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Undergraduate Research in Earth, Oceans and Space Science to be Showcased April 28 at UNH
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DURHAM, N.H. -- Last January, when University of New Hampshire senior Meredith Bailey presented her work at the American Geophysical Union's Ocean Sciences Conference in Portland, Oregon, most of the scientists and professors assumed she was describing graduate-level research. It was an understandable error given the nature of Bailey's work, which, she explains, involves “looking for evidence of cryptic speciation in the calanoid copepod *Acartia tonsa* by sequencing a mitochondrial gene from individuals I collected throughout the summer on New Hampshire's Great Bay and from estuaries in Maine, Massachusetts, and Rhode Island.”

Bailey will present her research on *Acartia tonsa* - a common species of zooplankton or “bug” found in the regions' coastal waters - at UNH's Institute for the Study of Earth, Oceans, and Space Wednesday, April 28, 2004. The symposium will be held in Durham in Morse Hall as part of the weeklong, fifth annual Undergraduate Research Conference featuring work by students from all of the university's schools and colleges.

Students will present their work through poster sessions in the Morse Hall atrium. Presentations will encompass a broad range of topics, including climate change in New Guinea, the chemical makeup of deep-sea hydrothermal vents, and instrument design for a future NASA mission.

“Many of today's scientific challenges are highly complex and require an increasingly interdisciplinary perspective and set of skills. This event will recognize outstanding student research now, and help to foster the broad perspective and skills needed by future scientific leaders,” says symposium organizer George Hurtt, assistant professor in EOS and the Department of Natural Resources.

Bailey's undergraduate research began in the second semester of her freshman year when she started working in the Ocean Process Analysis Laboratory at EOS. This past summer, for her senior, honors thesis, she applied for and was awarded an Undergraduate Research Opportunity Program Summer Undergraduate Research Fellowship. This funded her research on *Acartia tonsa* - an animal, Bailey has discovered, that is in the process of evolving into two distinctly separate species.

Explains Bailey, “I compared gene sequences of the individuals between different estuaries, and found that north of Cape Cod the genetic signature of *A. tonsa* is very different from those found south of Cape Cod. This indicates that these may not be the same species, or, that they were once
the same species but are now diverging into separate species.”

Of her undergraduate research experience at UNH Bailey adds, “People from other schools are often amazed at the level of student research that goes on here, but I almost take it for granted. Because, to me, it's no big deal to be a junior or sophomore or even a freshman and just walk into a lab and start doing science.”

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