

The Anchor



September 2006 Volume 2 Issue 1

CCOM/JHC Crew Brings Home the R/V Cochecho

Seventeen-hundred hours on Thursday, August 24th marked the arrival of CCOM-JHC's newest survey vessel, *R/V Cochecho*, at Portsmouth Harbor. Andy Armstrong, Ben Smith, Lee Alexander, and Evan Welsh delivered the 34-foot LOA vessel from Norfolk, VA in a approximately 40 engine hours, holding a speed of 19-knots in open water. The delivery was achieved in six days, one day less than was planned. The last leg of the voyage started in New London, CT at 0730, went through Block Island Sound, Buzzards Bay, Cape Cod Canal, Cape Cod Bay, Massachusetts Bay, around Cape Ann, to the Isles of Shoals, and into the USCG station at New Castle, NH by 1700 that afternoon.

The *R/V Cochecho* is named after the local river whose name derives from the [Abenaki](#) word meaning "rapid foaming water". The *R/V Cochecho* complements CCOM-JHC's multibeam survey vessel, *R/V Coastal Surveyor*, because the *Cochecho* is designed primarily for bottom sampling and towing sidescan sonar. The third vessel in the fleet, *R/V Little Bay*, is designed for very shallow water operations, primarily with single



R/V Cochecho and R/V Coastal Surveyor at Jackson's Landing

beam sonar. NOAA's Office of Coast Survey has loaned the *Cochecho* to CCOM-JHC for an unspecified number of years. *Cochecho* is larger but similar to the survey launches used from the NOAA survey ships. She is a new vessel, high speed for transiting to survey sites, and strong for handling bottom sampling and towing from her massive A-frame.

Cochecho has an electronics/sonar workspace that can easily accommodate two hydrographers and four additional observers. The stern deck is eleven feet wide and thirteen feet long, providing space for winches, sonar deck space, and many crew.

The *Cochecho* has already started operating for CCOM-JHC, but will not be fully fitted out for survey work until the 2007 survey season.

CCOM/JHC Welcomes New Graduate Students

The end of August brought a lot of new faces to CCOM, as six new graduate students and six new GEBCO/Nippon Foundation students arrived at the Center. The graduate students are: Robert Bogucki (Ocean Engineering), Janice Felzenberg (Earth Sciences), Nick Forfinski, NOAA (Earth Sciences), Bert Franzheim (Electrical Engineering), Lynn Morgan, NOAA (Earth Sciences), Marc Moser, NOAA (Earth Sciences) and Nathan Wardwell (Earth Sciences).



The R/V Cochecho

The newest GEBCO students are: Jose Gianella (Peru), Leonardo Humbert (Mexico), Yasutaka Katagiri (Japan), Vasudev Mahale (India), Nguyen Thanh (Vietnam) and Muhammad Yazid (Indonesia)

CCOM/JHC Grad Students Had a Busy Summer



2006 CCOM Hydrographic Field Course class

Muhammad Bashir, Djoko Hartoyo, Jorge Heredia Apolonio Lagonsin, Tsuyoshi Yoshida, Brian Heap, Gretchen Imahori, Luis Soares Rosa, Val Schmidt, Ed Sweeney and Michelle Weirathmueller completed the Hydrographic Field Course in June, taught by **Semme Dijkstra**.

In August **Val Schmidt** and **Michelle Weirathmueller** worked with **Tom Weber** (along with many others) to conduct an acoustic tracking field test in Portsmouth Harbor.

Gretchen Imahori was on the NOAA Ship Fairweather in Dutch Harbor, AK for much of the summer, with **Lloyd Huff, Glenn McGillicuddy and Luciano Fonseca** (during the FISHPAC cruise). Gretchen acquired sound speed data for her research project, the objective of which is to investigate the sound speed measurement component total propagated uncertainty of MBES depths, and how that may vary when using a subset of available sound speed profiles (SSPs). In order to understand and analyze the spatial and temporal variability at a given location on a small and large scale, the intent was to:

- Take MVP samples every 5 minutes in the same location (at anchor) over the course of several hours.
- Run the ship in a manner such that the ship returns to the same location to acquire SSPs every hour for several hours.

This allowed spatial and temporal influences in SSPs to be separated out and analyzed. The Dutch Harbor

data sets acquired on this cruise were not part of a hydrographic survey but were part of the stand alone data collection initiative to investigate variability which are normally ignored during a routine survey, but are essential to Gretchen's research project.

Fan Gu was in Honolulu, Hawaii in August at the IASTED International Conference on Signal and Image Processing (SIP 2006). She presented her paper (authored with **Yuri Rzhanov** and Alejo Hausner, Assistant Professor, UNH Computer Science Department) titled "Multi-Resolution Quality Improvement for Patch-based Texture Synthesis in Wavelet Domain". In September, Fan presented "Optimal Image Blending for Underwater Mosaics" as part of the Student Poster Program at the Oceans '06 conference in Boston.

Mashkoor Malik spent two weeks on the NOAA ship Nancy Foster in the Stellwagon Bank Marine Sanctuary over the summer. The crew enjoyed gorgeous summer weather while working on the whale tagging and tracking project. Scientists from NOAA Fisheries, Woods Hole Oceanographic Institution, Duke University, the University of Hawaii, the Whale Center of New England, and CCOM/JHC were involved in the project. **Colin Ware** and **Roland Arsenault** worked on visualization of data from whale tags and other sensors, while Mashkoor worked on Multibeam sonar data acquisition and processing.



NOAA Ship Nancy Foster taken from one of the ship's smaller boats (Image courtesy of Stellwagon Bank Marine Sanctuary)

Daniel Brogan, Barbara Kraft and Christian de Moustier attended the Acoustical Society of America conference in Providence, RI in June, where Daniel presented "Comparison of extended Kalman filtering with split-aperture processing for angle of arrival estimation in multibeam echo-sounding" based on work he completed with Christian.

Several students managed to find some time for some non-research related activities: **Val Schmidt** vacationed with his parents and traveled up the coast of Maine and to the Bay of Fundy. **Beccie Conrad** and **Ed Sweeney** got in a little local surfing. **Daniel Brogan** visited his grandmother in Philadelphia in July. **Brian Heap**, who was home in Virginia over the summer, caught up on some “honey-do” projects and has a beautifully tiled bathroom to show for it.

CCOM Begins Planning for Shallow Survey 2008

Planning has begun for the 5th International Shallow Survey Conference, to be hosted by CCOM/JHC in 2008. The conference will be held at the Wentworth-by-the-Sea Hotel in Newcastle and the date has tentatively been set for October 21-24th.

Colovos Rd. Underpass Moves Toward Completion

Completion of the new two-lane street that will connect McDaniel Drive to Colovos Rd. near the Gregg Building, may be finished ahead of the originally anticipated February date. The new underpass will allow pedestrians, vehicles and bicycles to safely share the road. The old one-lane underpass, will eventually be used only as a pedestrian walkway. In addition to addressing safety concerns, the new underpass is part of the Campus Master Plan to create a campus traffic pattern that supports the future vision of a pedestrian-only core campus.

Wedding bells for Abby Pagan and Donald Allis



The newlyweds at the Seacoast Science Center



On July 29th Abby Pagan and Don Allis were married at the Mt. Washington Hotel in Bretton Woods, NH. Congratulations!

Administrative Notes

Open enrollment has begun for all benefits eligible faculty and staff. Open enrollment is the time each year when you have the opportunity to review your benefit elections and make any needed changes. This year, the open enrollment period is Oct. 2nd to Oct. 13th. You can enroll in your 2007 benefits online via a link from the HR website <http://www.usnhhr.unh.edu> or by completing the enrollment forms you received in the mail.

UNH Human Resources will host the 2006 Benefits/Services Fair on Tuesday, Oct. 10th from 10:00 am to 2:00 pm in the Granite State Room of the MUB. This event offers you the opportunity to come by and ask questions of the providers and obtain information about your USNH flexible benefits. Representatives from Harvard Pilgrim Health Care, Northeast Delta Dental, TIAA-CREF, and Fidelity Investments will be there to answer any benefits questions you may have.

The proper grant number to refer to in published papers and posters, when the work was funded by our main NOAA grant, is NA0NOS4001153. This is the official NOAA number--any other numbers are only local UNH accounting numbers.

To make sure you always have the most current UNH mileage rates when completing a travel reimbursement form, bookmark the Controller’s Office website and click on “Travel Forms”:

<http://www.finadmin.unh.edu/controller/travel.html>

UNH will be closed for the Veteran’s Day Holiday on Friday, November 10th and will also be closed for the Thanksgiving break on Thursday and Friday, November 23rd and 24th.

