



R/V *Cape Hatteras*

“NEWS FROM THE R/V CAPE HATTERAS”

DUKE/UNIVERSITY OF NORTH CAROLINA
OCEANOGRAPHIC CONSORTIUM
CONSORTIUM NEWSLETTER

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2010 REVIEW

2010 was a very busy year for the *Cape Hatteras* program, highlighted by the *Cape Hatteras* sailing to the Gulf of Mexico as part of the national response to the Deepwater Horizon catastrophe. In this edition of the DUNCOC newsletter, we review the 2010 sailing season, including an article on the Gulf of Mexico activities and some of the challenges faced by the scientists and crew on these cruises.

Joe Ustach, Executive Officer of DUNCOC, retired and was feted at the DUNCOC annual meeting. Joe has been with the ship from almost the beginning and has been the anchor for consortium activities, ship scheduling, and technical services. We are pleased that he will continue to be an advisor to DUNCOC activities. Ms. Beth Govoni was hired as the new Executive Officer this January, and we will introduce Beth in the next newsletter this fall.

NSF released an “Intent to Release a RFP...” for the construction of three new regional class vessels and the RFP will likely be released at the beginning of the summer, with proposal submission sometime in the fall. More information is available on the NSF OCE website (<http://www.nsf.gov/>



The Gulf of Mexico on fire

Photo by Tina Thomas

[div/index.jsp?div=OCE](#)). Stay tuned.

One of the topics we have been interested in over the last few years is sustainability on the *Cape Hatteras* and other UNOLS vessels. Mark Smith carried out an experiment using used vegetable oil from Morehead restaurants to fuel one of the generators, and this worked out well and demonstrated the feasibility of using biodiesel as a fuel source. Greening the academic research vessels is one of the UNOLS objectives this year and will be the focus of a workshop to be held in January 2012 at the Nicholas School of the Environment. We hope to bring together marine architects, designers, UNOLS

representatives, NSF, ONR, NOAA, and companies from the private sector to determine how to make existing and future academic ships more sustainable.

We have been working on a new outreach program to create a speaker series to campuses in North Carolina that are not part of DUNCOC, and some details are outlined in this newsletter. We hope that some of you will participate in this program so that we can reach out to students in the coming year.

We hope you enjoy this newsletter, which was edited by Alicia Bihler, a Duke graduate student working this year on *Cape Hatteras* outreach projects. If you

have any ideas for articles in future issues, please send them to us.

Regards,
Bruce Corliss
Director

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CRUISE YEAR 2010

2010 was an unexpectedly heavy year for *Cape Hatteras*. In late 2009, the 2010 schedule had 134 funded days. That is 46 days short of her ideal full schedule of 180 days. By the end of the year, the schedule had grown to 202 days. The ship and crew were pushed as hard as they have been in a long while and even NSF had to postpone its ship inspection until 2011.

The year started off with no cruises in January and an 8 day NOAA cruise, headed by Wilson Laney, in February. This is NOAA's annual winter fish tagging cruise trawling for striped bass, sturgeon, and shark, among other fish.

Laney is working hard to get this to become an annual part of our schedule. In March, the ship made her first foray to the Gulf of Mexico with Steve Lohrenz's spring study of carbon cycling along the Mississippi River runoff into the Gulf. The 13-day cruise was the fourth and final cruise of his study that began in 2009.

The second spring Gulf cruise was Warren Woods' 15-day cruise to test the Navy's Deep Towed Acoustic/Geophysical System (DTAGS). DTAGS is used to test for sediment anisotropy in soft sediments. Next, the ship sailed from Gulfport, MS to Galveston, TX to pick up Terry Quinn's cruise in the western Gulf. In an 8-day NSF funded cruise, the ship and crew took numerous multi-core and Giant Gravity Core samples. The Quinn lab will use these cores



Marine Technician Tina Thomas with dead pyrosomes

Photo by David Valentine, UC Santa Barbara

to determine the climate of the Gulf for the period 3000 to 5000 years ago. After 56 days away from her home port, the ship returned to Beaufort on April 29. She passed the Deepwater Horizon spill and managed to get some photos of the smoke and some of the ships.

After a lull in early May, the ship's next cruise left Beaufort on May 20 on a 2 week NSF cruise for Brian Binder. This was the second and last cruise of a two-year study looking at predation and the structure of picoplankton communities. The lull in early May was just the calm before the storm. NSF was gearing up its Rapid Response program for the oil spill and *Cape Hatteras* was going to take part. We got to shoehorn in two cruises to the Gulf be-

tween the end of the Binder cruise and the beginning of Joe Pawlik's two-ship dive cruise in the Bahamas.

These cruises were very demanding. Rebecca Stephens Smith, Marine Superintendent, had to get the ship's crew and the science party outfitted with hazmat suits, distribute and install sensors for hydrocarbon aerosols within the ship and along the working decks, and all personnel had to be fitted for respirators in case the aerosol sensors detected dangerous levels of hydrocarbons. The ship would be working in oily waters and unable to run the reverse osmosis water making system. Smith had to find arrangements for a fresh water supply or the ship could only stay out for 7 days. In addition, the ship had to be

decontaminated before she returned to a port.

One of the most difficult challenge was the media. All sorts of people wanted to get on board and film, record, tape, or interview the PI's on the cruises. Smith provided information on charter vessels, coordinated times for the media reps to get to the ship, and kept the science parties and crew informed of what was going to happen and when it would happen.

Most of the media folk were interested in the first Rapid Response cruise, John Kessler's (Texas AS&M) methane analysis. The main thrust was to measure the amount of methane that was dissolved in the water column and the amount emitted to

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CRUISE YEAR 2010 CONTINUED...

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the atmosphere. A second goal was to measure changes in water column dissolved oxygen due to oxidation and bubbling of methane.

The second Rapid Response cruise was a short five day cruise to deploy two sediment traps for Chris German. These traps were placed close to two previously deployed sediment traps so there can be a comparison of pre- and post spill data. Even on this short cruise, there was a National Geographic correspondent that went along on it.

After the Rapid Response cruises, *Cape Hatteras* returned to her normal schedule. She steamed to Florida to start a two-ship cruise for Joe Pawlik to study sponge ecology in the Bahamas. The cruise was completed successfully and *Cape Hatteras* and crew were back in Beaufort by mid-July.

The next two weeks were busy getting ready for a hectic summer and fall. The first cruise in August was an 8-day cruise to obtain preliminary data and operation information for a Navy-funded exercise that will span a couple of years. Jim Ledwell from WHOI experimented with different dye concentrations and deployments. This cruise is in preparation for a large, three ship and aircraft operation in 2011. The three ships are *Cape Hatteras*, *Oceanus*, and *Endeavor*, and the aircraft will come from Patuxent Naval Air Station in Maryland.

Two days after this cruise, *Cape Hatteras* left for the Gulf again. This was a two-ship operation with *Oceanus* and originally scheduled to study the nitrogen fixing planktonic communities in the Gulf. But after the oil spill, Joe Montoya and Tracy Villareal agreed to change the focus of the study to investigate the spill's effect on plankton.

After the 30-day Montoya/Villareal cruise, the ship and crew had to prepare for Steve Ross' (UNC-W) cruise looking at deep coral systems in the Gulf. This cruise included a large ROV component and complex logistics. The ROV, *Kraken II* from UCONN, has its own electronics van, winch system, and operators. These had to be loaded on the ship along with Ross' sampling gear and the ship's instrumentation. The cruise departed Gulfport and sailed to sampling sites off Florida and returned to Tampa/St. Petersburg for offloading. From there, the ship sailed back to Gulfport, towing a continuous plankton recorder for one last day's worth of sampling for Tracy Villareal.

Back in Gulfport, the crew prepped for the last Gulf trip for the year. Kevin Yeager and his team from the University of Southern Mississippi were funded through BP

to look at the effects of the oil spill on surface, water column, and sea floor processes. Another busy 10 days of water sampling, multi-coring, plankton towing, and box coring took place. On October 22, the ship and crew departed Gulfport for the return home. They arrived in Beaufort on October 27 and got ready to sail for Carol Arnosti's (UNC-CH) Consortium cruise on November 1. This 5-day trip looked at differences in microbial dynamics on particles from coastal runoff out to the shelf and shelf break. While this was supposed to be the last trip of the year, the National Buoy Data Center (NBDC) used *Cape Hatteras* to replace a buoy off Wilmington in late November.

- Joe Ustach

UPDATES ON INSTRUMENTATION



Mega-corer

IN 2009 *CAPE HATTERAS* made several requests from the National Science Foundation (NSF) for new pieces of equipment. This request included three new pieces of instrumentation and two requests for Shipboard Scientific Support Equipment (SSSE) that could improve the functioning of the requested instrumentation.

The first instrumentation requested was a Remotely

Operated Vehicle (ROV) that would have a depth limit of 500m. This request was declined by NSF.

The request for the ultra-cold freezer that would be able to reach temperatures as low as -86°C and allow research parties to preserve organisms and organic compounds was approved.

The request for a mega-corer that would allow research

parties to take 12 simultaneous samples of up to 400mm length was also approved by the NSF.

All SSSE requests—a portable side winch and a wire pool system—were declined because NSF is setting up central pooled resources for portable winches and wires.

-Alicia Bihler

LOOKING AHEAD TO 2011



THE 2011 SCHEDULE for *Cape Hatteras* is beginning to pick up as we move through the new year. At this time there are 121 operating days funded for 2011. The year started off with a four day cruise for the Navy and a day cruise for the United States Coast Guard.

The first cruise of 2011 was for the Space and Naval Warfare Systems Center Pacific. The objective for the *Cape Hatteras* was to provide an underwater sound source on specific navigational tracks for a deployed listening array. This cruise was prolonged by a day due to severe weather.

Cape Hatteras was used in a role play exercise for the United States Coast Guard for an overnight anti-terrorism

drill. The ship set sail only to be boarded later that evening by Rangers in search of hostile enemies. The objective of the cruise was to provide a stage for the USCG Maritime Security Response Team to practice offensive operations against maritime threats.

The 2010 NSF inspection was held on March 29 and 30, 2011. A week prior to the inspection, the *Cape Hatteras* had just returned from its bi-annual shipyard period. The entire crew, including all the shore staff for the vessel, worked diligently to make sure the ship was in pristine condition. Efforts paid off as we received excellent reviews from the inspectors. A full report should be available in July, 2011.

In May, the schedule begins

to heat up. There are two seven day NSF-funded cruises scheduled off the coast of North Carolina. The first, led by Dan McCorkle and Joan Bernhard, is a foraminiferan hunting cruise. The second cruise is Ken Halanych's study to assemble the Annelid Tree of Life. Both of these cruises will use a variety of sediment sampling gear.

In June, *Cape Hatteras* joins WHOI's *Oceanus* and Rhode Island's *Endeavor* for a Navy and NSF-funded three ship operation off of North Carolina's coast. The goal is to measure lateral mixing and dispersion in the upper layers of the sea using dyes and LIDAR. Night flights from the Patuxent Navy base will also be utilized. This marks the second year of the ship's participation in this study. *Cape*

Hatteras did a dye test cruise for this study in 2010. This study has the potential to continue for two plus years beyond 2011.

Nearly as soon as the LIDAR cruise ends, the ship sails for Charleston harbor on a four day study of organic materials in the harbor sediments. Soon after, she goes into the Gulf of Mexico for a two ship cruise (with *Endeavor*) for Joe Montoya and Terry Villareal. In 2010 the focus of this cruise changed to study the effects of the Deepwater Horizon spill on planktonic communities. In 2011 this study will go back to its original emphasis and look at the nitrogen fixing plankton in the Gulf.

The ship will stay in the Gulf

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LOOKING AHEAD CONTINUED...

(Continued from page 4)

for Dale Bibee’s cruise utilizing the Navy’s DTAGS to listen for low acoustic noise in fracture areas around methyl hydrate concentrations. Before the ship leaves the Gulf, we hope to have one more cruise from Ken Yeager and his group from the University of Southern Mississippi. This would extend for 12 days if the funding comes through. The ship

would be back in port by the end of August.

For the fall, three five day cruises are scheduled for Tom Herbers off the New River Inlet. These cruises will study wave, current, and tide interactions in inlets and rivers. These cruises involve deployment, turnaround, and recovery of moorings, tri-pods, and other bottom sensors for these measurements.

Finally, somewhere among

these cruises, we will fit in the Consortium Cruise. Look for the request for proposals for the 2011 Consortium cruise coming soon!

-Joe Ustach and
Beth Govoni

SPEAKER SERIES

DUNCOG is starting a lecture series that is targeting North Carolina University schools lacking an oceanographic program to increase awareness and to encourage students to pursue a marine science career.

This new speaker program will be initiated in the fall of 2011.

THE CREW OF CAPE HATTERAS

A COMMENT FROM Kevin Yeager’s post cruise assessment shows the Consortium’s strongest link, the ship’s crew. Yeager’s cruise was the last in the Gulf, and it was after the crew had been in the Gulf for 82 days straight.

“It was the consensus of the

senior scientists aboard, some of whom have been conducting research at sea for more than 30 years, that the *Cape Hatteras* crew was the finest crew they had ever worked with. Again, this crew could serve as an effective example of how a research ship’s crew should operate a vessel.”

This will be the first of several feature articles on the *Cape Hatteras* crew. The 0800 to 1200 watch, the second shift engineer and a marine technician provide insight on how they make *Cape Hatteras* a unique research vessel.

“THIS CREW COULD SERVE AS AN EFFECTIVE EXAMPLE OF HOW A RESEARCH SHIP’S CREW SHOULD OPERATE”

CAPTAIN DALE MURPHY

HOME TOWN Davis Shores, North Carolina

28 YEAR crew member

HOW DO YOU BREAK THE ICE?

I make sure the scientists understand that the science is why we are all onboard the HATTERAS. After lunch I typically do a round on deck and the lab space. I speak to everyone, even the undergraduate student in the corner, at least once a day to ensure they have what they need. I reiterate that we, the

Cape Hatteras crew, are there for them.

HAS THE CAPE HATTEARS CHANGED OVER TIME?

YES! The way that we conduct our operation has changed immensely. We have increased the time for science while decreasing the required labor by using improved instrumentation and technology. For example, a Nisken cast once took 2-3 hours for a single cast at a reasonable depth, and it would take 3 casts to capture what the

CTD does now in roughly 30 minutes. The data was once recorded on reams of paper and now the scientist walks away with all of the information stored on a disk. The means of navigation has also changed. We once relied on a sextant to get us “close” to a given location and now use a GPS for exact positioning.



BOSUN JOHN NELSON



HOME TOWN Davis Shores, North Carolina

20 YEAR crew member

FAVORITE PASTIME AT SEA?

Fishing! There is nothing like fresh fish. Once I finish my watch rotation, I will throw a line over the side if it looks fishy. Of course I have to consider what scientific operation is taking place and make sure I do not get in the way. I like to fish specifically for mahi-mahi using an artifi-

cial lure—blue and white islander. The biggest mahi-mahi I caught was around 35 lbs.

WHAT SKILLS DO YOU BRING TO THE SHIP?

As the Bosun, the senior man on deck, I work with the scientists helping to deploy and recover the instrumentation. The crew members on deck spend more one-on-one time with the scientists than the mate on watch. I am on the

ground with the scientist ensuring there are appropriate tag lines and people to deploy and retrieve. I am there when we pull up the instrumentation and one of the first to see the results.

ENGINEER ROBERT VANETTEN



HOME TOWN Beaufort, North Carolina

3 YEAR crew member

WHAT DO YOU MAKE SURE TO BRING WITH YOU ON CRUISES?

Depending on how long the trip is I will bring a “hobby” project to work on when I am not on watch. I build radio controlled high speed boats. I work off of a plan, but start

with just pieces of birch/mahogany plywood. This is a time consuming and tedious project, great for sea.

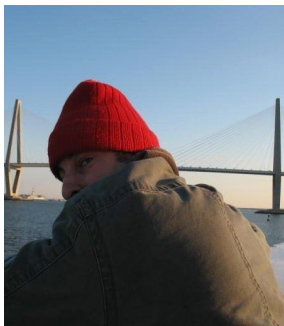
FAVORITE PASTIME AT SEA?

Fishing! I like to fish for anything edible—tuna, dolphin fish, wahoo. My favorite lure is red and white sea-star islander and the biggest fish I have caught is a 65 lb wahoo.

HOW HAS THE *Cape Hatteras* CHANGED?

I would say that we have maintained and improved our customer service. The crew is very aware of the mission, science.

MARINE TECHNICIAN STEPHEN JALICKEE



HOME TOWN Baltimore, Maryland

2 YEAR crew member

WHAT DO YOU MAKE SURE TO BRING WITH YOU ON CRUISES?

Flash drive. Pocket protectors are no longer socially acceptable.

FAVORITE PASTIME AT SEA?

Reading and listening to music. I enjoy listening to what the scientists bring on board

as well as sharing my collection. I am always amazed at the different types of music. There is typically an artist that I have not heard and that I like. Great exposure!

HOW HAS THE *Cape Hatteras* CHANGED?

The operation has become and is continuing to become more efficient. We are becoming aware of our personal decisions and how they affect

the environment. The ship is 29 years old, but we are making necessary changes—behavioral and operational—where possible to make the HATTERAS a greener operation.

Editor’s Note: Steve Jalickee left the *Cape Hatteras* program in December to take a position at the University of Washington.

THE *CAPE HATTERAS* IN THE GULF OF MEXICO



Bobby Daniels on a heavy burning day

Photo by David Valentine, UC

THIS SUMMER PROVED to be a logistical challenge for the *Cape Hatteras*. With the explosion of the Deepwater Horizon well head on April 20, 2010 the *Cape Hatteras* had to prepare for cruises with only a fraction of the time usually needed.

In June, John Kessler of Texas A&M University led a team of 12 on an NSF-funded cruise to the Gulf of Mexico, his first cruise on the *Cape Hatteras*. By the time the NSF approved funding for the cruise, only two weeks remained to prepare for departure, a process usually done over six months.

Kessler attributes the success of overcoming this challenge to three key factors. The team he assembled had all worked together before. Each member needed little oversight to prepare for departure. Being such a high profile cruise and in the spotlight,

with the help of media attention, the team had an unprecedented amount of aid from the private sector. And, lastly, the crew and shore based crew of the *Cape Hatteras* were “fantastic” at getting the ship ready for departure.

Kessler’s interest in the oil spill stems from his research in the cycling of gases in deep water environments. Kessler is looking at the role methane emissions have played in climate change, as the ocean serves as one of the largest methane reservoirs.

No lab exists where the amounts of methane equal to that released in the oil spill can be released and the impact observed. Kessler’s team treated the spill as a natural lab. “What might this tell us about methane emissions that are natural?” Kessler asks. Little is known about how methane cycles in the

deep water. Is it released to the atmosphere, or does the methane stay submerged underwater? Or will it be consumed by microbes, potentially leading to oxygen depletions in the water?

With 10 days to tackle these questions, the team set to work. CTD casts were done on the order of 4 to 5 casts a day. “We were trying to see how much methane made it up to the surface, and how quickly it was being released to the atmosphere,” explains Kessler. Fortunately, sampling the surface was an automated process, freeing up the scientists to process samples recovered from the CTD casts.

The team measured various natural gas components to see where they were dissolved in the water. In addition, the team collected water samples and incubated these samples to determine the rate at

which methane was being degraded.

A month after Kessler’s cruise, another team set out in the Gulf of Mexico for 27 days. Like Kessler’s cruise, this one also had its own logistical challenge--recasting the original project. Joe Montoya, of Georgia Institute of Technology, and University of Texas--Austin based scientist Tracy Villareal had a cruise scheduled for the Gulf of Mexico in August. The planned cruise was to investigate nitrogen fixation in the Gulf of Mexico in the open Gulf, and how the fresh water influence of the Mississippi River affects the rates and types of nitrogen fixers.

As a result of the Deepwater Horizon spill event, the planned NSF funded cruise was quickly recast. “Not only was it a great opportunity, the spill was of such a magnitude, and right in the heart of where we were working, it made no sense to go out there and study processes that could have been totally compromised by the hydrocarbons,” explains Villareal. If they had continued with the original project, there would always be a question mark with whatever they found.

Having recast the cruise, Villareal and Montoya’s team looked at the biogeochemical impact of the spill. The team performed high resolution vertical water sampling to develop a “better understand-

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IN THE GULF CONTINUED...

ing of the [oil spill's] impact on the nutrient and oxygen fields," explains Villareal. The CTD on board the *Cape Hatteras* proved to be one of the most useful instruments. With its 24 bottle collection capabilities, the team was able to collect nutrients, oxygen

levels, and occasional samples of dispersants throughout the water column.

Looking ahead, Villareal and Montoya would like to get back to the work they were originally funded to do. Villareal highlights the need for

more work in the Gulf to establish a baseline, "because we do not have a baseline, it is going to be very difficult to gage the impact of the spill."

-Alicia Bihler

"A CAPABLE
SCIENTIST,
CONSCIENTIOUS
WORKER, AND A
VERY SMART
PERSON"

BON VOYAGE JOE USTACH

WHEN JOE USTACH first joined the Consortium in 1982, he had recently finished a post-doc with Bill Kirby Smith surveying benthic hard bottom habitats off the North Carolina coast. Reluctant to leave his home in Beaufort, "a job opened up and I took it," jokes Joe. The Consortium was in its nascent years and with the *Cape Hatteras* newly commissioned, Joe Ustach became the ship's first Executive Officer. In a career that

spanned 28 years, Joe oversaw scheduling, budgets and proposals, the marine technician program, and ensured the ship was well prepared for researchers needs.

A native of Springfield, Massachusetts, Joe's early interest in the marine sciences stemmed from Jacques Cousteau's programs on TV. Later, at Rutgers University, Joe started his work in marshes, influenced by the research interests of one of

his professors. This early work in marshes led to a PhD at North Carolina University while working at the NOAA lab on Pivers Island, marking the start of Joe's life in Beaufort.

As Joe's post-doc came to a close, Dick Barber, the consortium's first director, was looking for help. "It was a question of technical help. The demanding job would be dealing with NSF, writing proposals, and developing the ship's annual schedule. The job required someone who knew the science," explains Barber. The title of the new position: Executive Officer. Barber knew Joe from the small marine lab community at Duke, and knew of Joe's reputation for being "a capable scientist, conscientious worker, and a very smart person," from his post-doc work with Bill Kirby Smith.

The Executive Officer faces two great challenges every year: securing a good instrument proposal to help equip the ship, and scheduling the ship. These two go hand in hand with sticking to the

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Dr. Joe Ustach, DUNCOC Executive Officer

BON VOYAGE CONTINUED...

budget. As to the instrument proposal, Joe explains it is important to get “something the ship can really use and can help to sell the ship better.” Over the 28 years as Executive Officer, Joe has acquired several sediment sampling cores, including a piston corer, three box cores, a gravity corer, shipek grab, and a giant gravity corer, a new CTD, a backup CTD system, and upgraded the ship from a 12 bottle water sampler to a 24 bottle water sampler.

The *Cape Hatteras* “is a small program, always oriented toward users. Everybody understands the job is to get the science done,” explains Barber. To get the science done as Executive Officer, Joe not only secured the instrumentation needed on *Cape Hatteras*, but worked diligently on her schedule. Joe has become a master of balancing the needs of the ship/consortium with the needs of the UNOLS community. Not an easy task. As Barber explains, “there is competition, but scheduling is also done cooperatively.”

In his wake as Executive Offi-



Dick Barber, Joe Ustach, and Bruce Corliss

Photo by Alicia Bihler

cer Joe leaves two legacies behind. The first, initiated by Tom Johnson, the consortium’s second director and maintained by Joe and the director, is the annual Consortium meeting. This year marked the 24th meeting, with the exception of one canceled due to a hurricane. But, Joe will joke, technically “Paul Baker showed up to go fishing when no one else did.” Dave DeMaster, a researcher at North Carolina State University, explains the ultimate goal of the Consortium meeting is to get marine scientists together, advertise the ship,

and “get people on the *Cape Hatteras*.”

The second legacy is an outreach program developed for North Carolina University schools. This program offers NC students the opportunity to go out on *Cape Hatteras* and experience firsthand the activities and type of research that is currently being done on oceanographic research vessels. “Joe has been an enormous help by working with the *Cape Hatteras* schedule and making the educational experience enjoyable, even for the novices,” explains DeMaster, who has taken many of his students

out on these educational trips. Several factors have played a role in Joe’s success as Executive Officer. He cites the continued support from the Consortium and its members, directors both past and present, and the technicians he supervised as all playing a role. “They all made it fun and interesting. Different personalities, all were fun to work with,” remembers Joe.

With retirement fast approaching, Joe looks forward to playing more music. Joe is the baritone sax in a big band, and the clarinet in a community band. Now with all his new found free time Joe jokes, “is hoping to play music a little more seriously.”

Joe’s presence will be missed at the marine lab on Pivers Island. This was clearly expressed at the consortium’s meeting in November when several consortium members gave tributes to Joe. Congratulations Joe on a successful career as the Executive Officer of *Cape Hatteras* and best wishes as you embark on the next chapter—retirement!

-Alicia Bihler

NEWS IN BRIEF: GREEN BOATS WORKSHOP

UNOLS IS PLANNING to host a workshop to green the U.S. academic and federal research fleets. This workshop will focus on methods to reduce the environmental impact of the oceanographic and federal research fleets to make the fleets more sustainable.

Members of the oceanographic community will be brought together with marine architects, engineers, consulting firms, and LEED experts as well as representatives from UNOLS, NOAA, the Office of the Navy, and NSF to discuss greening the fleets.

This workshop aims to: 1)

promote environmental sustainability within UNOLS, 2) develop guidelines for construction, operation, and recycling of UNOLS research vessels, 3) develop a set of green vessel guidelines, 4) promote environmental awareness of UNOLS ships among research scientists and students, and 5) incorporate

environmental sustainability in Ocean Class and Regional Class vessel construction and operation.

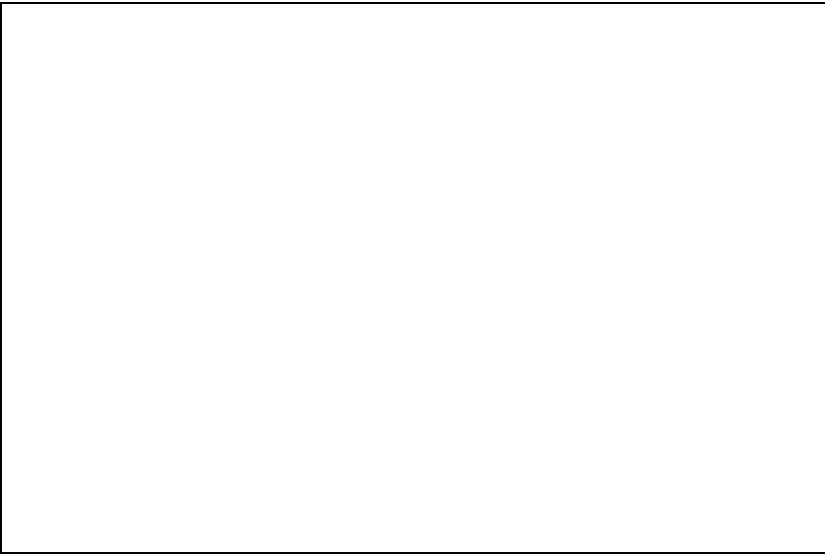
The workshop will be held in January 2012 at the Nicholas School of the Environment, Duke University, and is being organized by Bruce Corliss, UNOLC Chair and Director of DUNCOG.



R/V *Cape Hatteras*

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R/V CAPE HATTERAS is owned by the National Science Foundation and assigned through a Charter Party Agreement to Duke/University of North Carolina Oceanographic Consortium. The Oceanographic Consortium is comprised of: Duke University, University of North Carolina-Chapel Hill, North Carolina State University, University of North Carolina-Greensboro, University of North Carolina-Wilmington, East Carolina University, and University of North Carolina Coastal Studies Institute. Duke University Marine Laboratory provides the operations base for *Cape Hatteras* on Pivers Island near Beaufort, North Carolina

CONSORTIUM MEETING IN REVIEW

ON FRIDAY, NOVEMBER 19, the annual DUNCOC meeting got underway at 1pm at the Duke Marine Lab on Pivers Island, Beaufort, NC.

Friday afternoon's symposium included 15 minute presentations that spanned from the use of isotope samples in shells to determine monthly seasonal sea surface temperatures (Jose Rafael Garcia-March/UNC-CH) to a new satellite to measure sea surface salinity (Fred Bingham/UNCH-W) to effective management tools for hydrothermal vent mining (Cindy VanDover/Duke).

At 6pm the Consortium joined together at the Marine Lab Dining Hall for dinner and drinks. Following dinner, the group moved to the Repass Center for drinks and air cigars! After the party retired to the Repass Center, a nice celebration was held to celebrate Joe Ustach's coming retirement. The audience was entertained with a slide show of Joe from his first days on the *Cape Hatteras* in 1982, to some pictures from the last few years. Many people shared some kind words. Included were Captain Dale Murphy, John Morrison, Dave DeMaster, Dick Barber, and Bruce Corliss.

Bruce Corliss explained the sentiment of the evening, "Over the last 28 years, Joe has played a critical role for the ship. He is the heart and soul of the ship. Joe is the anchor of the ship." The evening concluded after Joe was presented with an engraved marine wall clock by Bruce and Dick Barber.

Talks resumed on Saturday morning with coffee and treats at 10am. The morning talks included modeling the circulation of oil after the BP oil spill (Roy He/NCSU), and the use of chromatograms to determine if the

BP oil has a specific signature, and concluded with Donna Surge's talk on the use of limpet shells for more detailed seasonal sea surface temperature during the medieval climate anomaly.

-Alicia Bihler