – The world's smallest creatures in the ocean serve a critical role as the base of the food chain and the metabolic engines of the ocean environment. However, scientists lack the ability to assess the effects of oil spills on these creatures because they know little about the diversity of these important microorganisms.

A University of New Hampshire scientist has received a \$2.47 million grant to study these ecosystems in the hopes of being able to make damage assessments and progress toward remediation following oil spills.

[W. Kelley Thomas](#), professor of

“One of the outcomes of the Deepwater Horizon event and similar tragic, large-scale environmental stresses has been an acknowledgment that we lack the ability to assess their effects on the biological communities,” said Kelley. “The problem stems largely from the vast unknown diversity among the most common yet smallest creatures in these ecosystems. Paradoxically, while small in size, the importance of these communities of microscopic species to the proper functioning of the ecosystem is well-documented, including critical roles in breaking down contaminants.”

“To help overcome this problem we will apply the tools of high throughput genomics and bioinformatics -- the same tools used in human genetic testing -- to investigate the kinds of organisms that comprise these communities and assess what their likely functional roles are in the environment. The resulting databases of genomes from these organisms and the standard operating

procedures developed will make future assessment of damage and progress toward remediation possible in the future," he said.

Kelley will lead a multidisciplinary team of experts that includes Holly Bik at NYU, who will analyze genetic data to reveal biogeographic patterns and functional shifts in marine communities, and Paul Montagna, an expert in ecosystems and modeling at the Harte Institute for Gulf of Mexico Studies in Corpus Christi at Texas A&M University.

In addition, the project represents a collaboration with Jon Norenburg and Francesca Leasi at the Smithsonian Institution, who are experts in the groups of organisms critical to these ecosystems. Finally, toward the goal of generating a durable resource for environmental assessment, the team will collaborate with Jonathan Coddington with the Global Genome Initiative at the Smithsonian Institution and Daniel Distal with the Ocean Genome Legacy at New England Biolabs and Northeastern University.

The [University of New Hampshire](#), founded in 1866, is a world-class public research university with the feel of a New England liberal arts college. A land, sea, and space-grant university, UNH is the state's flagship public institution, enrolling 13,000 undergraduate and 2,500 graduate students.

#### **PHOTO AVAILABLE FOR DOWNLOAD**

[https://colsa.unh.edu/sites/colsa.unh.edu/files/kelleythomas\\_unh.jpg](https://colsa.unh.edu/sites/colsa.unh.edu/files/kelleythomas_unh.jpg)

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