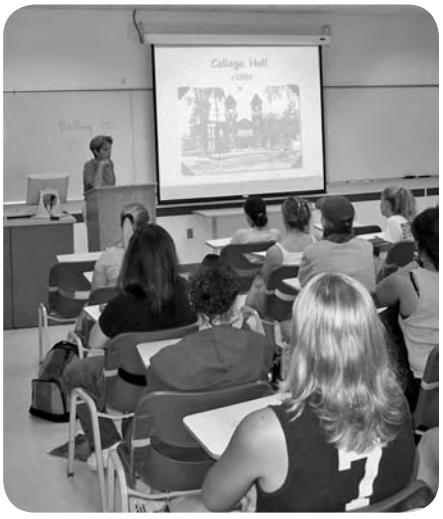
NEWSLETTER NO. 29 FALL/WINTER 2005
FLORIDA STATE UNIVERSITY
Oceanography

Changes at Oceanography

Marcus Named Dean of Graduate Studies

Dewar Appointed Chair



Nancy Marcus lectures on "Women in Science" to students participating in the Women in Math, Science and Engineering (WIMSE) program. Marcus is the founding director of the program.

The FSU Department of Oceanography is proud to have a new dean on its faculty. **Nancy Marcus**, a Robert O. Lawton Distinguished Professor, the Mary Sears Professor of Oceanography and former chair, was named Dean of Graduate Studies by FSU Provost and Executive Vice President Lawrence G. Abele.

As Dean of Graduate Studies, Marcus will oversee the university's policies and procedures relating to more than 200 graduate programs, including 73 doctoral programs. She will coordinate the university fellowship program and minority graduate fellowship program, approve faculty to teach at the graduate level and grant them permission to supervise master and doctoral students.

Marcus has also been charged with helping secure FSU President T.K. Wetherell's vision of FSU becoming a top graduate research institution and a member of the elite American Association of Universities through increasing the number of PhD graduate students attending the university.

"The view from the Dean of Graduate Studies Office has given me a totally new appreciation for the breadth of the graduate programs at Florida State University and the diversity of our students," Marcus said. "The next few years will be especially exciting times for our office, since doctoral education will be an integral part of the new Pathway to Excellence initiative at FSU."

With Marcus' promotion to Dean of Graduate Studies, the search for a new department chair commenced. According to **William Landing**, chair of the search committee, "Searching for a departmental chair is like a bear attacking a group of campers. As the campers run away, the bear only catches the slowest runner. In our recent chair search, Dewar was obviously the slowest runner....." Yes, after much denying and dragging of feet, **William Dewar**, the Pierre Welander Professor of Oceanography, was appointed chair by Interim Dean of the FSU College of Arts and Sciences Joseph Travis. He will serve a three-year term.

"Nobody gets out of here alive." Those are the first words of our new chair. Dewar continues, "I want everyone to remember that I didn't ask for this job. I was coerced. Just remember that." However reluctant the new chair is, faculty and staff members are confident the department will survive Dewar's chairmanship.

William Dewar

Dewar joined the department in 1985. His research interests are directed toward understanding the dynamics of the ocean at scales from 100 km to 10,000 km, or equivalently from the deformation scale to the basin scale. Phenomena at these scales exhibit several different behaviors, from completely free evolution to directly forced evolution, and have a number of interesting characteristics.

Dewar chose to study these phenomena because of a long-time interest in understanding global climate. "It is likely that the ocean is an important component in the determination of long-term climate tendencies," Dewar says. "It is also likely that one of the primary ways in which the atmosphere and the ocean are coupled involves the storage and transport of heat by the ocean. The oceanic phenomena of deformation and larger scales participate importantly in both."

Dewar's research group consists of new graduate students, **Michael Beck** and **Allison Byrd** as well as his grant administrator for the last five years, **Svetla Elsner**. Former students, **Sebastien Bigorre** and **Dmitri A. Leonov,** graduated this summer. His group wishes Dewar and the department good luck. They'll need it.

Carol Bramlett comes back home

Carol Bramlett is ready for any secretarial duty that's thrown her way.

There's a new face down in the department offices. Senior Secretary **Carol Bramlett** joined the department in August, taking over for **Diane Grubbs** who was promoted to grants specialist. Carol began her career many years ago at FSU working for Library Sciences and then the Association for Institutional Research or AIR heads.

Carol spent the last 10 years living in New Jersey where she had moved to be closer to her ailing father, who, it turns out, went from death's door to 10 more exciting years of life. She worked at Trump's Taj Mahal Casino Resort as administrative assistant to the vice president of poker/simulcast and really enjoyed her work. "It was a lot of fun! Poker players are a very interesting lot," she says, "My daughters also got jobs at the Taj Mahal, so we liked to say that the Bramlett's were taking over running the Poker Parlor."

After her father passed away, she decided to move back to Tallahassee where it's a lot warmer, safer, and always referred to as home. "This is the place I've always felt safest, and it's very family oriented," Carol says. Her two grown daughters followed her here, so now she can once again be close to her three grandchildren.

Carol is also a baseball enthusiast, following a number of major league teams and is counting the days to the start of the FSU baseball season. So, if you need any poker tips or want to talk baseball, see Carol down in 101D.

Around the OSB

Congratulations

Former Senior Secretary **Diane Grubbs** has been promoted to grants specialist for the department.

More News

Markus Huettel, coordinator of the international European research project COSA, Coastal Sands as Biocatalytic Filters, organized a workshop on the project in Spain on June 13-18, 2005. The group then held a special session about the COSA results at the ASLO conference in Santiago de Compostela, Spain on June 19-24, 2005.

Joel Kostka was elected to serve on the review panel for the German Science Foundation (Deutschel Forschungs Gemeinschaft or DFG) Research Unit entitled, "e-TRAP, Electron transfer processes in anoxic aquifers."

This past spring, **David Thistle's** research on the effects of carbon dioxide sequestration on deep-sea animals was the featured discussion on National Public Radio's *Science Friday.*

Oceans Day at the Florida Capitol

Oceans Day at the Florida Capitol was celebrated this spring with booths from many Florida organizations who have an ongoing interest in our oceans' well being. The department's graduate students braved sun and wind, we were out in the courtyard this year, to show capital employees the kinds of research our professors are currently conducting. Thank you to all who participated, **Sebastien Bigorre, Sara Cleveland, Diana Lambert, Cathrine Sandal, Chris and Linda Sedlacek.**

In Memory of:

The department was saddened to learn of the passing of **Ray Bieber**, former grant administrator for Doron Nof, on July 10, 2005.

In Doron's words: Ray worked with me for less than a year and yet the feeling that I have is that I have known him for twenty. Maybe it is his openness and fairness that gave me this feeling or maybe it is the kaleidoscope of issues with which he dealt with throughout his life. He had been a Navy commander, a NATO negotiator after the collapse of the Soviet Union (when Poland joined NATO), a wildlife tour guide, an accomplished wildlife photographer (he won several photographic awards), a husband and a father. One story that perhaps reflects best who he was is the one which has to do with his curriculum vita. Ray listed his highest rank in the Canadian Navy (where he spent most of his career) as the second in command of a destroyer. It turned out that he actually was the commander of a destroyer for a period of a year. But he didn't list that in his vita because, evidently, he became the commander when they sacked his boss so he (incredibly) didn't feel right about listing it.

With his many talents Ray helped me formulate a paper on climate and terrorism which will, hopefully, be submitted for publication soon (with him as a co-author). I am missing him pretty badly.

Professional Activities

Invited Presentations

William Burnett

Department of Geological Sciences
Jerusalem University, Israel
"Assessment of Submarine Groundwater Discharge via ^{222}Rn"
June 6, 2005

Allan Clarke

SARDI, Adelaide, Australia
"El Niño currents and their influence on western rock lobster and Australian "salmon" populations."
August 19, 2005

The Dynamic Planet Meeting, Cairns, Australia
"Interannual coastal flow and examples of its influence on Australian marine populations."
August 22, 2005

Thorsten Dittmar

Symposium on Advanced Characterization of Natural Organic Matter, at the 230th American Chemical Society (ACS) National Meeting, Washington DC, USA
"New molecular approaches for tracing dissolved organic matter through marine systems"
August 28-September 1, 2005

Markus Huettel

Louisiana Universities Marine Consortium (LUMCON), Chauvin, LA
"The role of permeable sediments and coral mucus for nutrient cycling in reef ecosystems"
February 14, 2005

Department of Earth and Environmental Sciences, Tulane University, LA
"Coral mucus degradation in permeable reef sediments"
March 4, 2005

Joel Kostka

University of Tubingen, Tubingen, Germany
"Metal reducing microbial communities in the acidic subsurface"
March 10, 2005

Max Planck Institute for Marine Microbiology, Bremen, Germany
"Coupling of biogeochemical processes and macrobenthic activity from the micro- to the macroscale in saltmarsh sediments"
March 8, 2005

Douglas Nowacek

Southeast and Mid-Atlantic Marine Mammal Symposium, Wilmington, NC
"Behavioral and acoustic ecology of marine mammals"
May 2005

Fall Festival, St. Joseph Bay State Buffer Preserve, Port St. Joe, FL
"Florida's Bottlenose Dolphins"
October 9, 2005

Nancy Marcus

International Crustacean Congress, Glasgow, Scotland
"Effects of continuous vs diel exposure to hypoxia and food on egg production of the calanoid copepod *Acartia tonsa*"
July 2005

David Thistle

Laboratoire Océanographic Villefranche, Villefranche-sur-Mer, France; CNRS, Montpellier, France; and Institute of Oceanology of the Polish Academy of Sciences, Sobot, Poland
"Sequestration of CO_2 on the deep-sea floor: an overview and results of recent experimental work"
March & April 2005

New Grants

William Burnett and Jeff Chanton

National Science Foundation
$450,408 (2005-2008)
"Assessing the driving forces of submarine groundwater discharge"

William Burnett, Philip Froelich, and William Landing

National Science Foundation
$455,412 (2005-2007)
"The acquisition of a multi-collector, inductively coupled plasma mass spectrometer and laser ablation system for earth and ocean sciences at FSU"

Thorsten Dittmar

NOAA Climate & Global Change Program
$448,438 (2005-2008)
"Does the ice-covered Southern Ocean act as a 'dissolved organic matter pump' to the abyssal ocean & so sequester carbon from active cycles?"

Markus Huettel and Joel Kostka

FSU Research Foundation
$99,974 (2005-2007)
"Decomposition of organic matter in permeable Apalachicola Bay sand sediments"

Nancy Marcus

Sub-contract – Mote Marine Laboratory
$75,000 (2005-2006)
"Developing a marine fish hatchery and nursery culture to expand Florida's aquaculture industry"

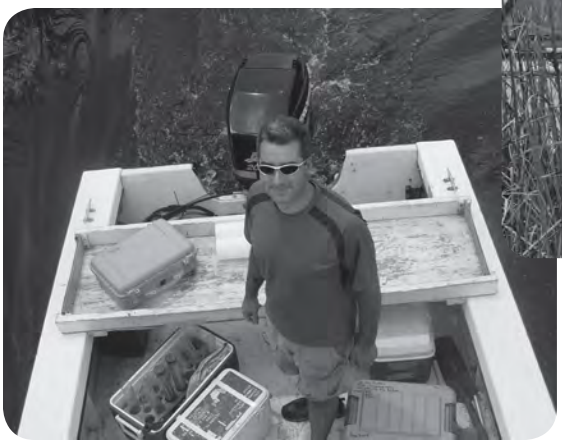
David Thistle

DOE
$399,556 (2005-2008)
"The influence of deep-sea-bed CO_2 sequestration on small metazoan (meiofaunal) viability and community structure"

Travel

Joel Kostka with colleagues from the Korea Ocean Research and Development Institute in Seoul, Korea, at a traditional Korean meal. In June, Kostka traveled to the Institute to give two seminars and teach a couple of classes. He also toured the country with his Korean colleagues.

The new look for fall is mud-knee boots as modeled by **Joel Kostka** and **Heath Mills**. Kostka's research group was in Savannah, Georgia, this summer working with the Skidaway Institute of Oceanography on shallow marine ecosystems.



Tom Gihring (left) working on his fellowship research in the Apalachicola Bay marshes. He began sampling in July in collaboration with **Lee Edmiston** (above on boat) of the Apalachicola Bay National Estuarine Research Reserve.

Collecting water from the Yellow River estuary for analysis of radium isotopes. Over 100 liters of muddy water must be processed for each analysis. Radium isotopes can be used to determine exchange rates of estuarine waters with ocean waters.

Right: In August, **Bill Burnett, Ricky Peterson** and **Henrieta Dulaiova** worked with colleagues from the University of Hawaii in a joint NSF-sponsored study of submarine springs along the west coast of the island of Hawaii.

Bill Burnett and **Ricky Peterson** traveled to northeastern China in May for fieldwork on the Yellow River estuary as part of a collaborative effort with the Research Institute for Humanity and Nature located in Kyoto, Japan.

Left: Lava tubes funnel groundwater down from the wet areas in the mountains to the coastline. Some of these lava tubes exit offshore, creating submarine springs.

Right: **Burnett** and **Peterson** teamed up with USGS personnel and several investigators from Israel for a study of submarine groundwater discharge along the northern Israeli Mediterranean coast. At Dor Beach in northern Israel, a continuous radon monitor and other equipment was deployed in the small boat.

Publications

Kim, G., S.-J. Kim, K. Harada, M.K. Schultz, and W.C. Burnett, 2005. Enrichment of excess ^{210}Po in anoxic ponds. *Environmental Science & Technology*, **39**, 4894-4899.

Clarke, A.J., and K.Y. Kim, 2005. On weak zonally symmetric ENSO atmospheric heating and the strong zonally symmetric ENSO air temperature response. *Journal of Atmospheric Sciences*, **62**, 2012-2022.

Li., J., and A.J. Clarke, 2005. Sea surface temperature and the brown shrimp (*Farfantepenaeus aztecus*) population on the Alabama, Mississippi, Louisiana and Texas continental shelves. *Estuarine, Coastal and Shelf Science,* **64**, 261-266.

Koch, B.P., M. Witt, R. Engbrodt, T. Dittmar, and G. Kattner, 2005. Molecular formulae of dissolved organic matter in the ocean detected by Electrospray Ionisation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. *Geochimica et Cosmochimica Acta*, **69**, 3299-3308.

Janssen, F., P. Faerber, M. Huettel, V. Meyer, and U. Witte, 2005. Pore-water advection and solute fluxes in permeable marine sediments (I): Calibration and performance of the novel benthic chamber system *Sandy. Limnology and Oceanography*, **50**, 768-778.

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Wild C., H. Røy, and M. Huettel, 2005. Role of pelletization in mineralization of fine-grained coastal sediments. *Marine Ecology – Progress Series,* **291**, 23-33.

Kristensen, E., and J.E. Kostka, 2005. Macrofaunal burrows and irrigation in marine sediment: microbiological and biogeochemical interactions, Ch. 7, In: *Interactions Between Macro- and Microorganisms in Marine Sediments,* E. Kristensen, R.R. Haese, J.E. Kostka (eds.). American Geophysical Union, Washington, DC.

Dollhopf, S.L., J. Hyun, A.C. Smith, H.J. Adams, S. O'Brien, and J.E. Kostka, 2005. Quantification of ammonia-oxidizing bacteria and controls of nitrification in saltmarsh sediments. *Applied and Environmental Microbiology*, **71**, 240-246.

Marcus, N.H., 2005. Calanoid copepods, resting eggs, and aquaculture, p. 3-10. In: *Copepods in Aquaculture,* C.-S. Lee, P.J. O'Bryen, and N.H. Marcus, (eds.). Blackwell Publishing, Oxford.

Sedlacek, C. and N.H. Marcus, 2005. Egg production of the copepod *Acartia tonsa*: the influence of hypoxia and food concentration. *Journal of Experimental Marine Biology and Ecology,* **318**, 183-190.

Marcus, N.H., 2005. Oceanography, Science, and Academia. *Oceanography Magazine,* **18**, 51- 55.

Stern, M.E., 2004. Transport extremum through Denmark Strait. *Geophysical Research Letters,* **31**(12), L12303 10.1029/2004GL020184. 16 June 2004.

Stern, M.E., and J. Simeonov, 2005. The secondary instability of salt fingers. *Journal of Fluid Mechanics,* **533**, 361-380.

Vopel, K., D. Thistle, J. Ott, M. Bright, and H. Røy, 2005. Wave-induced H_2S flux sustains a chemoautotrophic symbiosis. *Limnology and Oceanography,* **50**, 128-133.

Thistle, D., K.R. Carman, J.W. Fleeger, P.G. Brewer, and J.P. Barry, 2005. Deep-ocean, sediment-dwelling animals are sensitive to sequestered CO_2. *Marine Ecology Progress Series,* **289**, 1-4. (Designated a feature article for the issue.)

Degrees Conferred

Completed requirements for PhD

Spring 2005

Annette Samuelsen, "Modeling the Effect of Eddies and Advection on the Lower Tropic Ecosystem in the Northeastern Tropical Pacific"
(O'BRIEN)

Summer 2005

Sebastien Bigorre, "Topographic Effects on Wind Driven Oceanic Circulation"
(DEWAR)

Henrieta Dulaiova, "Multiple Isotopic Tracers for Study of Coastal Hydrological Processes"
(BURNETT)

Dmitri A. Leonov, "Effects of Finite Amplitude Bottom Topography on Ocean Variability"
(DEWAR)

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Have you been wondering what's new at your alma mater? Now you can log onto *fsu.com* to keep up with FSU news and events. While you're there, sign up for the weekly *everythingFSU* e-newsletter, which highlights important and innovative university research. Visit the alumni gift shop or send an e.Postcard to family or friends. Recent featured news articles include Jeff Chanton's study on odor-scrubbing bio-filters at the Leon County landfill and Doug Nowacek's research on the North Atlantic Right Whale's struggle to survive possible extinction.

Honors

Joel Kostka was one of five professors honored with a Developing Scholar Award for 2005-06 at this spring's annual Faculty Awards Ceremony. **Carol Anne Clayson**, Meteorology and a Courtesy Faculty in Oceanography, also received a Developing Scholar Award. The Developing Scholar Award is designed to recognize outstanding associate professors, identifying FSU's future academic leaders.

Jeff Chanton was named the Florida Wildlife Federation's 2005 Conservation Communicator of the Year.

Rachel Smith, Coordinator of Information/Publication Services, and the Department of Oceanography were honored for their redesigned website by the Florida Public Relations Association. The FSU Department of Oceanography Redesigned Website won a statewide Judges' Award, presented in any category for an outstanding entry that achieves maximum results while using minimum money, and locally, an Image Award, presented to the top-scoring entry in each category if the entry meets a predetermined criterion of excellence set by the judges, and a Judges' Award in the Website Category for Audio/Visual Tools of Public Relations.

This newsletter is produced by the Florida State University Department of Oceanography. Please visit our web site at: **www.ocean.fsu.edu**.

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Newsletter Editor: Rachel Smith, APR, CPRC, (850) 644-2770

View from ~~the Bridge~~ Under the Chair's Desk

Well here I am in the Chair's chair. Now what am I going to do? The first thing after the coma was to tell my wife. She in her supportive spousal capacity responded by saying "@$&*()%^#@!"

But she is contemplative. As usual, she mulled things over and came back with a reasoned, carefully thought out response. Smiling that little smile of hers, she said "%*$%$*#$%^&#$$#^%#$%^*#$^@#!!!" We had to have three windows replaced.

But, I digress. Back to the question at hand. The predicament this shy, hillbilly is in is that FSU Oceanography has enjoyed inspired leadership since its inception. The list of notables and luminaries who have held this position is distinguished; Prof. Winchester being an early outstanding example. In my many years here, I have had the pleasure of serving under Profs. Sturges, Hsueh, Burnett, Thistle (for an astounding above-and-beyond-the-call-of-duty three terms) and Marcus. Believe me, those are ALL tough, tough acts to follow.

Really, really TOUGH.

Every one of them has left their mark. The faculty is first-rate, for which past chairs can, with pride, claim credit. The infrastructure is outstanding: a Current Meter Facility (how many state universities can boast of such a thing), marine lab (ditto), you get the picture. The graduate students are brilliant. They scare the ^#*@ out of me when I talk to them about anything from asymptotic expansions to copepod biophysics to poetry. We've got an extremely talented, professional and (fortunately) patient staff (who just may keep me out of jail). Why? Think smart and selective hiring by past chairs. And this, by the way, was done along with the general acknowledgement by the rest of the world of the internationally recognized research records these same past chairs have accrued by sweat off their brow.

And now this beautiful little prized gem of a first rate department is mine to manage. Motivated by the highest of ideals, aspiring to serve the best interests of all and the gauntlet having been thrown down, I respond in the best way I can.

I quit.

Uh, oh, there's the provost. Umm, I didn't mean it. Wait, wait, that must've been my twin brother dingo you heard. Look, its Elvis. By the way, can I talk to you about some cluster hires? (Sorry, got to rush. We'll talk later.) Hey, hey, wait up.

the Big Cheese

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