



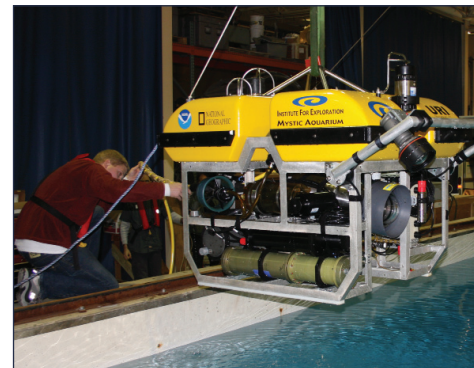
The Anchor

June 2010 • Volume 5 • Issue 1

New ROV Room

By Andy McLeod

After the successful testing of the Little Hercules ROV in January, a more permanent home is being constructed to house future ROVs, including the 8000 lb. Phoenix that NOAA will bring to UNH for redesign, rebuild and testing. To accommodate the Phoenix ROV, and to provide a level of security and safety, a 600 square foot room, equipped with high voltage power and internet connectivity, has been built in the Chase Lab High Bay area. The ROV rebuild will be supported by on-site NOAA engineers and will have a component of student involvement at the undergraduate and graduate level. ⚓



The ROV Little Herc during its layover at UNH.

Summer Cruises

By Linda Prescott

Jim Gardner (Chief Scientist), Brian Calder, Brian O'Donnell and David Armstrong conducted a Law of the Sea research cruise on the R/V *Kilo Moana* from May 17th to June 16th. The cruise departed from Pago Pago Harbor, American Samoa, and arrived in Honolulu, HI on June 16th.



The R/V KILO MOANA. Photo by Bob Chin, University of Hawaii.



The NOAA Ship GORDON GUNTER. Photo courtesy of NOAA/Dept. of Commerce.

CCOM scientists have been called to assist in the oil spill disaster in the Gulf of Mexico. Tom Weber worked from the NOAA ship *Gordon Gunter*, conducting a survey in the area of the subsurface plume near the oil spill site. Meanwhile, Larry Mayer was part of a nine-day research cruise aboard the NOAA ship *Thomas Jefferson*, working with a team whose primary goal was to determine ways to find subsurface oil.

Colin Ware and Roland Arsenault participated in their second Antarctic research cruise, sponsored by the Nicholas School of the Environment at Duke University. Colin and Roland were also part of the Nicholas School Antarctic trip in the spring of 2009.

The purpose of the cruise, which ran from May 7th through June 9th aboard the *Nathaniel B. Palmer*, was to apply suction cup tags to humpback and minke whales to measure their movements during a four to twenty-four hour period. While the tags were recording the whales' movements, the density of krill in the water was acoustically mapped so that information about diving behavior and foraging ecology could be gathered and analyzed. Colin and Roland will use the GeoZui-4D application to plot the whale behavior. ⚓



The NOAA Ship THOMAS JEFFERSON. Photo courtesy of NOAA/Dept. of Commerce.



The R/V NATHANIEL B. PALMER.

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AUV Boot Camp 2010

By Val Schmidt

AUV Bootcamp 2010 was held during the week of June 7th. AUV collaborators from the University of Delaware (Art Trembanis and his lab) arrived for a fun-filled week of adventure in AUV operations. In addition to the dozen or so staff, students, and interns from Art's lab, there were fourteen participants from NOAA, the University of British Columbia, the University of Reykjavik, industry (IVS and Hafmynd), and the United States Naval Academy. Goals for the week included training in AUV care and feeding, mission planning, operations, and data processing.

Boot Camp started on Tuesday with a classroom session introducing the AUV and its operation. The remainder of the week (through Saturday) was spent running missions on Swain's Lake in Barrington, NH. The group rented a house on the lake from which all operations were based. ⚓



Summer Hydro 2010

By Ben Smith

On June 10th, the Summer Hydrographic Field class, under the supervision of Andy Armstrong and Semme Dijkstra, began surveying in the north east corner of the Isles of Shoals, including Duck Island. This is the last area of a three-year effort to survey this area.

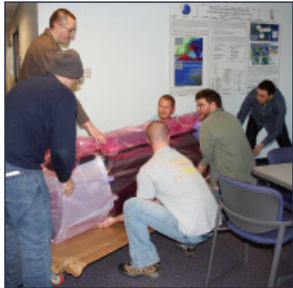
The equipment on the Coastal Surveyor is a Kongsberg dual head EM3002 multi-beam sonar, Applanix POS/MV attitude and position processor, and Real Time Kinematic differential GPS from Trimble. The equipment on the Cocheco is a Moving Vessel Profiler (MVP) from Odium and an Echosound CV single beam sonar from Odom, using a survey transducer from Airmar. Both Odium and Kongsberg provided engineers to instruct the students on their systems.

Ten students participated in the survey, which continued through the week of June 14th and will finish up the following week with data processing and report writing. ⚓





The new plotter arrives. Measure first!



Lift with your knees!



Up the stairs...will it make it around the landing?



Oh no! It's crushing Bert!



Abalone, installed and ready to print beautiful posters.

IT Notes

New IT Charge-Out Rates

As part of the annual budgeting process for the IT Department, we have reviewed the rates that we charge for the various services and equipment provided to the faculty, staff, and students here at the Center. These charges only apply to externally funded research, and are not assessed for work that is covered by the NOAA Grant. We will not charge these fees to existing grants retroactively.

Below is a summary of the charge-out rates for FY2011 that take effect on 7/1/2010. These rates should be used for all proposals generated during the year, until 6/30/2011. The rates are also available on the Grants and Contracts wiki page: [http://wiki/index.php/Grants_and_Contracts_\(OSR\)](http://wiki/index.php/Grants_and_Contracts_(OSR)). Please contact Jordan Chadwick or Brian Calder if you have any questions.

- **User Cost for Principal Investigators: \$684.79 per month**

This fee is new this year, and represents a significant change to the costs for externally funded research. The NOAA grant absorbed this cost in previous years. This fee is assessed monthly to recover the staffing costs for the IT Department. It covers the salary and fringe benefits of the three full-time IT staff (Jordan, Will, and Les) as well as the helpdesk adjunct staff's wages. This cost was calculated based on the the IT staff salaries (including a fringe rate of 42.2% and a Facilities and Administrative rate of 38.2%), divided by the total funded user months (507.25).

- **Data Storage: \$3.59 per GB**

The data storage rate is per Gigabyte (GB) and is a one-time cost. This cost covers the physical equipment (including filer heads and spinning disks), and ongoing maintenance of our Storage Area Network, as well as the tape backup infrastructure.

- **Computer Usage: \$37.54 per computer per month**

The computer usage fee is assessed per computer per month for computers used in the pursuit of your project. This fee covers the physical equipment, software licensing, and the network and server infrastructure that supports each computer.

Notes From Our IT administrators

IT will be auditing all IT equipment and software during the months of June and July. All users may be expected to have equipment on the premises for visual confirmation, as well as for the auditing of software installed on each system. Each user will be contacted on an individual basis to set up times and coordinate the audit of each system and softwares.

CCOM's new plotter is now available for use. Abalone, as it's aptly named, is located on the second floor in the IOCM wing. If you need something large printed and you'd like to use it, please contact a member of the IT staff to show you how to use it first. CCOM's other plotter, Rainbow, is also still available for non-Windows 7 users.

As always, make sure your data is backed up and protected. There are a couple simple steps you can take to make sure your CCOM workstation is receiving the backups it needs.

- Do not turn off your computer before you go home at night.
- If you are a laptop user and have your laptop backed up, remember to leave it here and plugged into a wired Ethernet port from time to time. Ensure that sleep and hibernate are disabled while here. If you rarely keep your laptop at CCOM, periodically coordinate with a member of the IT staff when the laptop will be available so a full backup can be scheduled.
- If you are a programmer, consider using Subversion to supplement the backup of your code. If you're interested, or not sure what it is, ask a member of the IT staff.
- Check on your backups by opening the Networker User client on your system and clicking 'recover.' The file list it will present you will give you the date of your last backup on each file.
- Don't be afraid to check our work—if you have concerns about your backups, please feel free to ask. ↴

Administrative Notes

New CCOM Visitor Parking Information

The Jere A. Chase Ocean Engineering Building has four parking spaces designated for visitor parking. The spaces are located on the left hand side of the building, near the entry to the Highway. To reserve a space for a visitor(s) please contact Brittany Edgar. You can also check the Parking Calendar on the CCOM WIKI to see if a space is available. Please submit your request at least 24 hours in advance.

If a space is available, Brittany will need the person's name, the company they are from, the date you need the space and the reason they are visiting the Center. Brittany will also need your okay to add your visitor to the weekly visitor e-mail that is sent out. (An e-mail will be sent out each Friday letting everyone know who is visiting the Center for the following week. If you do not want your visitor's name included in the e-mail please indicate this in your request.) This information is also used to update the CCOM visitors' log.



On the day your visitor is scheduled to arrive there will be a sign in front of the designated parking space, with his/her name, date and company's name.

If a parking space is unavailable at the Center, the next option is the UNH Visitor's Parking in Lot A. Day permit sales require the license plate number, the arrival and departure dates, and the full daily rate of \$8.00. Let Brittany know if you need assistance in obtaining a

daily pass for your visitor. Another option would be the parking meters at the Visitor's Center. Please go to the UNH Parking website, <http://www.unh.edu/transportation/parking>, for more information.

Please keep in mind that ALL UNH Visitors are subject to campus parking rules and regulations.

Parking Permit Renewal Information

From UNH Transportation Services

How to renew your parking permit if...

You are in Auto-Renew:

- Expect a Renewal Checkup Notice by mid-August delivered to your home address or your UNH e-mail account.
- If you don't receive a Renewal Checkup Notice at your home or e-mail by 8/20/10, there may be problem with your renewal. Call Transportation Services to find out what's up.
- Check that your vehicle and personal information is current (call in updates, 2-1010).

- Check that you do not owe any fines (fines must be paid to stay in Auto-Renew).
- If everything is fine you are set to go. Do not return the Renewal Notice!

You do an annual Standard Renewal:

- Expect a Renewal Application Form by mid-August delivered to your home address or your UNH e-mail account.
- If you don't receive a Renewal Application form by 8/20/10, there may be a problem with your renewal. Call Transportation Services to find out what's up.
- Check that your vehicle and personal information is current (write in updates on the form).
- Check to see if any fines are noted (unpaid fines will prevent your renewal).
- Select a payment option from those offered.
- Mail or bring your renewal form with payment choice to Transportation Services, 295 Mast Road, Durham, NH 03824 before September 1, 2010.

You do not have a UNH parking permit but would like one:

- Eligible employees who don't have a permit to renew but would like one may apply for their original permit. You will not receive anything in the mail this year.
- Obtain a parking permit application at Transportation Services, fill out and submit.
- A new permit application must be accompanied by documentation of your employment.

All unpaid tickets must be paid in order for a permit to be issued/renewed.

Remember to update your home address information with transportation services. (Addresses updated with HR do NOT result in updates to your parking permit record).

All permit holders get a renewal notice at their home address or UNH e-mail. If you do not get yours by 8/20/2010 please contact transportation services at 862-1010. ⚓



Visiting Scholars

In February, CCOM welcomed three visiting scholars.

Jean-Marie Augustin, Senior Engineer at the Acoustics and Seismics Department of Ifremer (the French government institute for marine research), is the conceiver, designer and main developer of the software suite SonarScope®.

Xabier Guinda Salamendi is a Postdoctoral Research Fellow at the Environmental Hydraulics Institute (IH Cantabria) of the University of Cantabria in Spain. Xabier received his Ph.D. from the University of Cantabria in 2008. His thesis dealt with biological and physicochemical aspects regarding the implementation of the European Water Framework Directive.



Larry explains it all to Jean-Marie (left) and Xabi (right).

Sanghyun Suh is a Senior Research Scientist at the Maritime and Ocean Engineering Research Institute (MOERI) at the



Dr. Sanghyun Suh

Korea Ocean Research and Development Institute (KORDI) in Daejeon, Republic of Korea (South Korea). Dr. Suh received his Ph.D. from the University of Michigan in GIS and Remote Sensing. At MOERI, he conducts applied research related to electronic charting, differential GPS, and e-Navigation. ⚓

Farewell Graduates!

Three CCOM students have finished their Master's degrees. We wish them the best in their future endeavors!

Tyler Clark received his MS degree in Electrical Engineering, with his Technical Talk, "Broadband Antenna for DTV Reception."

Rachel Soraruf completed her MS in Earth Sciences with her directed research project, "Geomorphologic Inputs for the Determination of Hydrographic Survey Prioritization."

Bert Franzheim successfully defended his thesis titled, "A Micro-Transponder for Precision Tracking of Underwater Targets." He received his MS in Electrical Engineering. ⚓



Bert Franzheim sports a 'stache to celebrate the end of his defense.

Spotlight On...

In an effort to get to know some of our newer staff members, we asked Brittany Edgar and Colleen Mitchell a few questions. Brittany is part of the administrative team and Colleen is the CCOM graphic designer.

Brittany

Colleen

Where did you grow up?

Somersworth, NH.

Peru...a tiny town in upstate New York.

When you were ten years old, what did you want to be when you grew up?

A photographer.

A princess.

What country would you most like to visit?

Italy.

Italy for the food; New Zealand for the hobbits.

Do you have any pets?

A four month old German Shepherd mix puppy. Her name is Penelope.

Two fat cats named Xander and Ripley.

Any hobbies?

When I have spare time, I love to read!

Right now, I'm spending all of my spare time fixing up my new house.

What is your favorite dessert?

Oh goodness! This is a hard one...my mom's homemade whoopie pies!

I was going to say cheesecake but now I think I need one of Brittany's mom's homemade whoopie pies!

A South African Vacation

By Lloyd Huff

Have you ever day-dreamed of taking an exotic vacation in a faraway place, like Africa? Lloyd Huff and his wife Valerie did just that this past fall. They traveled to Gauteng Province, South Africa and worked for three weeks as volunteers taking care of lion cubs in a wildlife park. The park serves as a research center for rearing animals, including rare white lions, which make South Africa one of the wildlife jewels of the world. The park is also a place where the public can visit to see wildlife up close and in their natural environment. The white lions in the park are not albino; they are a rare genetic variant of tawny lions.

While working at the wildlife park, the Huffs learned about caring for the lions, as they moved through stages: starting as baby cubs in the nursery, being bottle fed three times each day; advancing into being larger cubs living in a semi-open environment and eating specially prepared meals from bowls each evening; and finally being young adult lions eating raw meat once per week. Although working with the lions was the main incentive for volunteering at the wildlife park, the volunteers also worked with a variety of other animals, such as giraffes, aardwolves, hyenas, cheetahs, meerkats and porcupines. In addition to performing other basic care giving duties, like helping to clean out animal enclosures each morning, there were ample opportunities to learn about South Africa from the park staff and to learn about Africa's large predators and smaller mammals. The trip was coordinated by "i-to-i", who assembles teams of volunteers to work at the wild life park and at other interesting venues.

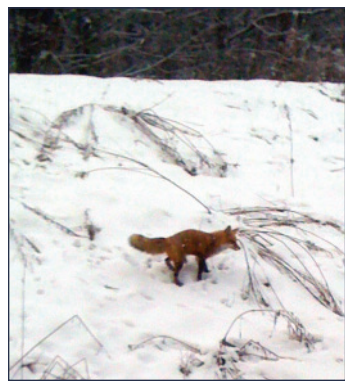
Lloyd and Valerie shared this fun and work at the lion park with six other volunteers from England and Scotland. Each member of the eight-person team of volunteers left South Africa knowing that their labors had been rewarding and that they had been enlightened by the experience. ↓



Fox News

By Linda Prescott

For the last several months, the area surrounding the Chase Ocean Engineering building has been inhabited by one or more foxes. They've been spotted in and around the parking lots and in the woods surrounding the building, usually in the early morning hours. Students in Semme Dijkstra's Geodesy Lab witnessed a fox going into College Woods while they were doing field work. Keeping their distance, several students followed the fox to what was apparently its den where it was greeted by its babies. Foxes have been spotted around Kingsbury Hall, and around the SERC dorms near South Drive. The Fish and Game department has been notified but they don't seem too concerned about our furry friends. Les Peabody saw one fox with what appeared to be a broken leg, but the next day an able-bodied fox was spotted near the same spot, leading us to believe there is definitely more than one fox. There is no indication that the foxes are sick or rabid.



Larry Mayer captured this picture of a fox behind Chase one snowy morning.

From Hinterland Who's Who (www.hwww.ca)

When rabid, the normally shy and elusive red fox shows no fear of people, is often seen in daylight, and may foam at the mouth in advanced stages of the disease. Children should be warned to avoid bold or apparently friendly foxes. Rabies is transmitted through the bite of an infected animal. If a person is bitten, the wound should be washed immediately, and a doctor should be seen on an emergency basis.

Foxes belong to the same family, as domestic dogs, coyotes, and grey wolves. Red foxes probably eat more small mammals—voles, mice, lemmings, squirrels, rabbits—than any other food, although they supplement this with a wide variety of other foods, including plants.

Red foxes hunt by smell, sight and sound. They have excellent eyesight, and the slight movement of an ear may be all that they need to locate a hidden rabbit. They have a keen sense of smell and acute hearing. They hunt mostly toward sunset, during the night, and in early morning.

Dog foxes (males) and vixens (females) are usually, but not always, monogamous. Foxes breed between late December and mid-March. After breeding, the foxes seek a suitable den, which is often an abandoned woodchuck burrow. Pups are born from March through May. Litter size may range from one to ten pups, but the average is five. Red foxes are patient, solicitous, and sometimes playful parents.

At one month, the cubs are weaned. Both parents hunt for themselves and bring back small game for the cubs to play with. In this way, the cubs learn the smell of the prey and how to eat it. For as long as two months, the adults feed the cubs at the den site and train them to hunt, by stalking mice and other small animals. When the young are able to feed themselves, usually at about three months of age, they leave the den site alone. ↓

Rohit's Pilgrimage

CCOM graduate student Rohit Venugopal was home in India over the winter break to make a traditional Hindu mountain pilgrimage to Sabarimala in the Western Ghat mountain range in the southern part of India.

Sabarimala is around 1800 kilometers from my home city of Pune. I flew into Kochi, the closest metropolitan city, and stayed at my cousin's house, where I met up with my parents. From Kochi, it was a two hour drive to the base of the mountain. The hike from the base of the mountain to the temple is around six kilometers. It is a very steep hike and all the devotees have to hike barefoot and the path is deliberately made uneven with sharp stones and pebbles so that the pilgrim experiences pain. It is said that one must endure pain and suffering so as to receive God's blessing.

My father, cousin and I started around 1:00 in the morning and we reached the temple by 10:00 am. Although I found the hike to be extremely crowded, my cousin told me that there were only 1/4 as many people as are normally there.

The pilgrimage is a way to show gratitude to the Hindu god, Ayyappa. During the hike, pilgrims must wear traditional black or saffron clothes, carry a sack of rice/flowers/bananas on the head (the items must first be blessed by a priest at the local temple) and pilgrims must hike barefoot.

My father has made the pilgrimage a few times but this is only my second time. The last time I went on this pilgrimage was at the age of five, and it was much easier since my father carried me on his shoulders. ⚓



This map shows the six-kilometer route that pilgrims follow up the mountain to the temple.

Monica in Portugal

We interviewed graduate student Monica Wolfson about her fascinating Portugal vacation in March.

Where did you go and why?

I went with six other folks from Chesley Brook Stables in Dover to Alcainca, Portugal, in order to train for a week at the Escola de Equitação de Alcainca. We rode Lusitanos, a Portuguese breed known for their agility, grace, and elevated movement. They were originally bred for war, dressage (precision movement on the ground) and bull-fighting, and are still used today for the latter two. Lusitanos have the ability to move so gracefully that it looks as though they are dancing. They can prance in place, or lift up onto their hind legs and hold the pose for several seconds.



Monica (far left), seated on Vigilante, poses with fellow riders from Chesley Brook Stables.

How long were you gone?

We stayed at the riding school for a week, riding twice a day for an hour and a half each ride. The riding was intense but amazing. I absolutely fell in love with Vigilante, the Lusitano pure-bred stallion that I rode for most of the week.

How long have you been riding?

I started riding when I was 8 years old at summer camp. This quickly turned into weekly lessons and, eventually, owning and competing with my own horse. I used to compete in three-day events, in which horse and rider compete in dressage, cross-country (where you are tested on speed, endurance, and jumping ability over courses that can range between two and four miles over all sorts of natural obstacles, including water jumps, logs, and bank drops) and stadium jumping. I had to stop riding when I left for college, but I started up again when I moved up here in 2007. I have also volunteered with a few different therapeutic riding centers both here at UNH and back in Florida.

Highlights from your trip?

For most of the week, my companions and I were divided into two groups for riding. The final ride of the trip, however, we all rode together in formation. It looked like something you would see if you have ever been to watch the Lipizzaner stallions perform when they come to UNH each year. Lipizzaner are similar to Lusitanos, except that have Spanish origins. ⚓

Congratulations!



Brittany with her new husband Gabe.

On January 2nd, Brittany Buzzell and Gabriel Edgar were married at Tri-City Covenant Church in Somersworth. They honeymooned in Cocoa Beach, Florida and are now making their home in Dover.



Jordan plants one on baby Molly.

Congratulations to Mary and Jordan Chadwick, who welcomed their first child, Molly Jane Chadwick on April 17th.



Big sister Gracie holds baby Maria with an assist from Val.

Congratulations to Val Schmidt and Alice Sneary on the birth of their daughter, Maria Maxwell Schmidt, who was born on May 25th.

Bring Your Kids to Work Day

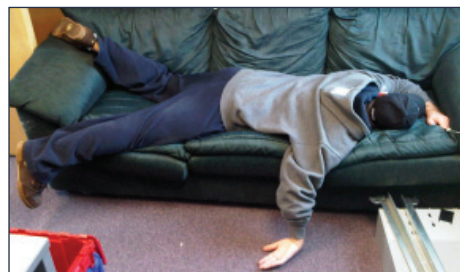
The first annual Chase Engineering Lab Bring Your Kids to Work Day was held on Wednesday, April 21st. Thirteen kids participated in a fun-filled morning that included an interactive VisLab demonstration by Roland Arsenault, a wave tank duck race manned by skilled duck-catcher, Andy McLeod, an egg hunt in the CCOM courtyard, and a visit by the UNH Marine docents, who brought a touch tank of interesting marine creatures.

The award for Most Energetic Kid was shared by Maureen Claussen and Briana Sullivan (big kids at heart), who presided over a rousing game of Red Light, Green Light in the courtyard.

The day was capped off with pizza and ice cream sundaes in the lunch room. ⚓



CCOM kids almost stand still for a group photo. View more pictures at www.flickr.com/photos/ccom_jhc.



Lester Peabody collapses after helping to judge the chili cook-off (note the stretchy pants).

CCOM Can Cook!

Two cooking competitions (just for fun!) helped us get through the cold New England winter. In December, Will Fessenden won the Chili Cook-off with his "Meat-normous" chili, but all seven entries were delicious.

In April, a Soup Cook-Off was judged in categories. Linda Prescott won Best Vegetarian with her Cream of Broccoli Soup; Andy McLeod won Best Meat Eaters with his Crockpot Crab Soup; Maureen Claussen won Most Unique with her Turkish Pea Soup; Shachak Pe'eri won Most Like Grandma's with his Matzoh Ball Soup and Colleen Mitchell won Best All Around with her Roasted Garlic and Parmesan Soup.

A CCOM cookbook is in the works. Any suggestions for the next cook-off? ⚓

The Anchor is published three times a year by the Center for Coastal and Ocean Mapping/Joint Hydrographic Center.

Editor: Linda Prescott • Graphic Designer: Colleen Mitchell • Outreach Coordinator: Briana Sullivan

Images are provided by the Center, unless noted otherwise. This issue's banner graphic is bathymetry of the Sigsbee Escarpment in the Gulf of Mexico, courtesy of Dr. Jim Gardner and the 2007 Law of the Sea Cruise.

We welcome comments and suggestions.